Principles of Accounting, Volume 1: Financial Accounting - DRAFT

Collection edited by: OpenStax
Content authors: OpenStax Accounting and OpenStax
Online: <https://cnx.org/content/col25448/1.2>

TABLE OF CONTENTS

1 Role of Accounting in Society

Figure 1.1 Careers and Accounting. Promotional opportunities throughout a person's career may involve managerial responsibilities and often include responsibility for a portion of the organization's financial performance. Having an understanding of how accounting affects businesses can help the individual to be successful in meeting the organization's strategic and financial goals.

Chapter Outline

Why It Matters

Jennifer has been in the social work profession for over 25 years. After graduating college, she started working at an agency that provided services to homeless women and children. Part of her role was to work directly with the homeless women and children to help them acquire adequate shelter and other necessities. Jennifer currently serves as the director of an organization that provides mentoring services to local youth.

Looking back on her career in the social work field, Jennifer indicates that there are two things that surprised her. The first thing that surprised her was that as a trained social worker she would ultimately become a director of a social work agency and would be required to make financial decisions about programs and how the money is spent. As a college student, she thought social workers would spend their entire careers providing direct support to their clients. The second thing that surprised her was how valuable it is for directors to have an understanding of accounting. She notes, "The best advice I received in college was when

my advisor suggested I take an accounting course. As a social work student, I was reluctant to do so because I did not see the relevance. I didn't realize so much of an administrator's role involves dealing with financial issues. I'm thankful that I took the advice and studied accounting. For example, I was surprised that I would be expected to routinely present to the board our agency's financial performance. The board includes several business professionals and leaders from other agencies. Knowing the accounting terms and having a good understanding of the information contained in the financial reports gives me a lot of confidence when answering their questions. In addition, understanding what influences the financial performance of our agency better prepares me to plan for the future."

1.1 Explain the Importance of Accounting and Distinguish between Financial and Managerial Accounting

Accounting is the process of organizing, analyzing, and communicating financial information that is used for decision-making. Financial information is typically prepared by accountants—those trained in the specific techniques and practices of the profession. This course explores many of the topics and techniques related to the accounting profession. While many students will directly apply the knowledge gained in this course to continue their education and become accountants and business professionals, others might pursue different career paths. However, a solid understanding of accounting can for many still serve as a useful resource. In fact, it is hard to think of a profession where a foundation in the principles of accounting would not be beneficial. Therefore, one of the goals of this course is to provide a solid understanding of how financial information is prepared and used in the workplace, regardless of your particular career path.

THINK IT THROUGH

Expertise

Every job or career requires a certain level of technical expertise and an understanding of the key aspects necessary to be successful. The time required to develop the expertise for a particular job or career varies from several months to much longer. For instance, doctors, in addition to the many years invested in the classroom, invest a significant amount of time providing care to patients under the supervision of more experienced doctors. This helps medical professionals develop the necessary skills to quickly and effectively diagnose and treat the various medical conditions they spent so many years learning about.

Figure 1.2 College Graduation. (credit: modification of "140501-A-XA877-046" by Fort Wainwright Public Affairs Office/Flickr, CC BY 2.0)

Accounting also typically takes specialized training. Top accounting managers often invest many years

and have a significant amount of experience mastering complex financial transactions. Also, in addition to attending college, earning professional certifications and investing in continuing education are necessary to develop a skill set sufficient to becoming experts in an accounting professional field.

The level and type of training in accounting are often dependent on which of the myriad options of accounting fields the potential accountant chooses to enter. To familiarize you with some potential opportunities, Describe the Varied Career Paths Open to Individuals with an Accounting Education examines many of these career options. In addition to covering an assortment of possible career opportunities, we address some of the educational and experiential certifications that are available. Why do you think accountants (and doctors) need to be certified and secure continuing education? In your response, defend your position with examples.

In addition to doctors and accountants, what other professions can you think of that might require a significant investment of time and effort in order to develop an expertise?

A traditional adage states that "accounting is the language of business." While that is true, you can also say that "accounting is the language of life." At some point, most people will make a decision that relies on accounting information. For example, you may have to decide whether it is better to lease or buy a vehicle. Likewise, a college graduate may have to decide whether it is better to take a higher-paying job in a bigger city (where the cost of living is also higher) or a job in a smaller community where both the pay and cost of living may be lower.

In a professional setting, a theater manager may want to know if the most recent play was profitable. Similarly, the owner of the local plumbing business may want to know whether it is worthwhile to pay an employee to be "on call" for emergencies during off-hours and weekends. Whether personal or professional, accounting information plays a vital role in all of these decisions.

You may have noticed that the decisions in these scenarios would be based on factors that include both financial and nonfinancial information. For instance, when deciding whether to lease or buy a vehicle, you would consider not only the monthly payments but also such factors as vehicle maintenance and reliability. The college graduate considering two job offers might weigh factors such as working hours, ease of commuting, and options for shopping and entertainment. The theater manager would analyze the proceeds from ticket sales and sponsorships as well as the expenses for production of the play and operating the concessions. In addition, the theater manager should consider how the financial performance of the play might have been influenced by the marketing of the play, the weather during the performances, and other factors such as competing events during the time of the play. All of these factors, both financial and nonfinancial, are relevant to the financial performance of the play. In addition to the additional cost of having an employee "on call" during evenings and weekends, the owner of the local plumbing business would consider nonfinancial factors in the decision. For instance, if there are no other plumbing businesses that offer services during evenings and weekends, offering emergency service might give the business a strategic advantage that could increase overall sales by attracting new customers.

This course explores the role that accounting plays in society. You will learn about **financial accounting**, which measures the financial performance of an organization using standard conventions to prepare and distribute financial reports. Financial accounting is used to generate information for stakeholders *outside* of an organization, such as owners, stockholders, lenders, and governmental entities such as the Securities and Exchange Commission (SEC) and the Internal Revenue Service (IRS).

Financial accounting is also a foundation for understanding **managerial accounting**, which uses both

financial and nonfinancial information as a basis for making decisions within an organization. Managerial accounting information tends to be used internally, for such purposes as budgeting, pricing, and determining production costs. Since the information is generally used internally, you do not see the same need for financial oversight in an organization's managerial data.

You will also note in your financial accounting studies that there are governmental and organizational entities that oversee the accounting processes and systems that are used in financial accounting. These entities include organizations such as the Securities and Exchange Commission (SEC), the Financial Accounting Standards Board (FASB), the American Institute of Certified Public Accountants (AICPA), and the Public Company Accounting Oversight Board (PCAOB). The PCAOB was created after several major cases of corporate fraud, leading to the Sarbanes-Oxley Act of 2002, known as SOX. If you choose to pursue more advanced accounting courses, especially auditing courses, you will address the SOX in much greater detail.

For now, it is not necessary to go into greater detail about the mechanics of these organizations or other accounting and financial legislation. You just need to have a basic understanding that they function to provide a degree of protection for those outside of the organization who rely on the financial information.

Whether or not you aspire to become an accountant, understanding financial and managerial accounting is valuable and necessary for practically any career you will pursue. Management of a car manufacturer, for example, would use both financial and managerial accounting information to help improve the business. Financial accounting information is valuable as it measures whether or not the company was financially successful. Knowing this provides management with an opportunity to repeat activities that have proven effective and to make adjustments in areas in which the company has underperformed. Managerial accounting information is likewise valuable. Managers of the car manufacturer may want to know, for example, how much scrap is generated from a particular area in the manufacturing process. While identifying and improving the manufacturing process (i.e., reducing scrap) helps the company financially, it may also help other areas of the production process that are indirectly related, such as poor quality and shipping delays.

1.2 Identify Users of Accounting Information and How They Apply Information

The ultimate goal of accounting is to provide information that is useful for decision-making. Users of accounting information are generally divided into two categories: internal and external. *Internal* users are those within an organization who use financial information to make day-to-day decisions. Internal users include managers and other employees who use financial information to confirm past results and help make adjustments for future activities.

External users are those outside of the organization who use the financial information to make decisions or to evaluate an entity's performance. For example, investors, financial analysts, loan officers, governmental auditors, such as IRS agents, and an assortment of other stakeholders are classified as external users, while still having an interest in an organization's financial information. (Stakeholders are addressed in greater detail in Explain Why Accounting Is Important to Business Stakeholders.)

Characteristics, Users, and Sources of Financial Accounting Information

Organizations measure financial performance in monetary terms. In the United States, the dollar is used as the standard measurement basis. Measuring financial performance in monetary terms allows managers to compare the organization's performance to previous periods, to expectations, and to other organizations or

industry standards.

Financial accounting is one of the broad categories in the study of accounting. While some industries and types of organizations have variations in how the financial information is prepared and communicated, accountants generally use the same methodologies—called accounting standards—to prepare the financial information. You learn in Introduction to Financial Statements that financial information is primarily communicated through financial statements, which include the Income Statement, Statement of Owner's Equity, Balance Sheet, and Statement of Cash Flows and Disclosures. These financial statements ensure the information is consistent from period to period and generally comparable between organizations. The conventions also ensure that the information provided is both reliable and relevant to the user.

Virtually every activity and event that occurs in a business has an associated cost or value. Part of an accountant's responsibility is to quantify these activities and events. In this course you will learn about the many types of transactions that occur within a business. You will also examine the effects of these **transactions**, including their impact on the financial position of the entity.

Accountants often use computerized accounting systems to record and summarize the financial reports, which offer many benefits. The primary benefit of a computerized accounting system is the efficiency by which transactions can be recorded and summarized, and financial reports prepared. In addition, computerized accounting systems store data, which allows organizations to easily extract historical financial information.

Common computerized accounting systems include QuickBooks, which is designed for small organizations, and SAP, which is designed for large and/or multinational organizations. QuickBooks is popular with smaller, less complex entities. It is less expensive than more sophisticated software packages, such as Oracle or SAP, and the QuickBooks skills that accountants developed at previous employers tend to be applicable to the needs of new employers, which can reduce both training time and costs spent on acclimating new employees to an employer's software system. Also, being familiar with a common software package such as QuickBooks helps provide employment mobility when workers wish to reenter the job market.

While QuickBooks has many advantages, once a company's operations reach a certain level of complexity, it will need a basic software package or platform, such as Oracle or SAP, which is then customized to meet the unique informational needs of the entity.

Financial accounting information is mostly historical in nature, although companies and other entities also incorporate estimates into their accounting processes. For example, you will learn how to use estimates to determine bad debt expenses or depreciation expenses for assets that will be used over a multiyear lifetime. That is, accountants prepare financial reports that summarize what has already occurred in an organization. This information provides what is called feedback value. The benefit of reporting what has already occurred is the reliability of the information. Accountants can, with a fair amount of confidence, accurately report the financial performance of the organization related to past activities. The feedback value offered by the accounting information is particularly useful to internal users. That is, reviewing how the organization performed in the past can help managers and other employees make better decisions about and adjustments to future activities.

Financial information has limitations, however, as a predictive tool. Business involves a large amount of uncertainty, and accountants cannot predict how the organization will perform in the future. However, by observing historical financial information, users of the information can detect patterns or trends that may be useful for estimating the company's future financial performance. Collecting and analyzing a series of historical financial data is useful to both internal and external users. For example, internal users can use

financial information as a predictive tool to assess whether the long-term financial performance of the organization aligns with its long-term strategic goals.

External users also use the historical pattern of an organization's financial performance as a predictive tool. For example, when deciding whether to loan money to an organization, a bank may require a certain number of years of financial statements and other financial information from the organization. The bank will assess the historical performance in order to make an informed decision about the organization's ability to repay the loan and interest (the cost of borrowing money). Similarly, a potential investor may look at a business's past financial performance in order to assess whether or not to invest money in the company. In this scenario, the investor wants to know if the organization will provide a sufficient and consistent return on the investment. In these scenarios, the financial information provides value to the process of allocating scarce resources (money). If potential lenders and investors determine the organization is a worthwhile investment, money will be provided, and, if all goes well, those funds will be used by the organization to generate additional value at a rate greater than the alternate uses of the money.

Characteristics, Users, and Sources of Managerial Accounting Information

As you've learned, managerial accounting information is different from financial accounting information in several respects. Accountants use formal accounting standards in financial accounting. These accounting standards are referred to as **generally accepted accounting principles (GAAP)** and are the concepts, standards, and rules that guide the preparation of and presentation of financial statements. The previously mentioned **Financial Accounting Standards Board (FASB)** uses the GAAP guidelines as its foundation for its system of accepted accounting methods and practices, reports, and other documents.

Since most managerial accounting activities are conducted for internal uses and applications, managerial accounting is not prepared using a comprehensive, prescribed set of conventions similar to those required by financial accounting. This is because managerial accountants provide managerial accounting information that is intended to serve the needs of internal, rather than external, users. In fact, managerial accounting information is rarely shared with those outside of the organization. Since the information often includes strategic or competitive decisions, managerial accounting information is often closely protected. The business environment is constantly changing, and managers and decision makers within organizations need a variety of information in order to view or assess issues from multiple perspectives.

Accountants must be adaptable and flexible in their ability to generate the necessary information management decision-making. For example, information derived from a computerized accounting system is often the starting point for obtaining managerial accounting information. But accountants must also be able to extract information from other sources (internal and external) and analyze the data using mathematical, formula-driven software, (such as Microsoft Excel).

Management accounting information as a term encompasses many activities within an organization. Preparing a budget, for example, allows an organization to estimate the financial performance for the upcoming year or years and plan for adjustments to scale operations according to the projections. Accountants often lead the budgeting process by gathering information from internal (estimates from the sales and engineering departments, for example) and external (trade groups and economic forecasts, for example) sources. These data are then compiled and presented to decision makers within the organization.

Examples of other decisions that require management accounting information include whether an organization should repair or replace equipment, make products internally or purchase the items from outside

vendors, and hire additional workers or use automation.

As you have learned, management accounting information uses both financial and nonfinancial information. This is important because there are situations in which a purely financial analysis might lead to one decision, while considering nonfinancial information might lead to a different decision. For example, suppose a financial analysis indicates that a particular product is unprofitable and should no longer be offered by a company. If the company fails to consider that customers also purchase a complementary good (you might recall that term from your study of economics), the company may be making the wrong decision. For example, assume that you have a company that produces and sells both computer printers and the replacement ink cartridges. If the company decided to eliminate the printers, then it would also lose the cartridge sales. In the past, in some cases, the elimination of one component, such as printers, led to customers switching to a different producer for its computers and other peripheral hardware. In the end, an organization needs to consider both the financial and nonfinancial aspects of a decision, and sometimes the effects are not intuitively obvious at the time of the decision. Figure 1.3 offers an overview of some of the differences between financial and managerial accounting.

COMMUNICATION THROUGH REPORTING	FINANCIAL ACCOUNTING	MANAGERIAL ACCOUNTING
Users of reports	External users: stockholders, creditors, regulators	Internal users: managers, officers, and other employees
Types of reports	Financial statements: balance sheet, income statement, cash-flow statement, etc.	Internal reports: job cost sheet, cost of goods manufactured, production cost report, etc.
Frequency of reports	Quarterly; annually	As frequently as needed
Purpose of reports	Helps those external users make decisions: credit terms, investment, and other decisions	Assists the internal users in the planning and control decision-making process
Focus of reports	Pertains to company as a whole Uses GAAP structure Composed from a multitude or combination of other more individual data	Pertains to departments, sections of the business Very detailed reporting No GAAP constraints
Nature of reports	Monetary	Monetary and nonmonetary information
Verification of reports	Audited by CPA	No independent audits

Figure 1.3 Comparing Reports between Financial and Managerial Accounting. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

1.3 Describe Typical Accounting Activities and the Role Accountants Play in Identifying, Recording, and Reporting Financial Activities

We can classify organizations into three categories: for profit, governmental, and not for profit. These organizations are similar in several aspects. For example, each of these organizations has inflows and outflows of cash and other resources, such as equipment, furniture, and land, that must be managed. In addition, all of these organizations are formed for a specific purpose or mission and want to use the available resources in an efficient manner—the organizations strive to be good stewards, with the underlying premise of being profitable. Finally, each of the organizations makes a unique and valuable contribution to society. Given the similarities, it is clear that all of these organizations have a need for accounting information and for accountants to provide that information.

There are also several differences. The main difference that distinguishes these organizations is the primary purpose or mission of the organization, discussed in the following sections.

For-Profit Businesses

As the name implies, the primary purpose or mission of a **for-profit business** is to earn a profit by selling goods and services. There are many reasons why a for-profit business seeks to earn a profit. The profits generated by these organizations might be used to create value for employees in the form of pay raises for existing employees as well as hiring additional workers. In addition, profits can be reinvested in the business to create value in the form of research and development, equipment upgrades, facilities expansions, and many other activities that make the business more competitive. Many companies also engage in charitable activities, such as donating money, donating products, or allowing employees to volunteer in the communities. Finally, profits can also be shared with employees in the form of either bonuses or commissions as well as with owners of the business as a reward for the owners' investment in the business. These issues, along with others, and the associated accounting conventions will be explored throughout this course.

In for-profit businesses, accounting information is used to measure the financial performance of the organization and to help ensure that resources are being used efficiently. Efficiently using existing resources allows the businesses to improve quality of the products and services offered, remain competitive in the marketplace, expand when appropriate, and ensure longevity of the business.

For-profit businesses can be further categorized by the types of products or services the business provides. Let's examine three types of for-profit businesses: manufacturing, retail (or merchandising), and service.

Manufacturing Businesses

A **manufacturing business** is a for-profit business that is designed to make a specific product or products. Manufacturers specialize in procuring components in the most basic form (often called direct or raw materials) and transforming the components into a finished product that is often drastically different from the original components.

As you think about the products you use every day, you are probably already familiar with products made by manufacturing firms. Examples of products made by manufacturing firms include automobiles, clothes, cell phones, computers, and many other products that are used every day by millions of consumers.

In Job Order Costing (https://cnx.org/content/m68122/latest/) , you will examine the process of job costing, learning how manufacturing firms transform basic components into finished, sellable products and

the techniques accountants use to record the costs associated with these activities.

CONCEPTS IN PRACTICE

Manufacturing

Think about the items you have used today. Make a list of the products that were created by manufacturing firms. How many can you think of? Think of the many components that went into some of the items you use. Do you think the items were made by machines or by hand?

If you are in a classroom with other students, see who has used the greatest number of items today. Or, see who used the item that would be the most complex to manufacture.

If you are able, you might consider arranging a tour of a local manufacturer. Many manufacturers are happy to give tours of the facilities and describe the many complex processes that are involved in making the products. On your tour, take note of the many job functions that are required to make those items—from ordering the materials to delivering to the customer.

Retail Businesses

Manufacturing businesses and retail (or merchandising) businesses are similar in that both are for-profit businesses that sell products to consumers. In the case of manufacturing firms, by adding direct labor, manufacturing overhead (such as utilities, rent, and depreciation), and other direct materials, raw components are converted into a finished product that is sold to consumers. A **retail business** (or merchandising business), on the other hand, is a for-profit business that purchases products (called inventory) and then resells the products without altering them—that is, the products are sold directly to the consumer in the same condition (production state) as purchased.

Examples of retail firms are plentiful. Automobile dealerships, clothes, cell phones, and computers are all examples of everyday products that are purchased and sold by retail firms. What distinguishes a manufacturing firm from a retail firm is that in a retail firm, the products are sold in the same condition as when the products were purchased—no further alterations were made on the products.

Did you happen to notice that the product examples listed in the preceding paragraph (automobiles, clothes, cell phones, and computers) for manufacturing firms and retail firms are identical? If so, congratulations, because you are paying close attention to the details. These products are used as examples in two different contexts—that is, manufacturing firms *make* these products, and retail firms *sell* these products. These products are relevant to both manufacturing and retail because they are examples of goods that are both manufactured and sold directly to the consumer. While there are instances when a manufacturing firm also serves as the retail firm (Dell computers, for example), it is often the case that products will be manufactured and sold by separate firms.

CONCEPTS IN PRACTICE

NIKEiD

NIKEiD is a program that allows consumers to design and purchase customized equipment, clothes, and shoes (https://store.nike.com/us/en_us/pw/nikeid/1k9?ipp=120). In 2007, Nike opened its first NIKEiD studio at Niketown in New York City (https://news.nike.com/news/nike-opens-new-nikeid-studio-in-new-york). Since its debut in 1999, the NIKEiD concept has flourished, and Nike has partnered with professional athletes to showcase their designs that, along with featured consumer designs, are available for purchase on the NIKEiD website (https://www.nike.com/us/en_us/c/nikeid).

Figure 1.4 NIKEiD Launch Store in Shanghai. (credit: "Nike-id-shanghai-launch" by "All.watson"/Wikimedia Commons, CC BY 2.0)

Assume you are the manager of a sporting goods store that sells Nike shoes. Think about the concept of NIKEiD, and consider the impact that this concept might have on your store sales. Would this positively or negatively impact the sale of Nike shoes in your store? What are steps you could take to leverage the NIKEiD concept to help increase your own store's sales?

Considerations like this are examples of what marketing professionals would address. Nike wants to ensure this concept does not negatively impact the existing relationships it has, and Nike works to ensure this program is also beneficial to its existing distribution partners.

In Merchandising Transactions you explore merchandising transactions, which include concepts and specific accounting practices for retail firms. You will learn, among other things, how to account for purchasing products from suppliers, selling the products to customers, and prepare the financial reports for retail firms.

Service Businesses

As the term implies, service businesses are businesses that provide services to customers. A major difference between manufacturing and retail firms and service firms is that service firms do not have a tangible product that is sold to customers. Instead, a **service business** does not sell tangible products to customers but rather provides intangible benefits (services) to customers. A service business can be either a for-profit or a not-for-profit business. Figure 1.5 illustrates the distinction between manufacturing, retail, and service businesses.

Examples of service-oriented businesses include hotels, cab services, entertainment, and tax preparers. Efficiency is one advantage service businesses offer to their customers. For example, while taxpayers can certainly read the tax code, read the instructions, and complete the forms necessary to file their annual tax returns, many choose to take their tax returns to a person who has specialized training and experience with preparing tax returns. Although it is more expensive to do so, many feel it is a worthwhile investment because the tax professional has invested the time and has the knowledge to prepare the forms properly and in a timely manner. Hiring a tax preparer is efficient for the taxpayer because it allows the taxpayer to file the required forms without having to invest numerous hours researching and preparing the forms.

The accounting conventions for service businesses are similar to the accounting conventions for manufacturing and retail businesses. In fact, the accounting for service businesses is easier in one respect. Because service businesses do not sell tangible products, there is no need to account for products that are being held for sale (inventory). Therefore, while we briefly discuss service businesses, we'll focus mostly on accounting for manufacturing and retail businesses.

Figure 1.5 Manufacturing, Retail, and Service. An auto manufacturing plant, a car sales lot, and a taxi represent three types of businesses: manufacturing, retail, and service. (credit (left): "Maquiladora" by "Guldhammer"/Wikimedia Commons, CCO; credit (center): "Mercedes Benz Parked" by unknown/Pixabay, CCO. Credit (right): modification of "Taxi Overtaking Bus" by "Kai Pilger"/Pixabay, CC0)

YOUR TURN

Categorizing Restaurants

So far, you've learned about three types of for-profit businesses: manufacturing, retail, and service. Previously, you saw how some firms such as Dell serve as both manufacturer and retailer.

Now, think of the last restaurant where you ate. Of the three business types (manufacturer, retailer, or service provider), how would you categorize the restaurant? Is it a manufacturer? A retailer? A service

provider? Can you think of examples of how a restaurant has characteristics of all three types of businesses?

Solution

Answers will vary. Responses may initially consider a restaurant to be only a service provider. Students may also recognize that a restaurant possesses aspects of a manufacturer (by preparing the meals), retailer (by selling merchandise and/or gift cards), and service provider (by waiting on customers).

Governmental Entities

A **governmental entity** provides services to the general public (taxpayers). Governmental agencies exist at the federal, state, and local levels. These entities are funded through the issuance of taxes and other fees.

Accountants working in governmental entities perform the same function as accountants working at for-profit businesses. Accountants help to serve the public interest by providing to the public an accounting for the receipts and disbursements of taxpayer dollars. Governmental leaders are accountable to taxpayers, and accountants help assure the public that tax dollars are being utilized in an efficient manner.

Examples of governmental entities that require financial reporting include federal agencies such as the Social Security Administration, state agencies such as the Department of Transportation, and local agencies such as county engineers.

Students continuing their study of accounting may take a specific course or courses related to governmental accounting. While the specific accounting used in governmental entities differs from traditional accounting conventions, the goal of providing accurate and unbiased financial information useful for decision-making remains the same, regardless of the type of entity. Government accounting standards are governed by the **Governmental Accounting Standards Board (GASB)**. This organization creates standards that are specifically appropriate for state and local governments in the United States.

Not-for-Profit Entities

To be fair, the name “not-for-profit” can be somewhat confusing. As with “for-profit” entities, the name refers to the primary purpose or mission of the organization. In the case of for-profit organizations, the primary purpose is to generate a profit. The profits, then, can be used to sustain and improve the business through investments in employees, research, and development, and other measures intended to help ensure the long-term success of the business.

But in the case of a **not-for-profit entity**, the primary purpose or mission is to serve a particular interest or need in the community. A not-for-profit entity tends to depend on financial longevity based on donations, grants, and revenues generated. It may be helpful to think of not-for-profit entities as “mission-based” entities. It is important to note that not-for-profit entities, while having a primary purpose of serving a particular interest, also have a need for financial sustainability. An adage in the not-for-profit sector states that “being a not-for-profit organization does not mean it is for-loss.” That is, not-for-profit entities must also ensure that resources are used efficiently, allowing for inflows of resources to be greater than (or, at a

minimum, equal to) outflows of resources. This allows the organization to continue and perhaps expand its valuable mission.

Examples of not-for-profit entities are numerous. Food banks have as a primary purpose the collection, storage, and distribution of food to those in need. Charitable foundations have as a primary purpose the provision of funding to local agencies that support specific community needs, such as reading and after-school programs. Many colleges and universities are structured as not-for-profit entities because the primary purpose is to provide education and research opportunities.

Similar to accounting for governmental entities, students continuing their study of accounting may take a specific course or courses related to not-for-profit accounting. While the specific accounting used in not-for-profit entities differs slightly from traditional accounting conventions, the goal of providing reliable and unbiased financial information useful for decision-making is vitally important. Some of the governmental and regulatory entities involved in maintaining the rules and principles in accounting are discussed in Explain Why Accounting Is Important to Business Stakeholders.

YOUR TURN

Types of Organizations

Think of the various organizations discussed so far. Now try to identify people in your personal and professional network who work for these types of agencies. Can you think of someone in a career at each of these types of organizations?

One way to explore career paths is to talk with professionals who work in the areas that interest you. You may consider reaching out to the individuals you identified and learning more about the work that they do. Find out about the positive and negative aspects of the work. Find out what advice they have relating to education. Try to gain as much information as you can to determine whether that is a career you can envision yourself pursuing. Also, ask about opportunities for job shadowing, co-ops, or internships

Solution

Answers will vary, but this should be an opportunity to learn about careers in a variety of organizations (for-profit including manufacturing, retail, and services; not-for-profit; and governmental agencies). You may have an assumption about a career that is based only on the positive aspects. Learning from experienced professionals may help you understand all aspects of the careers. In addition, this exercise may help you confirm or alter your potential career path, including the preparation required (based on advice given from those you talk with).

1.4 Explain Why Accounting Is Important to Business Stakeholders

The number of decisions we make in a single day is staggering. For example, think about what you had for breakfast this morning. What pieces of information factored into that decision? A short list might include the foods that were available in your home, the amount of time you had to prepare and eat the food, and what sounded good to eat this morning. Let’s say you do not have much food in your home right now because you are overdue on a trip to the grocery store. Deciding to grab something at a local restaurant involves an entirely new set of choices. Can you think of some of the factors that might influence the decision to grab a meal at a

local restaurant?

YOUR TURN

Daily Decisions

Many academic studies have been conducted on the topic of consumer behavior and decision-making. It is a fascinating topic of study that attempts to learn what type of advertising works best, the best place to locate a business, and many other business-related activities.

One such study, conducted by researchers at Cornell University, concluded that people make more than 200 food-related decisions per day (Wansink, B., & Sobal, J. [2007]. Mindless Eating: The 200 Daily Food Decisions We Overlook. *Environment & Behavior*, 39[1], 106–123.).

This is astonishing considering the number of decisions found in this particular study related only to decisions involving food. Imagine how many day-to-day decisions involve other issues that are important to us, such as what to wear and how to get from point A to point B. For this exercise, provide and discuss some of the food-related decisions that you recently made.

Solution

In consideration of food-related decisions, there are many options you can consider. For example, what types, in terms of ethnic groups or styles, do you prefer? Do you want a dining experience or just something inexpensive and quick? Do you have allergy-related food issues? These are just a few of the myriad potential decisions you might make.

It is no different when it comes to financial decisions. Decision makers rely on unbiased, relevant, and timely financial information in order to make sound decisions. In this context, the term **stakeholder** refers to a person or group who relies on financial information to make decisions, since they often have an interest in the economic viability of an organization or business. “Stakeholders” refers to stockholders, creditors, governmental and regulatory agencies, customers, management and other employees, and various other parties and entities.

Stockholders

A **stockholder** is an owner of stock in a business. Owners are called stockholders because in exchange for cash, they are given an ownership interest in the business, called stock. Stock is sometimes referred to as “shares.” Historically, stockholders received paper certificates reflecting the number of stocks owned in the business. Now, many stock transactions are recorded electronically. Introduction to Financial Statements discusses stock in more detail. Corporation Accounting offers a more extensive exploration of the types of stock as well as the accounting related to stock transactions.

Recall that organizations can be classified as for-profit, governmental, or not-for-profit entities. Stockholders are associated with for-profit businesses. While governmental and not-for-profit entities have constituents, there is no direct ownership associated with these entities.

For-profit businesses are organized into three categories: manufacturing, retail (or merchandising), and service. Another way to categorize for-profit businesses is based on the availability of the company stock. A

publicly traded company is one whose stock is traded (bought and sold) on an organized stock exchange such as the New York Stock Exchange (NYSE) or the National Association of Securities Dealers Automated Quotation (NASDAQ) system. Most large, recognizable companies are publicly traded, meaning the stock is available for sale on these exchanges. A **privately held company**, in contrast, is one whose stock is not available to the general public. Privately held companies, while accounting for the largest number of businesses and employment in the United States, are often smaller (based on value) than publicly traded companies. Whereas financial information and company stock of publicly traded companies are available to those inside and outside of the organization, financial information and company stock of privately held companies are often limited exclusively to employees at a certain level within the organization as a part of compensation and incentive packages or selectively to individuals or groups (such as banks or other lenders) outside the organization.

Publicly Held versus Privately Held Companies

Publicly Held Company	Privately Held Company
• Stock available to general public • Financial information public • Typically larger in value	• Stock not available to general public • Financial information private • Typically smaller in value

Table 1.1

Whether the stock is owned by a publicly traded or privately held company, owners use financial information to make decisions. Owners use the financial information to assess the financial performance of the business and make decisions such as whether or not to purchase additional stock, sell existing stock, or maintain the current level of stock ownership.

Other decisions stockholders make may be influenced by the type of company. For example, stockholders of privately held companies often are also employees of the company, and the decisions they make may be related to day-to-day activities as well as longer-term strategic decisions. Owners of publicly traded companies, on the other hand, will usually only focus on strategic issues such as the company leadership, purchases of other businesses, and executive compensation arrangements. In essence, stockholders predominantly focus on profitability, expected increase in stock value, and corporate stability.

Creditors and Lenders

In order to provide goods and services to their customers, businesses make purchases from other businesses. These purchases come in the form of materials used to make finished goods or resell, office equipment such as copiers and telephones, utility services such as heating and cooling, and many other products and services that are vital to run the business efficiently and effectively.

It is rare that payment is required at the time of the purchase or when the service is provided. Instead, businesses usually extend “credit” to other businesses. Selling and purchasing on credit, which is explored further in Merchandising Transactions and Accounting for Receivables, means the payment is expected after a certain period of time following receipt of the goods or provision of the service. The term **creditor** refers to a business that grants extended payment terms to other businesses. The time frame for extended credit to other businesses for purchases of goods and services is usually very short, typically thirty-day to forty-five-day

periods are common.

When businesses need to borrow larger amounts of money and/or for longer periods of time, they will often borrow money from a **lender**, a bank or other institution that has the primary purpose of lending money with a specified repayment period and stated interest rate. If you or your family own a home, you may already be familiar with lending institutions. The time frame for borrowing from lenders is typically measured in years rather than days, as was the case with creditors. While lending arrangements vary, typically the borrower is required to make periodic, scheduled payments with the full amount being repaid by a certain date. In addition, since the borrowing is for a long period of time, lending institutions require the borrower to pay a fee (called interest) for the use of borrowing. These concepts and the related accounting practices are covered in Long-Term Liabilities.

Creditor versus Lender

Creditor	Lender
• Business that grants extended payment terms to other businesses • Shorter time frame	• Bank or other institution that lends money • Longer time frame

Table 1.2

Both creditors and lenders use financial information to make decisions. The ultimate decision that both creditors and lenders have to make is whether or not the funds will be repaid by the borrower. The reason this is important is because lending money involves risk. The type of risk creditors and lenders assess is repayment risk—the risk the funds will not be repaid. As a rule, the longer the money is borrowed, the higher the risk involved.

Recall that accounting information is historical in nature. While historical performance is no guarantee of future performance (repayment of borrowed funds, in this case), an established pattern of financial performance using historical accounting information does help creditors and lenders to assess the likelihood the funds will be repaid, which, in turn, helps them to determine how much money to lend, how long to lend the money for, and how much interest (in the case of lenders) to charge the borrower.

Sources of Funding

Besides borrowing, there are other options for businesses to obtain or raise additional funding (also often labeled as capital). It is important for the business student to understand that businesses generally have three ways to raise capital: profitable operations is the first option; selling ownership—stock—which is also called equity financing, is the second option; and borrowing from lenders (called debt financing) is the final option.

In Introduction to Financial Statements, you'll learn more about the business concept called "profit." You are already aware of the concept of profit. In short, profit means the inflows of resources are greater than the outflow of resources, or stated in more business-like terms, the revenues that the company generates are larger or greater than the expenses. For example, if a retailer buys a printer for $150 and sells it for $320, then from the sale it would have revenue of $320 and expenses of $150, for a profit of $170. (Actually, the process is a little more complicated because there would typically be other expenses for the operation of the store. However, to keep the example simple, those were not included. You'll learn more about this later in the

course.)

Developing and maintaining profitable operations (selling goods and services) typically provides businesses with resources to use for future projects such as hiring additional workers, maintaining equipment, or expanding a warehouse. While profitable operations are valuable to businesses, companies often want to engage in projects that are very expensive and/or are time sensitive. Businesses, then, have other options to raise funds quickly, such as selling stock and borrowing from lenders, as previously discussed.

An advantage of selling stock to raise capital is that the business is not committed to a specific payback schedule. A disadvantage of issuing new stock is that the administrative costs (legal and compliance) are high, which makes it an expensive way to raise capital.

There are two advantages to raising money by borrowing from lenders. One advantage is that the process, relative to profitable operations and selling ownership, is quicker. As you've learned, lenders (and creditors) review financial information provided by the business in order to make assessments on whether or not to lend money to the business, how much money to lend, and the acceptable length of time to lend. A second, and related, advantage of raising capital through borrowing is that it is fairly inexpensive. A disadvantage of borrowing money from lenders is the repayment commitments. Because lenders require the funds to be repaid within a specific time frame, the risk to the business (and, in turn, to the lender) increases.

These topics are covered extensively in the area of study called corporate finance. While finance and accounting are similar in many aspects, in practicality finance and accounting are separate disciplines that frequently work in coordination in a business setting. Students may be interested to learn more about the educational and career options in the field of corporate finance. Because there are many similarities in the study of finance and accounting, many college students double major in a combination of finance, accounting, economics, and information systems.

CONCEPTS IN PRACTICE

Profit

What is profit? In accounting, there is general consensus on the definition of profit. A typical definition of profit is, in effect, when inflows of cash or other resources are greater than outflows of resources.

Ken Blanchard provides another way to define profit. Blanchard is the author of *The One Minute Manager*, a popular leadership book published in 1982. He is often quoted as saying, "profit is the applause you get for taking care of your customers and creating a motivating environment for your people [employees]." Blanchard's definition recognizes the multidimensional aspect of profit, which requires successful businesses to focus on their customers, employees, and the community.

A short video of Blanchard's definition of profit can be viewed at https://www.youtube.com/watch?v=RvdM0YgbzfM. What are alternative approaches to defining profit?

Governmental and Regulatory Agencies

Publicly traded companies are required to file financial and other informational reports with the **Securities**

and Exchange Commission (SEC), a federal government agency that is charged with protecting the investing public. The SEC accomplishes this in two primary ways: issuing regulations and providing oversight of financial markets. The goal of these actions is to help ensure that businesses provide investors with access to transparent and unbiased financial information.

Figure 1.6 Securities and Exchange Commission. (credit: "Seal of the United States Securities and Exchange Commission" by U.S. Government/Wikimedia Commons, Public Domain)

As an example of its responsibility to issue regulations, you learn in Introduction to Financial Statements that the SEC is responsible for establishing guidelines for the accounting profession. These are called accounting standards or generally accepted accounting principles (GAAP). Although the SEC also had the responsibility of issuing standards for the auditing profession, they relinquished this responsibility to the Financial Accounting Standards Board (FASB).

In addition, you will learn in Describe the Varied Career Paths Open to Individuals with an Accounting Education that auditors are accountants charged with providing reasonable assurance to users that financial statements are prepared according to accounting standards. This oversight is administered through the Public Company Accounting Oversight Board (PCAOB), which was established in 2002.

The SEC also has responsibility for regulating firms that issue and trade (buy and sell) securities—stocks, bonds, and other investment instruments.

Enforcement by the SEC takes many forms. According to the SEC website, "Each year the SEC brings hundreds of civil enforcement actions against individuals and companies for violation of the securities laws. Typical infractions include insider trading, accounting fraud, and providing false or misleading information about securities and the companies that issue them."[1] Financial information is a valuable tool that is part of the investigatory and enforcement activities of the SEC.

CONCEPTS IN PRACTICE

Financial Professionals and Fraud

You may have heard the name Bernard "Bernie" Madoff. Madoff was the founder of an investment firm, Bernard L. Madoff Investment Securities. The original mission of the firm was to provide financial advice and investment services to clients. This is a valuable service to many people because of the complexity of financial investments and retirement planning. Many people rely on financial professionals, like Bernie Madoff, to help them create wealth and be in a position to retire comfortably. Unfortunately, Madoff took

1 U.S. Securities and Exchange Commission. "What We Do." June 10, 2013. https://www.sec.gov/Article/whatwedo.html

advantage of the trust of his investors and was ultimately convicted of stealing (embezzling) over $50 billion (a low amount by some estimates). Madoff's embezzlement remains one of the biggest financial frauds in US history.

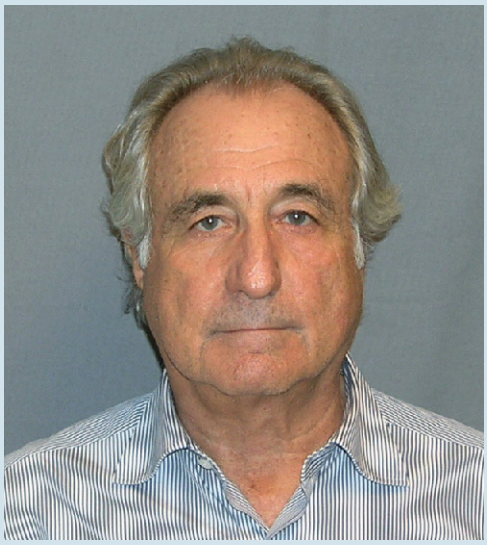


Figure 1.7 Bernie Madoff. Bernie Madoff's mug shot upon being arrested in March 2009. (credit: "BernardMadoff" by U.S. Department of Justice/Wikimedia Commons, Public Domain)

The fraud scheme was initially uncovered by a financial analyst named Harry Markopolos. Markopolos became suspicious because Madoff's firm purported to achieve for its investors abnormally high rates of return for an extended period of time. After analyzing the investment returns, Markopolos reported the suspicious activity to the Securities and Exchange Commission (SEC), which has enforcement responsibility for firms providing investment services. While Madoff was initially able to stay a few steps ahead of the SEC, he was charged in 2009 and will spend the rest of his life in prison.

There are many resources to explore the Madoff scandal. You might be interested in reading the book, *No One Would Listen: A True Financial Thriller*, written by Harry Markopolos. A movie and a TV series have also been made about the Madoff scandal.

In addition to governmental and regulatory agencies at the federal level, many state and local agencies use financial information to accomplish the mission of protecting the public interest. The primary goals are to ensure the financial information is prepared according to the relevant rules or practices as well as to ensure funds are being used in an efficient and transparent manner. For example, local school district administrators should ensure that financial information is available to the residents and is presented in an unbiased manner. The residents want to know their tax dollars are not being wasted. Likewise, the school district administrators want to demonstrate they are using the funding in an efficient and effective manner. This helps ensure a good relationship with the community that fosters trust and support for the school system.

Customers

Depending on the perspective, the term *customers* can have different meanings. Consider for a moment a retail store that sells electronics. That business has customers that purchase its electronics. These customers

are considered the end users of the product. The customers, knowingly or unknowingly, have a stake in the financial performance of the business. The customers benefit when the business is financially successful. Profitable businesses will continue to sell the products the customers want, maintain and improve the business facilities, provide employment for community members, and undertake many other activities that contribute to a vibrant and thriving community.

Businesses are also customers. In the example of the electronics store, the business purchases its products from other businesses, including the manufacturers of the electronics. Just as end-user customers have a vested interest in the financial success of the business, business customers also benefit from suppliers that have financial success. A supplier that is financially successful will help ensure the electronics will continue to be available to purchase and resell to the end-use customer, investments in emerging technologies will be made, and improvements in delivery and customer service will result. This, in turn, helps the retail electronics store remain cost competitive while being able to offer its customers a wide variety of products.

Managers and Other Employees

Employees have a strong interest in the financial performance of the organizations for which they work. At the most basic level, employees want to know their jobs will be secure so they can continue to be paid for their work. In addition, employees increase their value to the organization through their years of service, improving knowledge and skills, and accepting positions of increased responsibility. An organization that is financially successful is able to reward employees for that commitment to the organization through bonuses and increased pay.

In addition to promotional and compensation considerations, managers and others in the organization have the responsibility to make day-to-day and long-term (strategic) decisions for the organization. Understanding financial information is vital to making good organizational decisions.

Not all decisions, however, are based on strictly financial information. Recall that managers and other decision makers often use nonfinancial, or managerial, information. These decisions take into account other relevant factors that may not have an immediate and direct link to the financial reports. It is important to understand that sound organizational decisions are often (and should be) based on both financial and nonfinancial information.

In addition to exploring managerial accounting concepts, you will also learn some of the common techniques that are used to analyze the financial reports of businesses. Appendix A further explores these techniques and how stakeholders can use these techniques for making financial decisions.

IFRS CONNECTION

Introduction to International Financial Reporting Standards (IFRS)

In the past fifty years, rapid advances in communications and technology have led the economy to become more global with companies buying, selling, and providing services to customers all over the world. This increase in globalization creates a greater need for users of financial information to be able to compare and evaluate global companies. Investors, creditors, and management may encounter a need to assess a company that operates outside of the United States.

For many years, the ability to compare financial statements and financial ratios of a company headquartered in the United States with a similar company headquartered in another country, such as Japan, was challenging, and only those educated in the accounting rules of both countries could easily handle the comparison. Discussions about creating a common set of international accounting standards that would apply to all publicly traded companies have been occurring since the 1950s and post–World War II economic growth, but only minimal progress was made. In 2002, the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) began working more closely together to create a common set of accounting rules. Since 2002, the two organizations have released many accounting standards that are identical or similar, and they continue to work toward unifying or aligning standards, thus improving financial statement comparability between countries.

Why create a common set of international standards? As previously mentioned, the global nature of business has increased the need for comparability across companies in different countries. Investors in the United States may want to choose between investing in a US-based company or one based in France. A US company may desire to buy out a company located in Brazil. A Mexican-based company may desire to borrow money from a bank in London. These types of activities require knowledge of financial statements. Prior to the creation of IFRS, most countries had their own form of generally accepted accounting principles (GAAP). This made it difficult for an investor in the United States to analyze or understand the financials of a France-based company or for a bank in London to know all of the nuances of financial statements from a Mexican company. Another reason common international rules are important is the need for similar reporting for similar business models. For example, Nestlé and the Hershey Company are in different countries yet have similar business models; the same applies to Daimler and Ford Motor Company. In these and other instances, despite the similar business models, for many years these companies reported their results differently because they were governed by different GAAP—Nestlé by French GAAP, Daimler by German GAAP, and both the Hershey Company and Ford Motor Company by US GAAP. Wouldn't it make sense that these companies should report the results of their operations in a similar manner since their business models are similar? The globalization of the economy and the need for similar reporting across business models are just two of the reasons why the push for unified standards took a leap forward in the early twenty-first century.

Today, more than 120 countries have adopted all or most of IFRS or permit the use of IFRS for financial reporting. The United States, however, has not adopted IFRS as an acceptable method of GAAP for financial statement preparation and presentation purposes but has worked closely with the IASB. Thus, many US standards are very comparable to the international standards. Interestingly, the Securities and Exchange Commission (SEC) allows foreign companies that are traded on US exchanges to present their statements under IFRS rules without restating to US GAAP. This occurred in 2009 and was an important move by the SEC to show solidarity toward creating financial statement comparability across countries.

Throughout this text, "IFRS Connection" feature boxes will discuss the important similarities and most significant differences between reporting using US GAAP as created by FASB and IFRS as created by IASB. For now, know that it is important for anyone in business, not just accountants, to be aware of some of the primary similarities and differences between IFRS and US GAAP, because these differences can impact analysis and decision-making.

1.5 Describe the Varied Career Paths Open to Individuals with an Accounting Education

There are often misunderstandings on what exactly accountants do or what attributes are necessary for a successful career in accounting. Often, people perceive accountants as “number-crunchers” or “bean counters” who sit behind a desk, working with numbers, and having little interaction with others. The fact is that this perception could not be further from the truth.

Personal Attributes

While it is true that accountants often work independently, much of the work that accountants undertake involves interactions with other people. In fact, accountants frequently need to gather information from others and explain complex financial concepts to others, making excellent written and verbal communication skills a must. In addition, accountants often deal with strict deadlines such as tax filings, making prioritizing work commitments and being goal oriented necessities. In addition to these skills, traditionally, an accountant can be described as someone who

- is goal oriented,
- is a problem solver,
- is organized and analytical,
- has good interpersonal skills,
- pays attention to detail,
- has good time-management skills, and
- is outgoing.

The Association of Chartered Certified Accountants (ACCA), the governing body of the global Chartered Certified Accountant (CCA) designation, and the Institute of Management Accountants (IMA), the governing body of the Certified Management Accountant (CMA) designation, conducted a study to research the skills accountants will need given a changing economic and technological context. The findings indicate that, in addition to the traditional personal attributes, accountants should possess “traits such as entrepreneurship, curiosity, creativity, and strategic thinking.”[2]

Education

Entry-level positions in the accounting profession usually require a minimum of a bachelor’s degree. For advanced positions, firms may consider factors such as years of experience, professional development, certifications, and advanced degrees, such as a master’s or doctorate. The specific factors regarding educational requirements depend on the industry and the specific business.

After earning a bachelor’s degree, many students decide to continue their education by earning a master’s degree. A common question for students is when to begin a master’s program, either entering a master’s program immediately after earning a bachelor’s degree or first entering the profession and pursuing a master’s at a later point. On one hand, there are benefits of entering into a master’s program immediately after earning a bachelor’s degree, mainly that students are already into the rhythm of being a full-time

2 The Association of Chartered Certified Accountants (ACCA) and The Association of Accountants and Financial Professionals in Business (IMA). “100 Drivers of Change for the Global Accountancy Profession.” September 2012. https://www.imanet.org/insights-and-trends/the-future-of-management-accounting/100-drivers-of-change-for-the-global-accountancy-profession?ssopc=1

student so an additional year or so in a master's program is appealing. On the other hand, entering the profession directly after earning a bachelor's degree allows the student to gain valuable professional experience that may enrich the graduate education experience. When to enter a graduate program is not an easy decision. There are pros and cons to either position. In essence, the final decision depends on the personal perspective and alternatives available to the individual student. For example, one student might not have the financial resources to continue immediately on to graduate school and will first need to work to fund additional education, while another student might have outside suppliers of resources or is considering taking on additional student loan debt. The best recommendation for these students is to consider all of the factors and realize that they must make the final decision as to their own best alternative. It is also important to note that if one makes the decision to enter public accounting, as all states require 150 hours of education to earn a Certified Public Accountant (CPA) license, it is customary for regional and national public accounting firms to require a master's degree or 150 hours earned by other means as a condition for employment; this may influence your decision to enter a master's degree program as soon as the bachelor's degree is complete.

Related Careers

An accounting degree is a valuable tool for other professions too. A thorough understanding of accounting provides the student with a comprehensive understanding of business activity and the importance of financial information to make informed decisions. While an accounting degree is a necessity to work in the accounting profession, it also provides a solid foundation for other careers, such as financial analysts, personal financial planners, and business executives. The number of career options may seem overwhelming at this point, and a career in the accounting profession is no exception. The purpose of this section is to simply highlight the vast number of options that an accounting degree offers. In the workforce, accounting professionals can find a career that best fits their interests.

Students may also be interested in learning more about professional certifications in the areas of financial analysis (Chartered Financial Analyst) and personal financial planning (Certified Financial Planner), which are discussed later in this section.

Major Categories of Accounting Functions

It is a common perception that an accounting career means preparing tax returns. While numerous accountants do prepare tax returns, many people are surprised to learn of the variety of career paths that are available within the accounting profession. An accounting degree is a valuable tool that gives accountants a high level of flexibility and many options. Often individual accountants apply skills in several of the following career paths simultaneously. Figure 1.8 illustrates some of the many career paths open to accounting students.

Figure 1.8 Career Paths. There are many career paths open to students of accounting. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

Auditing

Auditing, which is performed by accountants with a specialized skill set, is the process of ensuring activities are carried out as intended or designed. There are many examples of the functions that auditors perform. For example, in a manufacturing company, auditors may sample products and assess whether or not the products conform to the customer specifications. As another example, county auditors may test pumps at gas stations to ensure the pumps are delivering the correct amount of gasoline and charging customers correctly.

Companies should develop policies and procedures to help ensure the company's goals are being met and the assets are protected. This is called the internal control system. To help maintain the effectiveness of the internal control system, companies often hire internal auditors, who evaluate internal controls through reviews and tests. For example, internal auditors may review the process of how cash is handled within a business. In this scenario, the goal of the company is to ensure that all cash payments are properly applied to customer accounts and that all funds are properly deposited into the company's bank account. As another example, internal auditors may review the shipping and receiving process to ensure that all products shipped or received have the proper paperwork and the product is handled and stored properly. While internal auditors also often work to ensure compliance with external regulations, the primary goal of internal auditors is to help ensure the company policies are followed, which helps the company attain its strategic goals and protect its assets. The professional certification most relevant to a career in internal audit is the Certified Internal Auditor (CIA). Financial fraud occurs when an individual or individuals act with intent to deceive for a financial gain. A Certified Fraud Examiner (CFE) is trained to prevent fraud from occurring and to detect when fraud has occurred. A thorough discussion of the internal control system and the role of accountants occurs in Fraud, Internal Controls, and Cash.

Companies also want to ensure the financial statements provided to outside parties such as banks, governmental agencies, and the investing public are reliable and consistent. That is, companies have a desire to provide financial statements that are free of errors or fraud. Since internal auditors are committed to providing unbiased financial information, it would be possible for the company to use internal auditors to attest to the integrity of the company's financial statements. With that said, doing so presents the appearance

of a *possibility* of a conflict of interest and could call into question the validity of the financial statements. Therefore, companies hire external auditors to review and attest to the integrity of the financial statements. External auditors typically work for a public accounting firm. Although the public accounting firm is hired by the company to attest to the fairness of the financial statements, the external auditors are independent of the company and provide an unbiased opinion.

Taxation

There are many taxes that businesses are required to pay. Examples include income taxes, payroll and related taxes such as workers' compensation and unemployment, property and inventory taxes, and sales and use taxes. In addition to making the tax payments, many of the taxes require tax returns and other paperwork to be completed. Making things even more complicated is the fact that taxes are levied at the federal, state, and local levels. For larger worldwide companies, the work needed to meet their international tax compliance requirements can take literally thousands of hours of accountants' time. To sum up the process, the goal of tax accountants is to help ensure the taxes are paid properly and in a timely manner, from an individual level all the way to the company level (including at the level of such companies as Apple and Walmart).

Since accountants have an understanding of various tax laws and filing deadlines, they are also well-positioned to offer tax planning advice. Tax laws are complex and change frequently; therefore, it is helpful for businesses to include tax considerations in their short- and long-term planning. Accountants are a valuable resource in helping businesses minimize the tax liability.

Many businesses find it necessary to employ accountants to work on tax compliance and planning on a full-time basis. Other businesses need these services on a periodic (quarterly or annual) basis and hire external accountants accordingly.

Financial Accounting

Financial accounting measures, in dollars, the activities of an organization. Financial accounting is historical in nature and is prepared using standard conventions, called accounting standards or GAAP. Because nearly every activity in an organization has a financial implication, financial accounting might be thought of as a "monetary scorecard."

Financial accounting is used internally by managers and other decision makers to validate activities that were done well and to highlight areas that need adjusted in the future. Businesses often use discretion as to how much and with whom financial accounting information is shared.

Financial accounting is also provided to those outside the organization. For a publicly traded company, issuing financial statements is required by the SEC. Sharing financial information for a privately held company is usually reserved for those instances where the information is required, such as for audits or obtaining loans.

Consulting

Because nearly every activity within an organization has a financial implication, accountants have a unique opportunity to gain a comprehensive view of an organization. Accountants are able to see how one area of a business affects a different aspect of the business. As accountants gain experience in the profession, this unique perspective allows them to build a "knowledge database" that is valuable to businesses. In this capacity, accountants can provide **consulting** services, which means giving advice or guidance to managers and other decision makers on the impact (both financial and nonfinancial) of a potential course of action. This role allows the organization to gain knowledge from the accountants in a way that minimizes risk and/or

financial investment.

As discussed previously, accountants may advise a business on tax-related issues. Other examples of consultative services that accountants perform include selection and installation of computer software applications and other technology considerations, review of internal controls, determination of compliance with relevant laws and regulations, review of compensation and incentive arrangements, and consideration of operational efficiencies within the production process.

Accounting Information Services

Computers are an integral part of business. Computers and related software programs allow companies to efficiently record, store, and process valuable data and information relevant to the business. Accountants are often an integral part of the selection and maintenance of the company's computerized accounting and information system. The goal of the accounting information system is to efficiently provide relevant information to internal decision makers, and it is important for businesses to stay abreast of advances in technology and invest in those technologies that help the business remain efficient and competitive.

Significant growth is expected in accounting information systems careers. According to the US Bureau of Labor Statistics, in 2010 there were over 130,000 jobs in the accounting informations systems sector, with over 49% growth expected through 2024. Median earnings in this field were over $73,000 in 2011 (https://www.bls.gov/opub/btn/volume-2/careers-in-growing-field-of-information-technology-services.htm). For those interested in both accounting and computer information systems, there are tremendous career opportunities.

CONCEPTS IN PRACTICE

Enterprise Resource Planning

As companies grow in size and expand geographically, it is important to assess whether or not a current computerized system is *the right size and fit* for the organization. For example, a company with a single location can easily manage its business activities with a small, off-the-shelf software package such as QuickBooks and software applications such as Microsoft Excel. A company's computer system becomes more complex when additional locations are added.

Figure 1.9 Growth. (credit: "Statistics Arrows Trends" by "geralt"/Pixabay, CC0)

As companies continue to grow, larger integrated computer systems, called enterprise resource planning (ERP) systems, may be implemented. Enterprise resource planning systems are designed to maintain the various aspects of the business within a single integrated computer system. For example, a leading ERP system is Microsoft Dynamics GP. Microsoft Dynamics GP is an integrated sytem with the capability to handle the human resource management, production, accounting, manufacturing, and many other aspects of a business. ERP systems, like Microsoft Dynamics GP, are also designed to accommodate companies that have international locations. The benefit of ERP systems is that information is efficiently stored and utilized across the entire business in real time.

Cost and Managerial Accounting

Cost accounting and managerial accounting are related, but different, types of accounting. In essence, a primary distinction between the two functions is that cost accounting takes a primarily quantitative approach, whereas managerial accounting takes both quantitative and qualitative approaches. The goal of cost accounting is to determine the costs involved with providing goods and services. In a manufacturing business, **cost accounting** is the recording and tracking of costs such as direct materials, employee wages, and supplies used in the manufacturing process.

Managerial accounting uses cost accounting and other financial accounting information, as well as nonfinancial information, to make short-term as well as strategic and other long-term decisions for a business.

Both cost and managerial accounting are intended to be used inside a business. Along with financial accounting information, managers and other decision makers within a business use the information to facilitate decision-making, develop long-term plans, and perform other functions necessary for the success of the business.

There are two major differences between cost and managerial accounting and financial accounting. Whereas financial accounting requires the use of standard accounting conventions (also called accounting standards or GAAP), there are no such requirements for cost and managerial accounting. In practice, management has different needs that require cost and managerial accounting information. In addition, financial information is prepared in specific intervals of time, usually monthly. The same is not true with cost and managerial accounting, which are prepared on an as-needed basis that is not reported as specific periods of time.

An example may be helpful in clarifying the difference between cost and managerial accounting. Manufacturing companies often face the decision of whether to make certain components or purchase the components from an outside supplier. Cost accounting would calculate the cost of each alternative. Managerial accounting would use that cost and supplement the cost with nonfinancial information to arrive at a decision. Let's say the cost accountants determine that a company would save $0.50 per component if the units were purchased from an outside supplier rather than being produced by the company. Managers would use the $0.50 per piece savings as well as nonfinancial considerations, such as the impact on the morale of current employees and the supplier's ability to produce a quality product, to make a decision whether or not to purchase the component from the outside supplier.

In summary, it may be helpful to think of cost accounting as a subset of managerial accounting. Another way to think about cost and managerial accounting is that the result of cost accounting is a number, whereas the result of managerial accounting is a decision.

Financial Planning

While accountants spend much of their time interacting with other people, a large component of their work involves numbers and finances. As mentioned previously, many people with an interest in data often go into the accounting profession and have a natural inclination toward solving problems. In addition, accountants also gain a comprehensive view of business. They understand how the diverse aspects of the business are connected and how those activities ultimately have a financial impact on the organization.

These attributes allow accountants to offer expertise in financial planning, which takes many forms. Within a business, making estimates and establishing a plan for the future—called a budget—are vital. These actions allow the business to determine the appropriate level of activity and make any adjustments accordingly. Training in accounting is also helpful for those who offer financial planning for individuals. When it comes to investing and saving for the future, there are many options available to individuals. Investing is complicated, and many people want help from someone who understands the complexities of the investment options, the tax implications, and ways to invest and build wealth. Accountants are well trained to offer financial planning services to the businesses they work with as well as individuals investing for their future.

Entrepreneurship

Many people have an idea for a product or service and decide to start their own business—they are often labeled as entrepreneurs. These individuals have a passion for their product or service and are experts at what they do. But that is not enough. In order for the business to be successful, the entrepreneur must understand all aspects of the business, including and especially the financial aspect. It is important for the entrepreneur to understand how to obtain the funding to start the business, measure the financial performance of the business, and know what adjustments to improve the performance of the business are necessary and when to make them. Understanding accounting, or hiring accountants who can perform these activities, is valuable to the entrepreneur. An entrepreneur works extremely hard and has often taken a great risk in starting his or her own business. Understanding the financial performance of the business helps ensure the business is successful.

CONCEPTS IN PRACTICE

Entrepreneurship

Entrepreneurs do not have to develop a brand new product or service in order to open their own business. Often entrepreneurs decide to purchase a store from a business that already exists. This is called a franchise arrangement. In these arrangements, the business owner (the franchisee) typically pays the franchisor (the business offering the franchise opportunity) a lump sum at the beginning of the arrangement. This lump sum payment allows the franchisee an opportunity to use the store logos and receive training, consulting, and other support from the franchisor. A series of scheduled payments is also common. The ongoing payments are often based on a percentage of the franchise store's sales.

The franchise arrangement is beneficial to both parties. For the franchisee, there is less risk involved because they often purchase a franchise from a business with an established track record of success. For the franchisor, it is an opportunity to build the brand without the responsbility of direct oversight for individual stores—each franchise is independently owned and operated (a phrase you might see on franchise stores).

The downside of the franchising arrangement is the amount of money that is paid to the franchisor through the initial lump sum as well as continued payments. These costs, however, are necessary for the ongoing support from the franchisor. In addition, franchisees often have restrictions relative to product pricing and offerings, geographic locations, and approved suppliers.

According to Entrepreneur.com, based on factors such as costs and fees, support, and brand strength, the number one–ranking franchise in 2017 was 7-Eleven, Inc. According to the website, 7-Eleven has been franchising since 1964 and has 61,086 franchise stores worldwide (7,025 are located in the United States). In addition, 7-Eleven has 1,019 company-owned stores. (Taken from: https://www.entrepreneur.com/franchises/7eleveninc/282052.)

Major Categories of Employers

Now that you've learned about the various career paths that accountants can take, let's briefly look at the types of organizations that accountants can work for. Figure 1.10 illustrates some common types of employers that require accountants. While this is not an all-inclusive list, most accountants in the profession are employed by these types of organizations.

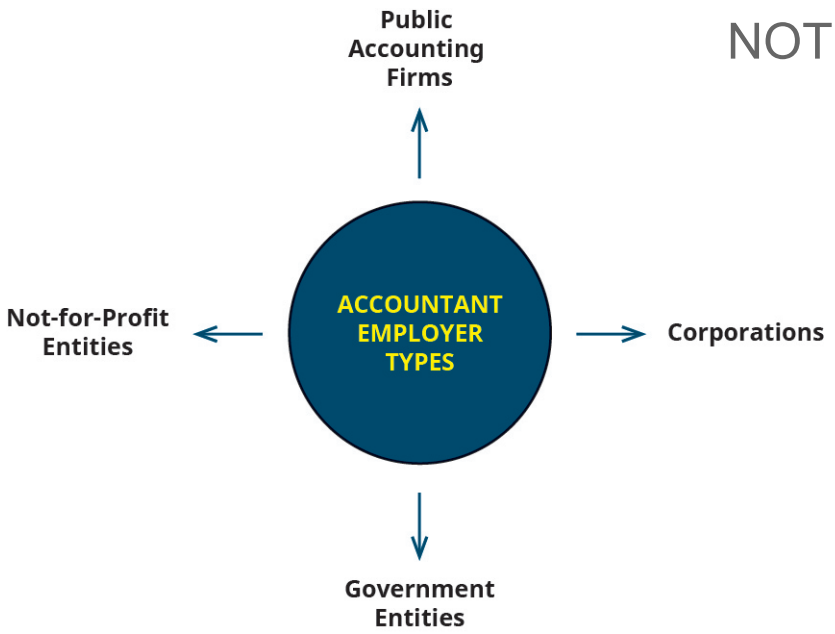


Figure 1.10 Accountant Employer Types. Accountants may find employment within a variety of types of entities. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

Public Accounting Firms

Public accounting firms offer a wide range of accounting, auditing, consulting, and tax preparation services to their clients. A small business might use a public accounting firm to prepare the monthly or quarterly financial statements and/or the payroll. A business (of any size) might hire the public accounting firm to audit the company financial statements or verify that policies and procedures are being followed properly. Public accounting firms may also offer consulting services to their clients to advise them on implementing computerized systems or strengthening the internal control system. (Note that you will learn in your advanced study of accounting that accountants have legal limitations on what consulting services they can provide to their clients.) Public accounting firms also offer tax preparation services for their business and individual clients. Public accounting firms may also offer business valuation, forensic accounting (financial crimes), and other services.

Public accounting firms are often categorized based on the size (revenue). The biggest firms are referred to as the "Big Four" and include Deloitte Touche Tohmatsu Limited (DTTL), PricewaterhouseCoopers (PwC), Ernst & Young (EY), and KPMG. Following the Big Four in size are firms such as RSM US, Grant Thornton, BDO USA, Crowe, and CliftonLarsonAllen (CLA).[3] There are also many other regional and local public accounting firms.

Public accounting firms often expect the accountants they employ to have earned (or will earn) the Certified Public Accountant (CPA) designation. It is not uncommon for public accounting firms to specialize. For example, some public accounting firms may specialize in serving clients in the banking or aerospace industries. In addition to specializing in specific industries, public accounting firms may also specialize in areas of accounting such as tax compliance and planning.

Hiring public accounting firms to perform various services is an attractive option for many businesses. The primary benefit is that the business has access to experts in the profession without needing to hire accounting

3 "2017 Top 100 Firms." *Accounting Today*. 2017. https://lscpagepro.mydigitalpublication.com/publication/?i=390208#{%22issue_id%22:390208,%22page%22:0}

specialists on a full-time basis.

Corporations

Corporations hire accountants to perform various functions within the business. The primary responsibility of corporate accountants (which include cost and managerial accountants) is to provide information for internal users and decision makers, as well as implement and monitor internal controls. The information provided by corporate accountants takes many forms. For example, some of the common responsibilities of corporate accountants include calculating and tracking the costs of providing goods and services, analyzing the financial performance of the business in comparison to expectations, and developing budgets, which help the company plan for future operations and make any necessary adjustments. In addition, many corporate accountants have the responsibility for or help with the company's payroll and computer network.

In smaller corporations, an accountant may be responsible for or assist with several of these activities. In larger firms, however, accountants may specialize in one of the areas of responsibilities and may rotate responsibilities throughout their career. Many larger firms also use accountants as part of the internal audit function. In addition, many large companies are able to dedicate resources to making the organization more efficient. Programs such as Lean Manufacturing and Six Sigma focus on reducing waste and eliminating cost within the organization. Accountants trained in these techniques receive specialized training that focuses on the cost impact of the activities of the business.

As with many organizations, professional certifications are highly valued in corporations. The primary certification for corporate accounting is the Certified Management Accountant (CMA). Because corporations also undertake financial reporting and related activities, such as tax compliance, corporations often hire CPAs.

Governmental Entities

Accountants in governmental entities perform many of the same functions as accountants in public accounting firms and corporations. The primary goal of **governmental accounting** is to ensure proper tracking of the inflows and outflows of taxpayer funds using the proscribed standards. Some governmental accountants also prepare and may also audit the work of other governmental agencies to ensure the funds are properly accounted for. The major difference between accountants in governmental entities and accountants working in public accounting firms and corporations relates to the specific rules by which the financial reporting must be prepared. Whereas as accountants in public accounting firms and corporations use GAAP, governmental accounting is prepared under a different set of rules that are specific to governmental agencies, as previously referred to as the Governmental Accounting Standards Board (GASB). Students continuing their study of accounting may take specific courses related to governmental accounting.

Accountants in the governmental sector may also work in specialized areas. For example, many accountants work for tax agencies at the federal, state, and local levels to ensure the tax returns prepared by businesses and individuals comply with the tax code appropriate for the particular jurisdiction. As another example, accountants employed by the SEC may investigate instances where financial crimes occur, as in the case of Bernie Madoff, which was discussed in Concepts in Practice: Financial Professionals and Fraud.

CONCEPTS IN PRACTICE

Bringing Down Capone

Al Capone was one of the most notorious criminals in American history. Born in 1899 in Brooklyn, New York, Al Capone rose to fame as a gangster in Chicago during the era of Prohibition. By the late 1920s–1930s, Capone controlled a syndicate with a reported annual income of $100 million.

Al Capone was credited for many murders, including masterminding the famous 1929 St. Valentine's Day murder, which killed seven rival gang members. But law enforcement was unable to convict Capone for the murders he committed or orchestrated. Through bribes and extortion, Capone was able to evade severe punishment, being charged at one point with gun possession and serving a year in jail.

Capone's luck ran out in 1931 when he was convicted of federal tax evasion. In 1927, the United States Supreme Court ruled that earnings from illegal activities were taxable. Capone, however, did not claim the illegal earnings on his 1928 and 1929 income tax returns and was subsequently sentenced to eleven years in prison. Up to that point, it was the longest-ever sentence for tax evasion.

Al Capone was paroled from prison in November 1939 and died on January 25, 1947. His life has been the subject of many articles, books, movies including *Scarface* (1932), and the TV series *The Untouchables* (1993).

Those interested in stories like this might consider working for the Federal Bureau of Investigation (FBI). According to the FBI, as of 2012, approximately 15% of FBI agents are special agent accountants.

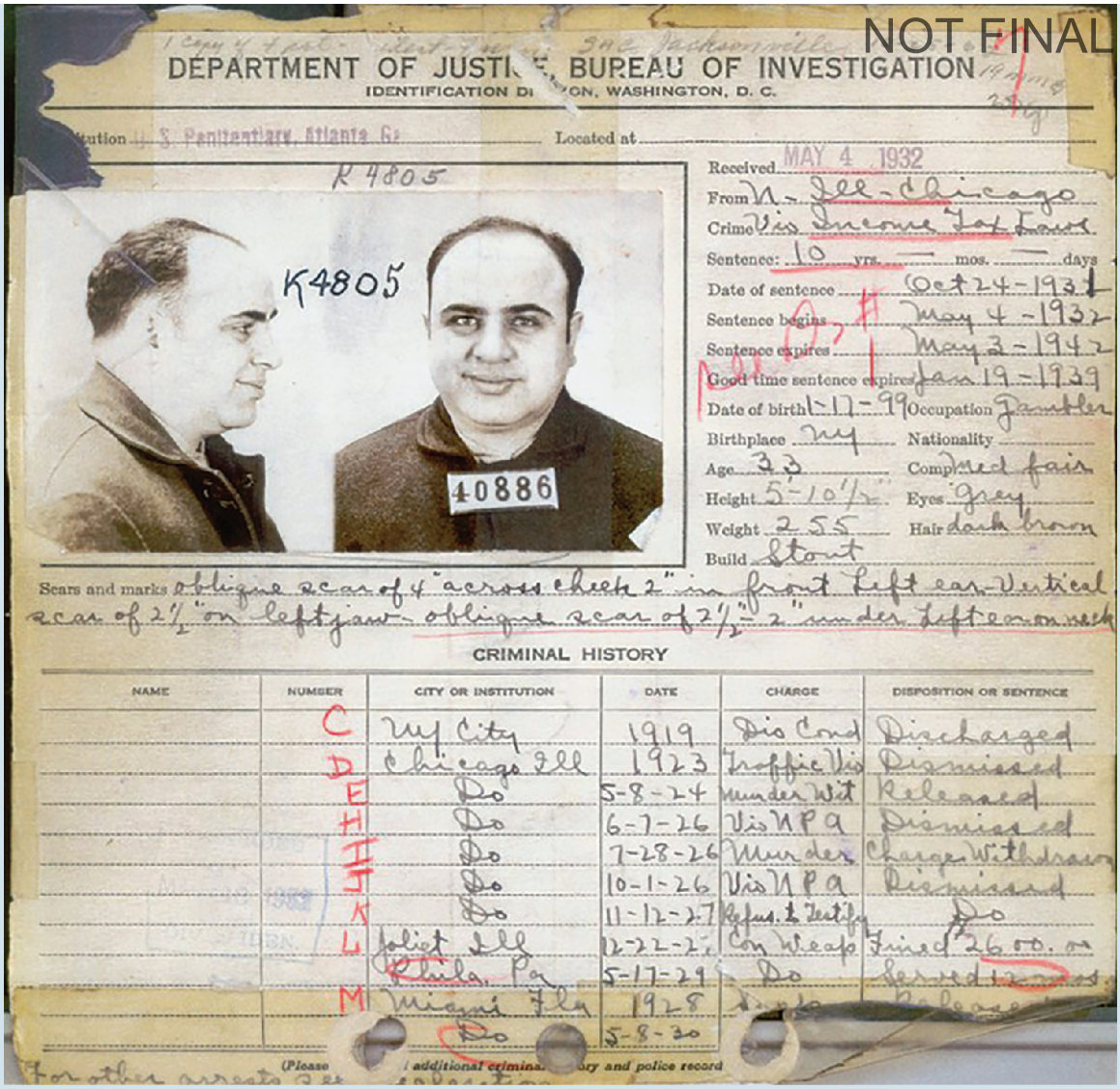


Figure 1.11 Al Capone. The FBI's 1932 criminal record on Al Capone shows the many charges against him, most of which were dismissed. (credit: "Capone's criminal record in 1932" by FBI/United States Bureau of Prisons/Wikimedia Commons, Public Domain)

Not-for-Profit Entities, Including Charities, Foundations, and Universities

Not-for-profit entities include charitable organizations, foundations, and universities. Unlike for-profit entities, not-for-profit organizations have a primary focus of a particular mission. Therefore, **not-for-profit (NFP) accounting** helps ensure that donor funds are used for the intended mission. Much like accountants in governmental entities, accountants in not-for-profit entities use a slightly different type of accounting than other types of businesses, with the primary difference being that not-for-profit entities typically do not pay income taxes.

However, even if a not-for-profit organization is not subjected to income taxes in a particular year, it generally must file informational returns, such as a Form 990, with the Internal Revenue Service (IRS). Information, such

as sources and amounts of funding and major types and amounts of expenditures, is documented by the not-for-profit entities to provide information for potential and current donors. Once filed with the IRS, Form 990 is available for public view so that the public can monitor how the specific charity uses proceeds as well as its operational efficiency.

Potential Certifications for Accountants

As previously discussed, the study of accounting serves as a foundation for other careers that are similar to accounting, and the certifications described here reflect that relationship.

There are many benefits to attaining a professional certification (or multiple certifications) in addition to a college degree. Certifications often cover material at a deeper and more complex level than might typically be covered in a college program. Those earning a professional certification demonstrate their willingness to invest the additional time and energy into becoming experts in the particular field. Because of this, employees with professional certifications are often in higher demand and earn higher salaries than those without professional certifications. Companies also benefit by having employees with professional certifications. A well-trained staff with demonstrated expertise conveys a level of professionalism that gives the organization a competitive advantage. In addition, professional certifications often require a certain number of hours of ongoing training. This helps ensure that the certificate holder remains informed as to the current advances within the profession and benefits both the employee and the employer.

Certifications are developed and governed by the respective governing body. Each issuing body establishes areas of content and requirements for the specific certification. Links to the particular websites are provided so you can easily gain additional information.

It is also important to note that many of the certifications have review courses available. The review courses help students prepare for the exam by offering test-taking strategies, practice questions and exams, and other materials that help students efficiently and effectively prepare for the exams.

ETHICAL CONSIDERATIONS

Accounting Codes of Ethics

In the United States, accountants can obtain a number of different certifications and can be licensed by each state to practice as a Certified Public Accountant (CPA). Accountants can also belong to professional organizations that have their own codes of conduct. “Many people engaged in business activity, including accountants and lawyers, are professionals. As such, they are bound by codes of conduct promulgated by professional societies. Many firms also have detailed codes of conduct, developed and enforced by teams of ethics and compliance personnel.”[4] CPAs can find a code of ethics in each state of practice and with the AICPA.[5] Certifications such as the CMA, CIA, CFE, CFA, and CFP each have their own codes of ethics.

International accountants also work within each country’s code of ethics, and “more than 100 countries have adopted the International Federation of Accountants’ (IFAC) Code of Ethics for Professional Accountants.”[6] When auditing a public company, CPAs may also have to follow a special code of ethics

4 Stanford Encyclopedia of Philosophy. “Business Ethics.” November 17, 2016. https://plato.stanford.edu/entries/ethics-business/

created by the Public Company Accounting Oversight Board (PCAOB), or when performing federal tax work, the US Treasury Department's Circular No. 230 code of ethics. These are just some examples of ethical codes that are covered in more detail in this course. Each area of accounting work has its own set of ethical rules, but they all require that a professional accountant perform his or her work with integrity.

Certified Public Accountant (CPA)

The Certified Public Accountant (CPA) designation is earned after passing a uniform exam issued by the American Institute of Certified Public Accountants (AICPA). While the exam is a uniform, nationally administered exam, each state issues and governs CPA licenses.

The CPA exam has four parts: Auditing and Attestation (AUD), Business Environment and Concepts (BEC), Financial Accounting and Reporting (FAR), and Regulation (REG). A score of at least 75% must be earned in order to earn the CPA designation.

Since each state determines the requirements for CPA licenses, students are encouraged to check the state board of accountancy for specific requirements. In Ohio, for example, candidates for the CPA exam must have 150 hours of college credit. Of those, thirty semester hours (or equivalent quarter hours) must be in accounting. Once the CPA designation is earned in Ohio, 120 hours of continuing education must be taken over a three-year period in order to maintain the certification. The requirements for the Ohio CPA exam are similar to the requirements for other states. Even though states issue CPA licenses, a CPA will not lose the designation should he or she move to another state. Each state has mobility or reciprocity requirements that allow CPAs to transfer licensure from one state to another. Reciprocity requirements can be obtained by contacting the respective state board of accountancy.

The majority of states require 150 hours of college credit. Students often graduate with a bachelor's degree with approximately 120–130 credit hours. In order to reach the 150-hour requirement that specific states have, students have a couple of options. The extra hours can be earned either by taking additional classes in their undergraduate program or by entering a graduate program, earning a master's degree. Master's degrees that would be most beneficial in an accounting or related field would be a master of accountancy, master in taxation, or a master in analytics, which is rapidly increasing in demand.

LINK TO LEARNING

Information about the Certified Public Accountant (CPA) exam is provided by the following:

- the American Institute of Certified Public Accountants (AICPA) (https://openstax.org/l/50AICPA_CPA)
- the National Association of State Boards of Accountancy (NASBA) (https://openstax.org/l/50NASBA_CPA)
- This Way to CPA (https://openstax.org/l/50ThisWayCPA)

5 American Institute of Certified Public Accountants (AICPA). "AICPA Code of Professional Conduct." n.d. https://www.aicpa.org/research/standards/codeofconduct.html

6 Catherine Allen and Robert Bunting. "A Global Standard for Professional Ethics: Cross-Border Business Concerns." May 2008. https://www.ifrs.com/overview/Accounting_Firms/Global_Standard.html

Certified Management Accountant (CMA)

The Certified Management Accountant (CMA) exam is developed and administered by the Institute of Management Accountants (IMA). There are many benefits in earning the CMA designation, including career advancement and earnings potential. Management accountants, among other activities, prepare budgets, perform analysis of financial and operational variances, and determine the cost of providing goods and services. Earning a certification enables the management accountant to advance to management and executive positions within the organization. Along with promotional opportunities, a study by Krippel and Mitchell (2017) indicated that a 22-year-old CMA, compared to a noncertified accountant, can add over $500,000 to career earnings (https://www.imanet.org/cma-certification?ssopc=1).

The CMA exam has two parts: Financial Reporting, Planning, Performance, and Control (part 1) and Financial Decision-Making (part 2). A score of at least 72% must be earned in order to earn the CMA designation. A minimum of a bachelor's degree is required to take the CMA exam. An accounting degree or a specific number of credit hours in accounting is not required in order to take the CMA exam. Once the CMA designation is earned, thirty hours of continuing education with two of the hours focusing on ethics must be taken annually in order to maintain the certification.

LINK TO LEARNING

Visit the Institute of Management Accountants (IMA)'s page on the Certified Management Accountant (CMA) exam and certification (https://openstax.org/l/50CMAExamIMA) to learn more.

Certified Internal Auditor (CIA)

The Certified Internal Auditor (CIA) exam is developed and administered by the Institute of Internal Auditors (IIA). According to the IIA website, the four-part CIA exam tests "candidates' grasp of internal auditing's role in governance, risk, and control; conducting an audit engagement; business analysis and information technology; and business management skills."[7]

If a candidate does not have a bachelor's degree, eligibility to take the CIA is based on a combination of work experience and education experience. In order to earn the CIA designation, a passing score of 80% is required. After successful passage of the CIA exam, certificate holders are required to earn eighty hours of continuing education credit every two years.[8]

LINK TO LEARNING

Information about the Certified Internal Auditor (CIA) exam is provided by the following:

- the Institute of Internal Auditors (IIA), Global (https://openstax.org/l/50IIAGlobeCIA)

7 The Institute of Internal Auditors. "What Does It Take to Be a Professional?" n.d. https://na.theiia.org/about-ia/PublicDocuments/WDIT_Professional-WEB.pdf
8 Ibid.

- the Institute of Internal Auditors (IIA), North America (https://openstax.org/l/50IIANorthAmCIA)

Certified Fraud Examiner (CFE)

The Certified Fraud Examiner (CFE) exam is developed and administered by the Association of Certified Fraud Examiners (ACFE). Eligibility to take the CFE is based on a points system based on education and work experience. Candidates with forty points may take the CFE exam, and official certification is earned with fifty points or more. A bachelor's degree, for example, is worth forty points toward eligibility of the fifty-point requirement for the CFE certification. The CFE offers an attractive supplement for students interested in pursuing a career in accounting fraud detection. Students might also consider studying forensic accounting in college. These courses are often offered at the graduate level.

The CFE exam has four parts: Fraud Prevention and Deterrence, Financial Transactions and Fraud Schemes, Investigation, and Law. Candidates must earn a minimum score of 75%. Once the CFE is earned, certificate holders must annually complete at least twenty hours of continuing education. The CFE certification is valued in many organizations, including governmental agencies at the local, state, and federal levels.

LINK TO LEARNING

Visit the Association of Certified Fraud Examiners (ACFE) page on the Certified Fraud Examiner (CFE) exam (https://openstax.org/l/50ACFE_CFEexam) to learn more.

Chartered Financial Analyst (CFA)

The Chartered Financial Analyst (CFA) certification is developed and administered by the CFA Institute. The CFA exam contains three levels (level I, level II, and level III), testing expertise in Investment Tools, Asset Classes, and Portfolio Management. Those with a bachelor's degree are eligible to take the CFA exam. In lieu of a bachelor's degree, work experience or a combination of work experience and education is considered satisfactory for eligibility to take the CFA exam. After taking the exam, candidates receive a "Pass" or "Did Not Pass" result. A passing score is determined by the CFA Institute once the examination has been administered. The passing score threshold is established after considering factors such as exam content and current best practices. After successful passage of all three levels of the CFA examination, chartered members must earn at least twenty hours annually of continuing education, of which two hours must be in Standards, Ethics, and Regulations (SER).

LINK TO LEARNING

Visit the the CFA Institute's page on the Chartered Financial Analyst (CFA) exam (https://openstax.org/l/50CFA_CFAexam) to learn more.

Certified Financial Planner (CFP)

The Certified Financial Planner (CFP) certification is developed and administered by the Certified Financial Planner (CFP) Board of Standards. The CFP exam consists of 170 multiple-choice questions that are taken over two, three-hour sessions. There are several ways in which the eligibility requirements can be met in order to take the CFP exam, which students can explore using the CFP Board of Standards website. As with the Chartered Financial Analyst (CFA) exam, the CFP Board of Standards does not predetermine a passing score but establishes the pass/fail threshold through a deliberative evaluation process. Upon successful completion of the exam, CFPs must obtain thirty hours of continuing education every two years, with two of the hours focused on ethics.

LINK TO LEARNING

Visit the Certified Financial Planners (CFP) Board of Standards page on the the Certified Financial Planner (CFP) exam (https://openstax.org/l/50CFP_CFPexam) to learn more.

Key Terms

accounting process of organizing, analyzing, and communicating financial information that is used for decision-making

auditing process of ensuring activities are carried out as intended or designed

consulting process of giving advice or guidance on financial and nonfinancial impact of a course of action

cost accounting recording and tracking of costs in the manufacturing process

creditor business that grants extended, but short-term, payment terms to other businesses

financial accounting measures the financial performance of an organization using standard conventions to prepare financial reports

Financial Accounting Standards Board (FASB) organization that sets standards for accounting methods and practices in the United States, including GAAP

for-profit business has the primary purpose of earning a profit by selling goods and services

generally accepted accounting principles (GAAP) concepts, standards, and rules that guide the preparation and presentation of financial statements; FASB uses the GAAP as its basis or foundation for its system of accepted accounting methods and practices

governmental accounting process of tracking the inflows and outflows of taxpayer funds using prescribed standards

Governmental Accounting Standards Board (GASB) source of generally accepted accounting principles (GAAP) used by state and local governments in the United States; is a private nongovernmental organization

governmental entity provides services to the general public (taxpayers)

lender bank or other institution that has the primary purpose of lending money

managerial accounting uses both financial and nonfinancial information as a basis on which to make decisions within an organization

manufacturing business for-profit business that is designed to make a specific product or products

not-for-profit (NFP) accounting including charities, universities, and foundations, helps ensure that donor funds are used for the intended mission of the not-for-profit entity

not-for-profit entity has the primary purpose of serving a particular interest or need in the community

privately held company one whose stock is available only to employees or select individuals or groups

publicly traded company one whose stock is traded (bought and sold) on an organized stock exchange

retail business for-profit business that purchases products (called inventory) and resells the products without altering them

Securities and Exchange Commission (SEC) federal government agency that is charged with protecting the investing public

service business business that does not sell tangible products to customers but rather sells intangible benefits (services) to customers; can be either a for-profit or a not-for-profit organization

stakeholder person or group that relies on financial information to make decisions

stockholder owner of stock, or shares, in a business

transaction business activity that has value

Summary

1.1 Explain the Importance of Accounting and Distinguish between Financial and Managerial Accounting

- Accounting is the process of organizing, analyzing, and communicating financial information that is used for decision-making.
- Accounting is often called the “language of business.”
- Financial accounting measures performance using financial reports and communicates results to those outside of the organization who may have an interest in the company’s performance, such as investors and creditors.
- Managerial accounting uses both financial and nonfinancial information to aid in decision-making.

1.2 Identify Users of Accounting Information and How They Apply Information

- The primary goal of accounting is to provide accurate, timely information to decision makers.
- Accountants provide information to internal and external users.
- Financial accounting measures an organization’s performance in monetary terms.
- Accountants use common conventions to prepare and convey financial information.
- Financial accounting is historical in nature, but a series of historical events can be useful in establishing predictions.
- Financial accounting is intended for use by both internal and external users.
- Managerial accounting is primarily intended for internal users.

1.3 Describe Typical Accounting Activities and the Role Accountants Play in Identifying, Recording, and Reporting Financial Activities

- Accountants play a vital role in many types of organizations.
- Organizations can be placed into three categories: for profit, governmental, and not for profit.
- For-profit organizations have a primary purpose of earning a profit.
- Governmental entities provide services to the general public, both individuals and organizations.
- Governmental agencies exist at the federal, state, and local levels.
- Not-for-profit entities have the primary purpose of serving a particular interest or need in communities.
- For-profit businesses can be further categorized into manufacturing, retail (or merchandising), and service.
- Manufacturing businesses are for-profit businesses that are designed to make a specific product or products.
- Retail firms purchase products and resell the products without altering the products.
- Service-oriented businesses provide services to customers.

1.4 Explain Why Accounting Is Important to Business Stakeholders

- Stakeholders are persons or groups that rely on financial information to make decisions.
- Stakeholders include stockholders, creditors, governmental and regulatory agencies, customers, and managers and other employees.
- Stockholders are owners of a business.
- Publicly traded companies sell stock (ownership) to the general public.
- Privately held companies offer stock to employees or to select individuals or groups outside the organization.
- Creditors sometimes grant extended payment terms to other businesses, normally for short periods of time, such as thirty to forty-five days.
- Lenders are banks and other institutions that have a primary purpose of lending money for long periods of time.
- Businesses generally have three ways to raise capital (money): profitable operations, selling ownership (called equity financing), and borrowing from lenders (called debt financing).
- In business, profit means the inflows of resources are greater than the outflows of resources.

- Publicly traded companies are required to file with the Securities and Exchange Commission (SEC), a federal government agency charged with protecting the investing public.
- Guidelines for the accounting profession are called accounting standards or generally accepted accounting principles (GAAP).
- The Securities and Exchange Commission (SEC) is responsible for establishing accounting standards for companies whose stocks are traded publicly on a national or regional stock exchange, such as the New York Stock Exchange (NYSE).
- Governmental and regulatory agencies at the federal, state, and local levels use financial information to accomplish the mission of protecting the public interest.
- Customers, employees, and the local community benefit when businesses are financially successful.

1.5 Describe the Varied Career Paths Open to Individuals with an Accounting Education

- It is important for accountants to be well versed in written and verbal communication and possess other nonaccounting skill sets.
- A bachelor's degree is typically required for entry-level work in the accounting profession.
- Advanced degrees and/or professional certifications are beneficial for advancement within the accounting profession.
- Career paths within the accounting profession include auditing, taxation, financial accounting, consulting, accounting information systems, cost and managerial accounting, financial planning, and entrepreneurship.
- Internal control systems help ensure the company's goals are being met and company assets are protected.
- Internal auditors work inside business and evaluate the effectiveness of internal control systems.
- Accountants help ensure the taxes are paid properly and in a timely manner.
- Accountants prepare financial statements that are used by decision makers inside and outside of the organization.
- Accountants can advise managers and other decision makers.
- Accountants are often an integral part of managing a company's computerized accounting and information system.
- Cost accounting determines the costs involved with providing goods and services.
- Managerial accounting incorporates financial and nonfinancial information to make decisions for a business.
- Training in accounting is helpful for financial planning services for businesses and individuals.
- Accounting helps entrepreneurs understand the financial implications of their business.
- Accountants have opportunities to work for many types of organizations, including public accounting firms, corporations, governmental entities, and not-for-profit entities.
- Professional certifications offer many benefits to those in the accounting and related professions.
- Common professional certifications include Certified Public Accountant (CPA), Certified Management Accountant (CMA), Certified Internal Auditor (CIA), Certified Fraud Examiner (CFE), Chartered Financial Analyst (CFA), and Certified Financial Planner (CFP).

Multiple Choice

1. LO 1.2 Accounting is sometimes called the "language of ____."
- A. Wall Street
- B. business
- C. Main Street
- D. financial statements

2. LO 1.2 Financial accounting information _____.
- A. should be incomplete in order to confuse competitors
- B. should be prepared differently by each company
- C. provides investors guarantees about the future
- D. summarizes what has already occurred

3. LO 1.2 External users of financial accounting information include all of the following *except* _____.
- A. lenders such as bankers
- B. governmental agencies such as the IRS
- C. employees of a business
- D. potential investors

4. LO 1.2 Which of the following groups would have access to managerial accounting information?
- A. bankers
- B. investors
- C. competitors of the business
- D. managers

5. LO 1.2 All of the following are examples of managerial accounting activities *except* _____.
- A. preparing external financial statements in compliance with GAAP
- B. deciding whether or not to use automation
- C. making equipment repair or replacement decisions
- D. deciding whether or not to use automation

6. LO 1.3 Which of the following is *not* true?
- A. Organizations share a common purpose or mission.
- B. Organizations have inflows and outflows of resources.
- C. Organizations add value to society.
- D. Organizations need accounting information.

7. LO 1.3 The primary purpose of what type of business is to serve a particular need in the community?
- A. for-profit
- B. not-for-profit
- C. manufacturing
- D. retail

8. LO 1.3 Which of the following is *not* an example of a retailer?

A. electronics store
B. grocery store
C. car dealership
D. computer manufacturer
E. jewelry store

9. LO 1.3 A governmental agency can best be described by which of the following statements?

A. has a primary purpose of making a profit
B. has a primary purpose of using taxpayer funds to provide services
C. produces goods for sale to the public
D. has regular shareholder meetings

10. LO 1.3 Which of the following is likely *not* a type of not-for-profit entity?

A. public library
B. community foundation
C. university
D. local movie theater

11. LO 1.4 Which of the following is *not* considered a stakeholder of an organization?

A. creditors
B. lenders
C. employees
D. community residents
E. a business in another industry

12. LO 1.4 Stockholders can best be defined as which of the following?

A. investors who lend money to a business for a short period of time
B. investors who lend money to a business for a long period of time
C. investors who purchase an ownership in the business
D. analysts who rate the financial performance of the business

13. LO 1.4 Which of the following sell stock on an organized stock exchange such as the New York Stock Exchange?

A. publicly traded companies
B. not-for-profit businesses
C. governmental agencies
D. privately held companies
E. government-sponsored entities

14. LO 1.4 All of the following are sustainable methods businesses can use to raise capital (funding) *except* for _____.

A. borrowing from lenders
B. selling ownership shares
C. profitable operations
D. tax refunds

15. LO 1.4 The accounting information of a privately held company is generally available to all of the following *except for* _____.

A. governmental agencies
B. investors
C. creditors and lenders
D. competitors

16. LO 1.5 Which of the following skills/attributes is *not* a primary skill for accountants to possess?

A. written communication
B. verbal communication
C. ability to work independently
D. analytical thinking
E. extensive computer programing background

17. LO 1.5 Which of the following is typically required for entry-level positions in the accounting profession?

A. bachelor's degree
B. master's degree
C. Certified Public Accountant (CPA)
D. Certified Management Accountant (CMA)
E. only a high school diploma

18. LO 1.5 Typical accounting tasks include all of the following tasks *except* _____.

A. auditing
B. recording and tracking costs
C. tax compliance and planning
D. consulting
E. purchasing direct materials

19. LO 1.5 What type of organization primarily offers tax compliance, auditing, and consulting services?

A. corporations
B. public accounting firms
C. governmental entities
D. universities

20. LO 1.5 Most states require 150 semester hours of college credit for which professional certification?

A. Certified Management Accountant (CMA)
B. Certified Internal Auditor (CIA)
C. Certified Public Accountant (CPA)
D. Certified Financial Planner (CFP)

Questions

The following websites might be helpful in answering questions 1 and 2.

- Occupational Outlook Handbook: https://www.bls.gov/ooh/
- National Association of Colleges and Employers: http://www.naceweb.org/
- O*Net OnLine: https://www.onetonline.org/find/

1. LO 1.2 Research your top five career choices. Identify financial factors that might influence your career choice. The following websites might be helpful in answering this question.

- Occupational Outlook Handbook: https://www.bls.gov/ooh/
- National Association of Colleges and Employers: http://www.naceweb.org/
- O*Net OnLine: https://www.onetonline.org/find/

2. LO 1.2 Using the same top five career choices, identify nonfinancial factors that might influence your career choice. The following websites might be helpful in answering this question.

- Occupational Outlook Handbook: https://www.bls.gov/ooh/
- National Association of Colleges and Employers: http://www.naceweb.org/
- O*Net OnLine: https://www.onetonline.org/find/

3. LO 1.2 Think about a recent purchase you made. Describe what financial and nonfinancial factors went into that purchase. Rank the factors, and explain how you made the final decision to purchase the item.

4. LO 1.2 Computerized accounting systems help businesses efficiently record and utilize financial information. QuickBooks is a popular software package for small businesses. Explore the QuickBooks website at https://quickbooks.intuit.com/. Select one of the QuickBooks plans, and discuss some of the capabilities of the software. Taking the perspective of a small business owner, explain how this software might help the business.

5. LO 1.2 The following information was taken from the Netflix financial statements.

NETFLIX, INC.
Consolidated Statement of Operations
For the Years 2014, 2015, and 2016

	Dec. 31, 2014	Dec. 31, 2015	Dec. 31, 2016
Sales	$5,504,656*	$6,779,511	$8,830,669

**Dollar values are in thousands of US dollars.*

Source: United States Security and Exchange Commission. "Netflix, Inc. Consolidated Statements of Operations." www.sec.gov

For Netflix, sales is the product of the number of subscribers and the price charged for each subscription. What observations can you make about the previous three years of Netflix's sales? Given this data, provide any predictions you can make about the future financial performance of Netflix. What nonfinancial factors influenced that prediction?

6. LO 1.2 The following chart shows the price of Netflix stock for the six-month period from August 2017 to January 2018.

Source: Nasdaq. "Netflix, Inc. Stock Chart." www.nasdaq.com

Assume you are considering purchasing Netflix stock. What considerations would influence your decision? Relative to Netflix's financial performance, what factors would influence the decision, and how would those factors rank in your decision? What about the nonfinancial factors?

7. LO 1.3 Use the internet to research one for-profit, one governmental, and one not-for-profit entity. For each entity, describe the following:

A. the primary purpose of the entity
B. the types of activities that accountants would record (hint: what is the source of the entity's funding, and what costs might the entity have?)
C. the types of decisions that might be made in this organization and how financial and nonfinancial information might help the decision-making process

8. LO 1.3 Use the internet to research one manufacturing, one retail (or merchandising), and one service business. For each business, describe the following:

A. the primary purpose of the entity
B. the types of activities that accountants would record (hint: what is the source of the business' funding, and what costs might the business have?)
C. the types of decisions that might be made in this organization and how financial and nonfinancial information might help the decision-making process

9. LO 1.3 Assume you are considering opening a retail business. You are trying to decide whether to have a traditional "brick-and-mortar" store or to sell only online. Explain how the activities and costs differ between these two retail arrangements.

10. LO 1.3 Uber and Lyft are two popular ride-sharing services. Imagine that you are visiting New York City for a family vacation. You are trying to decide whether to use one of these ride-sharing services to get around the city or rent a car and drive yourself. Considering the perspectives of the passengers (your family), the drivers, and the company (Uber or Lyft), explain the following:

A. why ride-sharing services have gained in popularity
B. the financial considerations relevant to your decision
C. the nonfinancial considerations relevant to your decision

11. LO 1.3 How would you categorize or classify a company like Disney?

12. LO 1.3 Charity Navigator (https://www.charitynavigator.org) is a website dedicated to providing information regarding not-for-profit charitable organizations.

A. After reviewing the website, explain how not-for-profit organizations are rated.
B. Explain why there is a need for the type of information provided by Charity Navigator.
C. Choose one to two charities listed in the website. Explain the information provided about the charity (financial and nonfinancial), the rating of the charity, and any other relevant factors.

13. LO 1.4 Use the internet to visit the Securities and Exchange Commission (SEC) website (https://www.sec.gov/). Write a report discussing the following:

A. several of the services provided by the SEC
B. why the services are important to the investing public
C. why you think the SEC would require publicly traded companies to file financial information

14. LO 1.4 Imagine that you have just been elected president of your university's student senate. Assume the university is considering constructing a new student union—a place that offers a variety of stores, restaurants, and entertainment option for students—and has asked the student senate to develop a formal position in support or opposition of the new student union.

A. Identify the stakeholders involved in this decision. Discuss the relevant considerations that each stakeholder might have.
B. Discuss the financial information that might be helpful in formulating the student senate position.
C. Discuss the nonfinancial information that might be helpful in formulating the student senate position.

15. LO 1.4 According to a company press release, on January 5, 2012, Hansen Natural Corporation changed its name to Monster Beverage Corporation. According to Yahoo Finance, on that day the value of the company stock (symbol: MNST) was $15.64 per share. On January 5, 2018, the stock closed at $63.49 per share. This represents an increase of nearly 306%.

A. Discuss the factors that might influence the increase in share price.
B. Consider yourself as a potential shareholder. What factors would you consider when deciding whether or not to purchase shares in Monster Beverage Corporation today?

16. LO 1.4 The Dow Jones Industrial Average (DJIA) is often cited as a key metric for business activity. The average is a mathematical formula that uses the stock prices of thirty companies traded on the New York Stock Exchange (NYSE) and the National Association of Securities Dealers Automated Quotation (NASDAQ) system.

A. Identify several of the companies that are included in the DJIA.
B. Explain why this metric might be commonly used to measure business activity.
C. Research the history of the DJIA and note some interesting facts. When did the Dow begin? What was the first value? What was the lowest value? The following is an example of a website that may be helpful: http://www.dow-jones-djia.com/history-of-dow-jones-industrial-average-index/.
D. What is the current value of the DJIA? What factors might contribute to the difference between early and current values of the DJIA?

17. LO 1.5 Many professional certifications now have requirements for ethics training.

A. Define ethics.
B. Why does the accounting profession put so much emphasis on acting ethically?

18. LO 1.5 The Certified Public Accountant (CPA) exam is a uniform exam that is administered by a national organization. Licenses, however, are issued by individual states.

A. Explain why you think each state is responsible for issuing CPA licenses.
B. Choose two to three states, and compare and contrast the requirements to become a CPA. Are they fairly consistent or drastically different from each other? A helpful resource is https://www.thiswaytocpa.com/. You may also find it helpful to search the board of accountancy for each state.
C. Tax preparation is a large part of what many CPAs do. Students may be interested to know that a CPA (or any other licensing) is not required to prepare tax returns. Assume you know two friends who prepare tax returns for others, one is a CPA and one is not. Assume that both friends intend to move next year and will, therefore, prepare taxes in another state. Analyze this situation.

19. LO 1.5 Accounting is not the only profession to offer professional certifications. Many other professions have certifications that are either required or encouraged for entry or advancement in the profession. Think of two to three career paths that you have considered or are considering. After doing some research, complete the following:

A. Identify the name of the certification and the institute that administered the certification.
B. Explain the education and/or experience requirements for taking the exam and earning the license.
C. Discuss any of the benefits, financial or otherwise, of earning the certification.

20. LO 1.5 Assume you are considering earning a master's degree (or even doctorate) after earning your bachelor's degree. One option is to continue directly into a master's program and then enter the workforce. Another option is to gain some work experience and then return to graduate school and earn your master's degree.

A. Evaluate these options, and identify the advantages and disadvantages of each.
B. It may be helpful to do some research on earnings and advancement potential, available formats of graduate programs (full time, part time, online), and other factors that might influence your decision. You may want to research graduate programs and utilize sites such as the Occupational Outlook Handbook (https://www.bls.gov/ooh/).

2 Introduction to Financial Statements

Figure 2.1 Derek's Venture. Technology can be a great tool for those who are far away from friends and family. Tablets are one way for those unfamiliar with technology to become comfortable using technology to connect with others. (credit: modification of "Lady Elderly" by "MabelAmber"/Pixabay, CC0)

Chapter Outline

Why It Matters

As a teenager, Derek loves computers. He also enjoys giving back to the community by helping others. Derek understands that many senior citizens live far away from their families, resulting in infrequent visits and loneliness. This summer he is considering combining both things he enjoys by working with the local retirement center. His idea is to have workshops to show the senior citizens how to connect with their families through the use of technology. The director of the retirement center is enthused about Derek's idea and has agreed to pay him for the services. During his visits, he will set up tablets and then show the seniors how to use them. Since he lives nearby, he will also provide support on an as-needed basis.

While he is excited about this opportunity, he is also trying to save up money for college. Although the retirement center will pay him for the workshops, he knows the investment in providing tablets will be expensive, and he wants to ensure he can cover his costs. A neighbor who works in banking suggests that Derek get a small loan to cover the costs of the tablets and use the income he earns to repay the loan. Derek is excited by the idea but is anxious when his neighbor mentions he will have to provide the bank monthly financial information, such as checking account and other financial statements. While he enjoys technology

and helping others, he is unfamiliar with financial statements. Derek decides to learn more about how financial statements will help both him and the bank make sound financial decisions.

2.1 Describe the Income Statement, Statement of Owner's Equity, Balance Sheet, and Statement of Cash Flows, and How They Interrelate

The study of accounting requires an understanding of precise and sometimes complicated terminology, purposes, principles, concepts, and organizational and legal structures. Typically, your introductory accounting courses will familiarize you with the overall accounting environment, and for those of you who want greater detail, there is an assortment of more advanced accounting courses available.

This chapter concentrates on the four major types of financial statements and their interactions, the major types of business structures, and some of the major terms and concepts used in this course. Coverage here is somewhat basic since these topics are accorded much greater detail in future chapters.

Types of Business Structure

As you learned in Role of Accounting in Society, virtually every activity that occurs in a business has an associated cost or value. Part of an accountant's role is to quantify these activities, or transactions.

Also, in business—and accounting in particular—it is necessary to distinguish the business entity from the individual owner(s). The personal transactions of the owners, employees, and other parties connected to the business should not be recorded in the organization's records; this accounting principle is called the *business entity concept*. Accountants should record only business transactions in business records.

This separation is also reflected in the legal structure of the business. There are several common types of legal business structures. While the accounting concepts for the various types of businesses are essentially the same regardless of the legal structure, the terminology will change slightly depending on the organization's legal structure, and it is important to understand the differences.

There are three broad categories for the legal structure of an organization: sole proprietorship, partnership, and corporation. A **sole proprietorship** is a legal business structure consisting of a single individual. Benefits of this type of structure include ease of formation, favorable tax treatment, and a high level of control over the business. The risks involved with sole proprietorships include unlimited personal liability and a limited life for the business. Unless the business is sold, the business ends when the owner retires or passes away. In addition, sole proprietorships have a fairly limited ability to raise capital (funding), and often sole proprietors have limited expertise—they are excellent at what they do but may have limited expertise in other important areas of business, such as accounting or marketing.

A **partnership** is a legal business structure involving two or more individuals. Benefits of this type of structure include favorable tax treatment, ease of formation of the business, and better access to capital and expertise. The downsides to a partnership include unlimited personal liability (although there are other legal structures—a limited liability partnership, for example—to help mitigate the risk); limited life of the partnership, similar to sole proprietorships; and increased complexity to form the venture (decision-making authority, profit-sharing arrangement, and other important issues need to be formally articulated in a written partnership agreement).

A **corporation** is a legal business structure involving one or more individuals (owners) who are legally distinct (separate) from the business. A primary benefit of a corporate legal structure is the owners of the organization

have limited liability. That is, a corporation is "stand alone," conducting business as an entity separate from its owners. Under the corporate structure, owners delegate to others (called agents) the responsibility to make day-to-day decisions regarding the operations of the business. Other benefits of the corporate legal structure include relatively easy access to large amounts of capital by obtaining loans or selling ownership (stock), and since the stock is easily sold or transferred to others, the business operates beyond the life of the shareholders. A major disadvantage of a corporate legal structure is double taxation—the business pays income tax and the owners are taxed when distributions (also called dividends) are received.

Types of Business Structures

	Sole Proprietorship	Partnership	Corporation
Number of Owners	Single individual	Two or more individuals	One or more owners
Ease of Formation	Easier to form	Harder to form	Difficult to form
Ability to Raise Capital	Difficult to raise capital	Harder to raise capital	Easier to raise capital
Liability Risk	Unlimited liability	Unlimited liability	Limited liability
Taxation Consideration	Single taxation	Single taxation	Double taxation

Table 2.1

The Four Financial Statements

Are you a fan of books, movies, or sports? If so, chances are you have heard or said the phrase "spoiler alert." It is used to forewarn readers, viewers, or fans that the ending of a movie or book or outcome of a game is about to be revealed. Some people prefer knowing the end and skipping all of the details in the middle, while others prefer to fully immerse themselves and then discover the outcome. People often do not know or understand what accountants produce or provide. That is, they are not familiar with the "ending" of the accounting process, but that is the best place to begin the study of accounting.

Accountants create what are known as financial statements. Financial statements are reports that communicate the financial performance and financial position of the organization.

In essence, the overall purpose of financial statements is to evaluate the performance of a company, governmental entity, or not-for-profit entity. This chapter illustrates this through a company, which is considered to be in business to generate a profit. Each financial statement we examine has a unique function, and together they provide information to determine whether a company generated a profit or loss for a given period (such as a month, quarter, or year); the assets, which are resources of the company, and accompanying liabilities, which are obligations of the company, that are used to generate the profit or loss; owner interest in profits or losses; and the cash position of the company at the end of the period.

The four financial statements that perform these functions and the order in which we prepare them are:

1. Income Statement
2. Statement of Owner's Equity
3. Balance Sheet

4. Statement of Cash Flows.

The order of preparation is important as it relates to the concept of how financial statements are interrelated. Before explaining each in detail, let's explore the purpose of each financial statement and its main components.

CONTINUING APPLICATION AT WORK

Introduction to the Gearhead Outfitters Story

Gearhead Outfitters, founded by Ted Herget in 1997 in Jonesboro, Arkansas, is a retail chain that sells outdoor gear for men, women, and children. The company's inventory includes clothing, footwear for hiking and running, camping gear, backpacks, and accessories, by brands such as The North Face, Birkenstock, Wolverine, Yeti, Altra, Mizuno, and Patagonia. Ted fell in love with the outdoor lifestyle while working as a ski instructor in Colorado and wanted to bring that feeling back home to Arkansas. And so, Gearhead was born in a small downtown location in Jonesboro. The company has had great success over the years, expanding to numerous locations in Ted's home state, as well as Louisiana, Oklahoma, and Missouri.

While Ted knew his industry when starting Gearhead, like many entrepreneurs he faced regulatory and financial issues that were new to him. Several of these issues were related to accounting and the wealth of decision-making information that accounting systems provide.

For example, measuring revenue and expenses, providing information about cash flow to potential lenders, analyzing whether profit and positive cash flow is sustainable to allow for expansion, and managing inventory levels. Accounting, or the preparation of financial statements (balance sheet, income statement, and statement of cash flows), provides the mechanism for business owners such as Ted to make fundamentally sound business decisions.

Purpose of Financial Statements

Before exploring the specific financial statements, it is important to know why these are important documents. To understand this, you must first understand who the users of financial statements are. Users of the information found in financial statements are called **stakeholders**. Stakeholders can be a group, individuals, or other types of constituents that can be affected by the actions or policies of an organization. The stakeholder's interest sometimes is not directly related to the entity's financial performance. Examples of stakeholders include lenders, investors/owners, vendors, employees and management, governmental agencies, and the communities in which the businesses operate. Stakeholders are interested in the performance of an organization for various reasons, but the common goal of using the financial statements is to understand the information each contains that is useful for making financial decisions. For example, a banker may be interested in the financial statements to decide whether or not to lend the organization money.

Likewise, small business owners may make decisions based on their familiarity with the business—they know if the business is doing well or not based on their "gut feeling." By preparing the financial statements, accountants can help owners by providing clarity of the organization's financial performance. It is important to understand that, in the long term, every activity of the business has a financial impact, and financial

statements are a way that accountants report the activities of the business. Stakeholders must make many decisions, and the financial statements provide information that is helpful in the decision-making process.

As described in Role of Accounting in Society, the complete set of financial statements acts as an X-ray of a company's financial health. By evaluating all of the financial statements together, someone with financial knowledge can determine the overall health of a company. The accountant can use this information to advise outside (and inside) stakeholders on decisions, and management can use this information as one tool to make strategic short- and long-term decisions.

ETHICAL CONSIDERATIONS

Utilitarian View of Accounting Decisions and Stakeholder Well-Being

Utilitarianism is a well-known and influential moral theory commonly used as a framework to evaluate business decisions. Utilitarianism suggests that an ethical action is one whose consequence achieves the greatest good for the greatest number of people. So, if we want to make an ethical decision, we should ask ourselves who is helped and who is harmed by it. Focusing on consequences in this way generally does not require us to take into account the means of achieving that particular end, however. Put simply, the utilitarian view is an ethical theory that the best action of a company is the one that maximizes utility of all stakeholders to the decision. This view assumes that all individuals with an interest in the business are considered within the decision.

Financial statements are used to understand the financial performance of companies and to make long- and short-term decisions. A utilitarian approach considers all stakeholders, and both the long- and short-term effects of a business decision. This allows corporate decision makers to choose business actions with the potential to produce the best outcomes for the majority of all stakeholders, not just shareholders, and therefore maximize stakeholder happiness.

Accounting decisions can change the approach a stakeholder has in relation to a business. If a company focuses on modifying operations and financial reporting to maximize short-term shareholder value, this could indicate the prioritization of certain stakeholder interests above others. When a company pursues only short-term profit for shareholders, it neglects the well-being of other stakeholders. Professional accountants should be aware of the interdependent relationship between all stakeholders and consider whether the results of their decisions are good for the majority of stakeholder interests.

YOUR TURN

Business Owners as Decision Makers

Think of a business owner in your family or community. Schedule some time to talk with the business owner, and find out how he or she uses financial information to make decisions.

Solution

Business owners will use financial information for many decisions, such as comparing sales from one

period to another, determining trends in costs and other expenses, and identifying areas in which to reduce or reallocate expenses. This information will be used to determine, for example, staffing and inventory levels, streamlining of operations, and advertising or other investment decisions.

The Income Statement

The first financial statement prepared is the **income statement**, a statement that shows the organization's financial performance *for a given period of time*. Let's illustrate the purpose of an income statement using a real-life example. Assume your friend, Chris, who is a sole proprietor, started a summer landscaping business on August 1, 2020. It is categorized as a service entity. To keep this example simple, assume that she is using her family's tractor, and we are using the *cash basis* method of accounting to demonstrate Chris's initial operations for her business. The other available basis method that is commonly used in accounting is the *accrual basis* method. She is responsible for paying for fuel and any maintenance costs. She named the business Chris's Landscaping. On August 31, Chris checked the account balance and noticed there is only $250 in the checking account. This balance is lower than expected because she thought she had been paid by some customers. Chris decides to do some research to determine why the balance in the checking account is lower than expected. Her research shows that she earned a total of $1,400 from her customers but had to pay $100 to fix the brakes on her tractor, $50 for fuel, and also made a $1,000 payment to the insurance company for business insurance. The reason for the lower-than-expected balance was due to the fact that she spent ($1,150 for brakes, fuel, and insurance) only slightly less than she earned ($1,400)—a net increase of $250. While she would like the checking balance to grow each month, she realizes most of the August expenses were infrequent (brakes and insurance) and the insurance, in particular, was an unusually large expense. She is convinced the checking account balance will likely grow more in September because she will earn money from some new customers; she also anticipates having fewer expenses.

CHRIS' LANDSCAPING Income Statement For the Month Ended August 31, 2020		
Revenue	$1,400	
Total revenue		$1,400
Expenses		
Tractor brake repair	100	
Tractor fuel	50	
Business insurance	1,000	
Total expenses		1,150
Net income		$ 250

The Income Statement can also be visualized by the formula: Revenue – Expenses = Net Income/(Loss).

Let's change this example slightly and assume the $1,000 payment to the insurance company will be paid in September, rather than in August. In this case, the ending balance in Chris's checking account would be $1,250, a result of earning $1,400 and only spending $100 for the brakes on her car and $50 for fuel. This stream of cash flows is an example of cash basis accounting because it reflects when payments are received and made, not necessarily the time period that they affect. At the end of this section and in The Adjustment

Process you will address accrual accounting, which does reflect the time period that they affect.

In accounting, this example illustrates an income statement, a financial statement that is used to measure the financial performance of an organization for a particular period of time. We use the simple landscaping account example to discuss the elements of the income statement, which are revenues, expenses, gains, and losses. Together, these determine whether the organization has net income (where revenues and gains are greater than expenses and losses) or net loss (where expenses and losses are greater than revenues and gains). Revenues, expenses, gains, and losses are further defined here.

Revenue

Revenue[1] is the value of goods and services the organization sold or provided to customers for a given period of time. In our current example, Chris's landscaping business, the "revenue" earned for the month of August would be $1,400. It is the value Chris received in exchange for the services provided to her clients. Likewise, when a business provides goods or services to customers for cash at the time of the service or in the future, the business classifies the amount(s) as revenue. Just as the $1,400 earned from a business made Chris's checking account balance increase, revenues increase the value of a business. In accounting, revenues are often also called sales or fees earned. Just as earning wages from a business or summer job reflects the number of hours worked for a given rate of pay or payments from clients for services rendered, revenues (and the other terms) are used to indicate the dollar value of goods and services provided to customers for a given period of time.

YOUR TURN

Coffee Shop Products

Think about the coffee shop in your area. Identify items the coffee shop sells that would be classified as revenues. Remember, revenues for the coffee shop are related to its primary purpose: selling coffee and related items. Or, better yet, make a trip to the local coffee shop and get a first-hand experience.

Solution

Many coffee shops earn revenue through multiple revenue streams, including coffee and other specialty drinks, food items, gift cards, and merchandise.

Expenses

An **expense**[2] is a cost associated with providing goods or services to customers. In our opening example, the expenses that Chris incurred totaled $1,150 (consisting of $100 for brakes, $50 for fuel, and $1,000 for insurance). You might think of expenses as the opposite of revenue in that expenses reduce Chris's checking

1 In a subsequent section of this chapter, you will learn that the accounting profession is governed by the Financial Accounting Standards Board (or FASB), a professional body that issues guidelines/pronouncements for the accounting profession. A set of theoretical pronouncements issued by FASB is called Statement of Financial Accounting Concepts (SFAC). In SFAC No. 6, FASB defines revenues as "inflows or other enhancements of assets of an entity or settlements of its liabilities (or a combination of both) from delivering or producing goods, rendering services, or other activities that constitute the entity's ongoing major or central operations" (SFAC No. 6, p. 23).

2 Expenses are formally defined by the FASB as "outflows or other using up of assets or incurrences of liabilities (or a combination of both) from delivering or producing goods, rendering services, or carrying out other activities that constitute the entity's ongoing major or central operations" (SFAC No. 6, p. 23).

account balance. Likewise, expenses decrease the value of the business and represent the dollar value of costs incurred to provide goods and services to customers for a given period of time.

YOUR TURN

Coffee Shop Expenses

While thinking about or visiting the coffee shop in your area, look around (or visualize) and identify items or activities that are the expenses of the coffee shop. Remember, expenses for the coffee shop are related to resources consumed while generating revenue from selling coffee and related items. Do not forget about any expenses that might not be so obvious—as a general rule, every activity in a business has an associated cost.

Solution

Costs of the coffee shop that might be readily observed would include rent; wages for the employees; and the cost of the coffee, pastries, and other items/merchandise that may be sold. In addition, costs such as utilities, equipment, and cleaning or other supplies might also be readily observable. More obscure costs of the coffee shop would include insurance, regulatory costs such as health department licensing, point-of-sale/credit card costs, advertising, donations, and payroll costs such as workers' compensation, unemployment, and so on.

Gains

A **gain**[3] can result from selling ancillary business items for more than the items are worth. (Ancillary business items are those that are used to support business operations.) To illustrate the concept of a gain, let's return to our example. However, this example and the accompanying *losses* example are not going to be part of our income statement, balance sheet, or owner's equity statement discussions. The gains and losses examples are only to be used in demonstrating the concepts of gains and losses. Assume that Chris paid $1,500 for a small piece of property to use for building a storage facility for her company. Further assume that Chris has an opportunity to sell the land for $2,000. She subsequently found a better storage option and decided to sell the property. After doing so, Chris will have a gain of $500 (a selling price of $2,000 and a cost of $1,500) and will also have $2,000 to deposit into her checking account, which would increase the balance.

Thinking back to the proceeds ($1,400) Chris received from her landscaping business, we might ask the question: how are gains similar to and different from revenues? The revenue of $1,400 that Chris earned from her business and the $2,000 she received from selling the land are similar in that both increase her checking account balance and make her business more valuable.

A difference, however, is evident if we consider how these funds were earned. Chris earned the $1,400 because she provided services (her labor) to her clients. Chris's primary objective is to earn revenue by working for her clients. In addition, earning money by selling her land was an infrequent event for Chris, since her primary job was serving as a landscaper. Her primary goal is to earn fees or revenue, not to earn money by selling land. In fact, she cannot consider doing that again because she does not have additional land to sell.

3 FASB notes that gains represent an increase in organizational value from activities that are "*incidental* or *peripheral*" (SFAC No. 6, p. 24) to the primary purpose of the business.

The primary goal of a business is to earn revenue by providing goods and services to customers in exchange for cash at that time or in the future. While selling other items for more than the value of the item does occur in business, these transactions are classified as gains, because these sales are infrequent and not the primary purpose of the business.

Losses

A **loss**[4] results from selling ancillary business items for less than the items are worth. To illustrate, let's now assume that Chris sells her land that she purchased for $1,500 at a sales price of $1,200. In this case she would realize (incur) a loss of $300 on the sale of the property ($1,200 sales price minus the $1,500 cost of purchasing the property) and will also have $1,200 to deposit into her checking account, which would increase the balance.

You should not be confused by the fact that the checking account balance increased even though this transaction resulted in a financial loss. Chris received $1,200 that she can deposit into her checking account and use for future expenses. The $300 loss simply indicates that she received less for the land than she paid for it. These are two aspects of the same transaction that communicate different things, and it is important to understand the differences.

As we saw when comparing gains and revenues, losses are similar to expenses in that both losses and expenses decrease the value of the organization. In addition, just as Chris's primary goal is to earn money from her job rather than selling land, in business, losses refer to infrequent transactions involving ancillary items of the business.

Net Income (Net Loss)

Net income (net loss) is determined by comparing revenues and expenses. **Net income** is a result of revenues (inflows) being greater than expenses (outflows). A **net loss** occurs when expenses (outflows) are greater than revenues (inflows). In accounting it is common to present net income in the following format:

Net Income
Revenue (sometimes called Sales or Fees Earned)
– Expenses
Operating Profit (or Net Loss)

Recall that revenue is the value of goods and services a business provides to its customers and increase the value of the business. Expenses, on the other hand, are the costs of providing the goods and services and decrease the value of the business. When revenues exceed expenses, companies have net income. This means the business has been successful at earning revenues, containing expenses, or a combination of both. If, on the other hand, expenses exceed revenues, companies experience a net loss. This means the business was unsuccessful in earning adequate revenues, sufficiently containing expenses, or a combination of both. While businesses work hard to avoid net loss situations, it is not uncommon for a company to sustain a net loss from time-to-time. It is difficult, however, for businesses to remain viable while experiencing net losses over the long term.

Shown as a formula, the net income (loss) function is:

4 FASB notes losses represent a decrease in organizational value from activities that are "*incidental* or *peripheral*" (SFAC No. 6, p. 24) to the primary purpose of the business.

Revenues (R) – Expenses (E) = Net Income (when R > E)
Revenues (R) – Expenses (E) = Net Loss (when E > R)

To be complete, we must also consider the impact of gains and losses. While gains and losses are infrequent in a business, it is not uncommon that a business would present a gain and/or loss in its financial statements. Recall that gains are similar to revenue and losses are similar to expenses. Therefore, the traditional accounting format would be:

Gains and Losses
Revenue (sometimes called Sales or Fees Earned)
+ Gains
– Expenses
– Losses
Net Income (or Net Loss)

Shown as a formula, the net income (loss) function, including gains and losses, is:

Revenues (R) + Gains (G) – Expenses (E) – Losses (L) = Net Income [when (R + G) > (E + L)]
Revenues (R) + Gains (G) – Expenses (E) – Losses (L) = Net Loss [when (E + L) > (R + G)]

When assessing a company's net income, it is important to understand the source of the net income. Businesses strive to attain "high-quality" net income (earnings). High-quality earnings are based on sustainable earnings—also called permanent earnings—while relying less on infrequent earnings—also called temporary earnings. Recall that revenues represent the *ongoing* value of goods and services the business provides (sells) to its customers, while gains are *infrequent* and involve items ancillary to the primary purpose of the business. We should use caution if a business attains a significant portion of its net income as a result of gains, rather than revenues. Likewise, net losses derived as a result of losses should be put into the proper perspective due to the infrequent nature of losses. While net losses are undesirable for any reason, net losses that result from expenses related to ongoing operations, rather than losses that are infrequent, are more concerning for the business.

Statement of Owner's Equity

Equity is a term that is often confusing but is a concept with which you are probably already familiar. In short, equity is the value of an item that remains after considering what is owed for that item. The following example may help illustrate the concept of equity.

When thinking about the concept of equity, it is often helpful to think about an example many families are familiar with: purchasing a home. Suppose a family purchases a home worth $200,000. After making a down payment of $25,000, they secure a bank loan to pay the remaining $175,000. What is the value of the family's equity in the home? If you answered $25,000, you are correct. At the time of the purchase, the family owns a home worth $200,000 (an asset), but they owe $175,000 (a liability), so the equity or net worth in the home is $25,000.

The **statement of owner's equity**, which is the second financial statement created by accountants, is a statement that shows how the equity (or value) of the organization has changed over time. Similar to the income statement, the statement of owner's equity is *for a specific period of time, typically one year.* Recall that another way to think about equity is net worth, or value. So, the statement of owner's equity is a financial

statement that shows how the net worth, or value, of the business has changed for a given period of time.

CHRIS' LANDSCAPING Statement of Owner's Equity For the Month Ended August 31, 2020	
Owner's equity, August 1	$ 0
+ Net income	250
	250
Owner's equity, August 31	$250

The elements of the financial statements shown on the statement of owner's equity include *investments by owners* as well as *distributions to owners*. Investments by owners and distributions to owners are two activities that impact the value of the organization (increase and decrease, respectively). In addition, net income or net loss affects the value of the organization (net income increases the value of the organization, and net loss decreases it). Net income (or net loss) is also shown on the statement of owner's equity; this is an example of how the statements are interrelated. Note that the word *owner's* (singular for a sole owner) changes to *owners'* (plural, for a group of owners) when preparing this statement for a sole proprietorship.

In our example, to make it less complicated, we started with the first month of operations for Chris's Landscaping. In the first month of operations, the owner's equity total begins the month of August 2020, at $0, since there have been no transactions. During the month, the business received revenue of $1,400 and incurred expenses of $1,150, for net income of $250. Since Chris did not contribute any investment or make any withdrawals, other than the $1,150 for expenses, the ending balance in the owner's equity account on August 31, 2020, would be $250, the net income earned.

At this stage, it's important to point out that we are working with a sole proprietorship to help simplify the examples. We have addressed the owner's value in the firm as *capital* or *owner's equity*. However, later we switch the structure of the business to a corporation, and instead of owner's equity we begin using stockholder's equity, which includes account titles such as *common stock* and *retained earnings* to represent the owners' interests.

The corporate treatment is more complicated because corporations may have a few owners up to potentially thousands of owners (stockholders). More detail on this issue is provided in Define, Explain, and Provide Examples of Current and Noncurrent Assets, Current and Noncurrent Liabilities, Equity, Revenues, and Expenses.

Investments by Owners

Generally, there are two ways by which organizations become more valuable: profitable operations (when revenues exceed expenses) and investments by owners. Organizations often have long-term goals or projects that are very expensive (for example, building a new manufacturing facility or purchasing another company).

While having profitable operations is a viable way to "fund" these goals and projects, organizations often want to undertake these projects in a quicker time frame. Selling ownership is one way to quickly obtain the funding necessary for these goals. **Investments by owners** represent an exchange of cash or other assets for which the investor is given an ownership interest in the organization. This is a mutually beneficial arrangement: the organization gets the funding it needs on a timely basis, and the investor gets an ownership interest in the organization.

When organizations generate funding by selling ownership, the ownership interest usually takes the form of **common stock**. When the organization issues common stock for the first time, it is called an **initial public offering (IPO)**. In Corporation Accounting, you learn more about the specifics of this type of accounting. Once a company issues (or sells) common stock after an IPO, we describe the company as a **publicly traded company**, which simply means the company's stock can be purchased by the general public on a public exchange like the New York Stock Exchange (NYSE). That is, investors can become owners of the particular company. Companies that issue publicly traded common shares in the United States are regulated by the **Securities and Exchange Commission (SEC)**, a governmental agency that, among other responsibilities, is charged with oversight of financial investments such as common stock.

CONCEPTS IN PRACTICE

Roku Goes Public

On September 1, 2017, Roku, Inc. filed a Form S-1 with the Securities and Exchange Commission (SEC).[5] In this form, Roku disclosed its intention to become a publicly traded company, meaning its stock will trade (sell) on public stock exchanges, allowing individual and institutional investors an opportunity to own a portion (shares) of the company. The Form S-1 included detailed financial and nonfinancial information about the company. The information from Roku also included the purpose of the offering as well as the intended uses of the funds. Here is a portion of the disclosure: "The principal purposes of this offering are to increase our capitalization and financial flexibility and create a public market for our Class A common stock. We intend to use the net proceeds we receive from this offering primarily for general corporate purposes, including working capital . . . research and development, business development, sales and marketing activities and capital expenditures."[6]

On September 28, 2017, Roku "went public" and exceeded expectations. Prior to the IPO, Roku estimated it would sell between $12 and $14 per share, raising over $117 million for the company. The closing price per share on September 28 was $23.50, nearly doubling initial expectations for the share value (https://finance.yahoo.com/quote/ROKU/history?p=ROKU).

Distributions to Owners

There are basically two ways in which organizations become less valuable in terms of owners' equity: from unprofitable operations (when expenses or losses exceed revenues or gains) and by distributions to owners. Owners (investors) of an organization want to see their investment appreciate (gain) in value. Over time, owners of common stock can see the value of the stock increase in value—the share price increases—due to the success of the organization. Organizations may also make **distributions to owners**, which are periodic rewards issued to the owners in the form of cash or other assets. Distributions to owners represent some of the value (equity) of the organization.

For investors who hold common stock in the organization, these periodic payments or distributions to owners

5 Roku, Inc. "Form S-1 Filing with the Securities and Exchange Commission." September 1, 2017. https://www.sec.gov/Archives/edgar/data/1428439/000119312517275689/d403225ds1.htm

6 Roku, Inc. "Form S-1 Filing with the Securities and Exchange Commission." September 1, 2017. https://www.sec.gov/Archives/edgar/data/1428439/000119312517275689/d403225ds1.htm

are called **dividends**. For sole proprietorships, distributions to owners are withdrawals or drawings. From the organization's perspective, dividends represent a portion of the net worth (equity) of the organization that is returned to owners as a reward for their investment. While issuing dividends does, in fact, reduce the organization's assets, some argue that paying dividends increases the organization's long-term value by making the stock more desirable. (Note that this topic falls under the category of Dividend Policy, and there is a significant stream of research addressing this.)

Balance Sheet

Once the statement of owner's equity is completed, accountants typically complete the **balance sheet**, a statement that lists what the organization owns (*assets*), what it owes (*liabilities*), and what it is worth (*equity*) on a *specific date*. Notice the change in timing of the report. The income statement and statement of owner's equity report the financial performance and equity change for a period of time. The balance sheet, however, lists the financial position at the close of business on a specific date. (Refer to Figure 2.2 for the balance sheet as of August 31, 2020, for Chris's Landscaping.)

CHRIS' LANDSCAPING Balance Sheet August 31, 2020	
Assets	
Cash	$250
Liabilities	
None	0
Owner's Equity	
Owner's Equity	$250

Figure 2.2

Assets

If you recall our previous example involving Chris and her newly established landscaping business, you are probably already familiar with the term **asset**[7]—these are resources used to generate revenue. In Chris's business, to keep the example relatively simple, the business ended the month with one asset, cash, assuming that the insurance was for one month's coverage.

However, as organizations become more complex, they often have dozens or more types of assets. An asset can be categorized as a **short-term asset** or current asset (which is typically used up, sold, or converted to cash in one year or less) or as a **long-term asset** or noncurrent asset (which is not expected to be converted into cash or used up within one year). Long-term assets are often used in the production of products and services.

Examples of short-term assets that businesses own include cash, accounts receivable, and inventory, while examples of long-term assets include land, machinery, office furniture, buildings, and vehicles. Several of the chapters that you will study are dedicated to an in-depth coverage of the special characteristics of selected assets. Examples include Merchandising Transactions, which are typically short term, and Long-Term Assets, which are typically long term.

7 The 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).

An asset can also be categorized as a tangible asset or an intangible asset. **Tangible assets** have a physical nature, such as trucks or many inventory items, while **intangible assets** have value but often lack a physical existence or corpus, such as insurance policies or trademarks.

Liabilities

You are also probably already familiar with the term **liability**[8]—these are amounts owed to others (called creditors). A liability can also be categorized as a **short-term liability** (or current liability) or a **long-term liability** (or noncurrent liability), similar to the treatment accorded assets. Short-term liabilities are typically expected to be paid within one year or less, while long-term liabilities are typically expected to be due for payment more than one year past the current balance sheet date.

Common short-term liabilities or amounts owed by businesses include amounts owed for items purchased on credit (also called *accounts payable*), taxes, wages, and other business costs that will be paid in the future. Long-term liabilities can include such liabilities as long-term notes payable, mortgages payable, or bonds payable.

Equity

In the Statement of Owner's Equity discussion, you learned that **equity** (or net assets) refers to book value or net worth. In our example, Chris's Landscaping, we determined that Chris had $250 worth of equity in her company at the end of the first month (see Figure 2.2).

At any point in time it is important for stakeholders to know the financial position of a business. Stated differently, it is important for employees, managers, and other interested parties to understand what a business owns, owes, and is worth at any given point. This provides stakeholders with valuable financial information to make decisions related to the business.

Statement of Cash Flows

The fourth and final financial statement prepared is the **statement of cash flows**, which is a statement that lists the cash inflows and cash outflows for the business *for a period of time.* At first glance, this may seem like a redundant financial statement. We know the income statement also reports the inflows and outflows for the business for a period of time. In addition, the statement of owner's equity and the balance sheet help to show the other activities, such as investments by and distributions to owners that are not included in the income statement. To understand why the statement of cash flows is necessary, we must first understand the two bases of accounting used to prepare the financial statements. The changes in cash within this statement are often referred to as sources and uses of cash. A source of cash lets one see where cash is coming from. For example, is cash being generated from sales to customers, or is the cash a result of an advance in a large loan. Use of cash looks at what cash is being used for. Is cash being used to make an interest payment on a loan, or is cash being used to purchase a large piece of machinery that will expand business capacity? The two bases of accounting are the cash basis and the accrual basis, briefly introduced in Describe the Income Statement, Statement of Owner's Equity, Balance Sheet, and Statement of Cash Flows, and How They Interrelate.

Under **cash basis accounting**, transactions (i.e., a sale or a purchase) are not recorded in the financial statements until there is an exchange of cash. This type of accounting is permitted for nonprofit entities and small businesses that elect to use this type of accounting. Under **accrual basis accounting**, transactions are

8 The FASB defines liabilities as "probable future sacrifices of economic benefits arising from present obligations of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions or events" (SFAC No. 6, p. 13).

generally recorded in the financial statement when the transactions occur, and not when paid, although in some situations the two events could happen on the same day.

An example of the two methods (cash versus accrual accounting) would probably help clarify their differences. Assume that a mechanic performs a tune-up on a client's car on May 29, and the customer picks up her car and pays the mechanic $100 on June 2. If the mechanic were using the cash method, the revenue would be recognized on June 2, the date of payment, and any expenses would be recognized when paid.

If the accrual method were used, the mechanic would recognize the revenue and any related expenses on May 29, the day the work was completed. The accrual method will be the basis for your studies here (except for our coverage of the cash flow statement in Statement of Cash Flows). The accrual method is also discussed in greater detail in Explain the Steps within the Accounting Cycle through the Unadjusted Trial Balance.

While the cash basis of accounting is suited well and is more efficient for small businesses and certain types of businesses, such as farming, and those without inventory, like lawyers and doctors, the accrual basis of accounting is theoretically preferable to the cash basis of accounting. Accrual accounting is advantageous because it distinguishes between the timing of the transactions (when goods and services are provided) and when the cash involved in the transactions is exchanged (which can be a significant amount of time after the initial transaction). This allows accountants to provide, in a timely manner, relevant and complete information to stakeholders. The Adjustment Process explores several common techniques involved in accrual accounting.

Two brief examples may help illustrate the difference between cash accounting and accrual accounting. Assume that a business sells $200 worth of merchandise. In some businesses, there are two ways the customers pay: cash and credit (also referred to as "on account"). Cash sales include checks and credit cards and are paid at the time of the sale. Credit sales (not to be confused with credit card sales) allow the customer to take the merchandise but pay within a specified period of time, usually up to forty-five days.

A cash sale would be recorded in the financial statements under *both* the cash basis and accrual basis of accounting. It makes sense because the customer received the merchandise and paid the business at the same time. It is considered two events that occur simultaneously (exchange of merchandise for cash).

Similar to the previous example for the mechanic, a credit sale, however, would be treated differently under each of these types of accounting. Under the cash basis of accounting, a credit sale would not be recorded in the financial statements until the cash is received, under terms stipulated by the seller. For example, assume on April 1 a landscaping business provides $500 worth of services to one of its customers. The sale is made on account, with the payment due forty-five days later. Under the cash basis of accounting, the revenue would not be recorded until May 16, when the cash was received. Under the accrual basis of accounting, this sale would be recorded in the financial statements at the time the services were provided, April 1. The reason the sale would be recorded is, under accrual accounting, the business reports that it provided $500 worth of services to its customer. The fact the customers will pay later is viewed as a separate transaction under accrual accounting.

Cash ← → Accrual

LANDSCAPE Statement of Cash Flows For Month Ended May 31, 2021		LANDSCAPE Statement of Cash Flows For Month Ended April 30, 2021	
Cash Flow from Operations		Cash Flow from Operations	
Net Earnings	$500	Net Earnings	$500

Figure 2.3 Credit versus Cash. On the left is a credit sale recorded under the cash basis of accounting. On the right the same credit sale is recorded under the accrual basis of accounting. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Let's now explore the difference between the cash basis and accrual basis of accounting using an expense. Assume a business purchases $160 worth of printing supplies from a supplier (vendor). Similar to a sale, a purchase of merchandise can be paid for at the time of sale using cash (also a check or credit card) or at a later date (on account). A purchase paid with cash at the time of the sale would be recorded in the financial statements under *both* cash basis and accrual basis of accounting. It makes sense because the business received the printing supplies from the supplier and paid the supplier at the same time. It is considered two events that occur simultaneously (exchange of merchandise for cash).

If the purchase was made on account (also called a *credit purchase*), however, the transaction would be recorded differently under each of these types of accounting. Under the cash basis of accounting, the $160 purchase on account would not be recorded in the financial statements until the cash is paid, as stipulated by the seller's terms. For example, if the printing supplies were received on July 17 and the payment terms were fifteen days, no transaction would be recorded until August 1, when the goods were paid for. Under the accrual basis of accounting, this purchase would be recorded in the financial statements at the time the business received the printing supplies from the supplier (July 17). The reason the purchase would be recorded is that the business reports that it bought $160 worth of printing supplies from its vendors. The fact the business will pay later is viewed as a separate issue under accrual accounting. Table 2.2 summarizes these examples under the different bases of accounting.

Transactions by Cash Basis versus Accrual Basis of Accounting

Transaction	Under Cash Basis Accounting	Under Accrual Basis Accounting
$200 sale for cash	Recorded in financial statements at time of sale	Recorded in financial statements at time of sale
$200 sale on account	*Not* recorded in financial statements until cash is received	Recorded in financial statements at time of sale
$160 purchase for cash	Recorded in financial statements at time of purchase	Recorded in financial statements at time of purchase

Table 2.2 Businesses often sell items for cash as well as on account, where payment terms are extended for a period of time (for example, thirty to forty-five days). Likewise, businesses often purchase items from suppliers (also called vendors) for cash or, more likely, on account. Under the cash basis of accounting, these transactions would not be recorded until the cash is exchanged. In contrast, under accrual accounting the transactions are recorded when the transaction occurs, regardless of when the cash is received or paid.

Transactions by Cash Basis versus Accrual Basis of Accounting

Transaction	Under Cash Basis Accounting	Under Accrual Basis Accounting
$160 purchase on account	*Not* recorded in financial statements until cash is paid	Recorded in financial statements at time of purchase

Table 2.2 Businesses often sell items for cash as well as on account, where payment terms are extended for a period of time (for example, thirty to forty-five days). Likewise, businesses often purchase items from suppliers (also called vendors) for cash or, more likely, on account. Under the cash basis of accounting, these transactions would not be recorded until the cash is exchanged. In contrast, under accrual accounting the transactions are recorded when the transaction occurs, regardless of when the cash is received or paid.

Knowing the difference between the cash basis and accrual basis of accounting is necessary to understand the need for the statement of cash flows. Stakeholders need to know the financial *performance* (as measured by the income statement—that is, net income or net loss) and financial *position* (as measured by the balance sheet—that is, assets, liabilities, and owners' equity) of the business. This information is provided in the income statement, statement of owner's equity, and balance sheet. However, since these financial statements are prepared using accrual accounting, stakeholders do not have a clear picture of the business's cash activities. The statement of cash flows solves this inadequacy by specifically focusing on the cash inflows and cash outflows.

2.2 Define, Explain, and Provide Examples of Current and Noncurrent Assets, Current and Noncurrent Liabilities, Equity, Revenues, and Expenses

In addition to what you've already learned about assets and liabilities, and their potential categories, there are a couple of other points to understand about assets. Plus, given the importance of these concepts, it helps to have an additional review of the material.

To help clarify these points, we return to our coffee shop example and now think of the coffee shop's assets—items the coffee shop owns or controls. Review the list of assets you created for the local coffee shop. Did you happen to notice many of the items on your list have one thing in common: the items will be used over a long period of time? In accounting, we classify assets based on whether or not the asset will be used or consumed within a certain period of time, generally one year. If the asset will be used or consumed in one year or less, we classify the asset as a **current asset**. If the asset will be used or consumed over more than one year, we classify the asset as a **noncurrent asset**.

Another thing you might have recognized when reviewing your list of coffee shop assets is that all of the items were something you could touch or move, each of which is known as a tangible asset. However, as you also learned in Describe the Income Statement, Statement of Owner's Equity, Balance Sheet, and Statement of Cash Flows, and How They Interrelate, not all assets are tangible. An asset could be an intangible asset, meaning the item lacks physical substance—it cannot be touched or moved. Take a moment to think about your favorite type of shoe or a popular type of farm tractor. Would you be able to recognize the maker of that shoe or the tractor by simply seeing the logo? Chances are you would. These are examples of intangible assets, trademarks to be precise. A trademark has value to the organization that created (or purchased) the trademark, and the trademark is something the organization controls—others cannot use the trademark without permission.

Similar to the accounting for assets, liabilities are classified based on the time frame in which the liabilities are expected to be settled. A liability that will be settled in one year or less (generally) is classified as a **current liability**, while a liability that is expected to be settled in more than one year is classified as a **noncurrent liability**.

Examples of current assets include **accounts receivable**, which is the value of goods or services sold for which payment will be received at a later date; **inventory**, which is the value of products to be sold or items to be converted into sellable products; and sometimes a **notes receivable**, which is the value of amounts loaned that will be received in the future with interest, assuming that it will be paid within a year.

Examples of current liabilities include **accounts payable**, which is the value of goods or services purchased that will be paid for at a later date, and **notes payable**, which is the value of amounts borrowed (usually not inventory purchases) that will be paid in the future with interest.

Examples of noncurrent assets include notes receivable (notice notes receivable can be either current or noncurrent), land, buildings, equipment, and vehicles. An example of a noncurrent liability is notes payable (notice notes payable can be either current or noncurrent).

Why Does Current versus Noncurrent Matter?

At this point, let's take a break and explore why the distinction between current and noncurrent assets and liabilities matters. It is a good question because, on the surface, it does not seem to be important to make such a distinction. After all, assets are things owned or controlled by the organization, and liabilities are amounts owed by the organization; listing those amounts in the financial statements provides valuable information to stakeholders. But we have to dig a little deeper and remind ourselves that stakeholders are using this information to make decisions. Providing the amounts of the assets and liabilities answers the "what" question for stakeholders (that is, it tells stakeholders the value of assets), but it does not answer the "when" question for stakeholders. For example, knowing that an organization has $1,000,000 worth of assets is valuable information, but knowing that $250,000 of those assets are current and will be used or consumed within one year is more valuable to stakeholders. Likewise, it is helpful to know the company owes $750,000 worth of liabilities, but knowing that $125,000 of those liabilities will be paid within one year is even more valuable. In short, the *timing* of events is of particular interest to stakeholders.

THINK IT THROUGH

Borrowing

When money is borrowed by an individual or family from a bank or other lending institution, the loan is considered a personal or consumer loan. Typically, payments on these types of loans begin shortly after the funds are borrowed. Student loans are a special type of consumer borrowing that has a different structure for repayment of the debt. If you are not familiar with the special repayment arrangement for student loans, do a brief internet search to find out when student loan payments are expected to begin.

Now, assume a college student has two loans—one for a car and one for a student loan. Assume the person gets the flu, misses a week of work at his campus job, and does not get paid for the absence. Which loan would the person be most concerned about paying? Why?

Equity and Legal Structure

Recall that equity can also be referred to as net worth—the value of the organization. The concept of equity does not change depending on the legal structure of the business (sole proprietorship, partnership, and corporation). The terminology does, however, change slightly based on the type of entity. For example, investments by owners are considered "capital" transactions for sole proprietorships and partnerships but are considered "common stock" transactions for corporations. Likewise, distributions to owners are considered "drawing" transactions for sole proprietorships and partnerships but are considered "dividend" transactions for corporations.

As another example, in sole proprietorships and partnerships, the final amount of net income or net loss for the business becomes "Owner(s), Capital." In a corporation, net income or net loss for the business becomes **retained earnings**, which is the cumulative, undistributed net income or net loss, less dividends paid for the business since its inception.

The essence of these transactions remains the same: organizations become *more* valuable when owners make investments in the business and the businesses earn a profit (net income), and organizations become *less* valuable when owners receive distributions (dividends) from the organization and the businesses incur a loss (net loss). Because accountants are providing information to stakeholders, it is important for accountants to fully understand the specific terminology associated with the various legal structures of organizations.

The Accounting Equation

Recall the simple example of a home loan discussed in Describe the Income Statement, Statement of Owner's Equity, Balance Sheet, and Statement of Cash Flows, and How They Interrelate. In that example, we assumed a family purchased a home valued at $200,000 and made a down payment of $25,000 while financing the remaining balance with a $175,000 bank loan. This example demonstrates one of the most important concepts in the study of accounting: the **accounting equation**, which is:

Assets = Liabilities + Owner's Equity

In our example, the accounting equation would look like this:

$200,000 = $175,000 + $25,000

As you continue your accounting studies and you consider the different major types of business entities available (sole proprietorships, partnerships, and corporations), there is another important concept for you to remember. This concept is that no matter which of the entity options that you choose, the accounting process for all of them will be predicated on the accounting equation.

It may be helpful to think of the accounting equation from a "sources and claims" perspective. Under this approach, the assets (items owned by the organization) were obtained by incurring liabilities or were provided by owners. Stated differently, every asset has a claim against it—by creditors and/or owners.

YOUR TURN

The Accounting Equation

On a sheet of paper, use three columns to create your own accounting equation. In the first column, list all of the things you own (assets). In the second column, list any amounts owed (liabilities). In the third column, using the accounting equation, calculate, you guessed it, the net amount of the asset (equity). When finished, total the columns to determine your net worth. Hint: do not forget to subtract the liability from the value of the asset.

Here is something else to consider: is it possible to have negative equity? It sure is . . . ask any college student who has taken out loans. At first glance there is no asset directly associated with the amount of the loan. But is that, in fact, the case? You might ask yourself why make an investment in a college education—what is the benefit (asset) to going to college? The answer lies in the difference in lifetime earnings with a college degree versus without a college degree. This is influenced by many things, including the supply and demand of jobs and employees. It is also influenced by the earnings for the type of college degree pursued. (Where do you think accounting ranks?)

Solution

Answers will vary but may include vehicles, clothing, electronics (include cell phones and computer/gaming systems, and sports equipment). They may also include money owed on these assets, most likely vehicles and perhaps cell phones. In the case of a student loan, there may be a liability with no corresponding asset (yet). Responses should be able to evaluate the benefit of investing in college is the wage differential between earnings with and without a college degree.

Expanding the Accounting Equation

Let's continue our exploration of the accounting equation, focusing on the equity component, in particular. Recall that we defined equity as the net worth of an organization. It is helpful to also think of net worth as the *value* of the organization. Recall, too, that revenues (inflows as a result of providing goods and services) *increase* the value of the organization. So, every dollar of revenue an organization generates increases the overall value of the organization.

Likewise, expenses (outflows as a result of generating revenue) *decrease* the value of the organization. So, each dollar of expenses an organization incurs decreases the overall value of the organization. The same approach can be taken with the other elements of the financial statements:

- Gains *increase* the value (equity) of the organization.
- Losses *decrease* the value (equity) of the organization.
- Investments by owners *increase* the value (equity) of the organization.
- Distributions to owners *decrease* the value (equity) of the organization.
- Changes in assets and liabilities can *either* increase or decrease the value (equity) of the organization depending on the net result of the transaction.

A graphical representation of this concept is shown in Figure 2.4.

Assets				=	Liabilities				+	Owner's Equity	
Current		Noncurrent			Current		Noncurrent				
+	–	+	–		–	+	–	+		–	+
										Distribution to Owners Expenses Losses Comprehensive Income	Investments by Owners Revenues Gains Comprehensive Income

Figure 2.4 Graphical Representation of the Accounting Equation. Both assets and liabilities are categorized as current and noncurrent. Also highlighted are the various activities that affect the equity (or net worth) of the business. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

The format of this illustration is also intended to introduce you to a concept you will learn more about in your study of accounting. Notice each account subcategory (Current Assets and Noncurrent Assets, for example) has an "increase" side and a "decrease" side. These are called T-accounts and will be used to analyze transactions, which is the beginning of the accounting process. See Analyzing and Recording Transactions for a more comprehensive discussion of analyzing transactions and T-Accounts.

Not All Transactions Affect Equity

As you continue to develop your understanding of accounting, you will encounter many types of transactions involving different elements of the financial statements. The previous examples highlighted elements that change the equity of an organization. Not all transactions, however, ultimately impact equity. For example, the following do not impact the equity or net worth of the organization[9]:

- Exchanges of assets for assets
- Exchanges of liabilities for liabilities
- Acquisitions of assets by incurring liabilities
- Settlements of liabilities by transferring assets

It is important to understand the inseparable connection between the elements of the financial statements and the possible impact on organizational equity (value). We explore this connection in greater detail as we return to the financial statements.

2.3 Prepare an Income Statement, Statement of Owner's Equity, and Balance Sheet

One of the key factors for success for those beginning the study of accounting is to understand how the elements of the financial statements relate to each of the financial statements. That is, once the transactions are categorized into the elements, knowing what to do next is vital. This is the beginning of the process to create the financial statements. It is important to note that financial statements are discussed in the order in which the statements are presented.

9 SFAC No. 6, p. 20.

Elements of the Financial Statements

When thinking of the relationship between the elements and the financial statements, we might think of a baking analogy: the elements represent the ingredients, and the financial statements represent the finished product. As with baking a cake (see Figure 2.5), knowing the ingredients (elements) and how each ingredient relates to the final product (financial statements) is vital to the study of accounting.

(a)

(b)

Figure 2.5 Baking requires an understanding of the different ingredients, how the ingredients are used, and how the ingredients will impact the final product (a). If used correctly, the final product will be beautiful and, more importantly, delicious, like the cake shown in (b). In a similar manner, the study of accounting requires an understanding of how the accounting elements relate to the final product—the financial statements. (credit (a): modification of "U.S. Navy Culinary Specialist Seaman Robert Fritschie mixes cake batter aboard the amphibious command ship USS Blue Ridge (LCC 19) Aug. 7, 2013, while underway in the Solomon Sea 130807-N-NN332-044" by MC3 Jarred Harral/Wikimedia Commons, Public Domain; credit (b): modification of "Easter Cake with Colorful Topping" by Kaboompics .com/Pexels, CC0)

To help accountants prepare and users better understand financial statements, the profession has outlined what is referred to as **elements of the financial statements**, which are those categories or accounts that accountants use to record transactions and prepare financial statements. There are ten elements of the financial statements, and we have already discussed most of them.

- **Revenue—**value of goods and services the organization sold or provided.
- **Expenses—**costs of providing the goods or services for which the organization earns revenue.
- **Gains—**gains are similar to revenue but relate to "incidental or peripheral" activities of the organization.
- **Losses—**losses are similar to expenses but related to "incidental or peripheral" activities of the organization.
- **Assets—**items the organization owns, controls, or has a claim to.
- **Liabilities—**amounts the organization owes to others (also called creditors).
- **Equity—**the net worth (or net assets) of the organization.
- **Investment by Owners—**cash or other assets provided to the organization in exchange for an ownership interest.

- **Distribution to Owners—**cash, other assets, or ownership interest (equity) provided to owners.
- **Comprehensive Income—**defined as the "change in equity of a business enterprise during a period from transactions and other events and circumstances from nonowner sources" (SFAC No. 6, p. 21). While further discussion of comprehensive income is reserved for intermediate and advanced studies in accounting, it is worth noting that comprehensive income has four components, focusing on activities related to foreign currency, derivatives, investments, and pensions.

Financial Statements for a Sample Company

Now it is time to bake the cake (i.e., prepare the financial statements). We have all of the ingredients (elements of the financial statements) ready, so let's now return to the financial statements themselves. Let's use as an example a fictitious company named Cheesy Chuck's Classic Corn. This company is a small retail store that makes and sells a variety of gourmet popcorn treats. It is an exciting time because the store opened in the current month, June.

Assume that as part of your summer job with Cheesy Chuck's, the owner—you guessed it, Chuck—has asked you to take over for a former employee who graduated college and will be taking an accounting job in New York City. In addition to your duties involving making and selling popcorn at Cheesy Chuck's, part of your responsibility will be doing the accounting for the business. The owner, Chuck, heard that you are studying accounting and could really use the help, because he spends most of his time developing new popcorn flavors.

The former employee has done a nice job of keeping track of the accounting records, so you can focus on your first task of creating the June financial statements, which Chuck is eager to see. Figure 2.6 shows the financial information (as of June 30) for Cheesy Chuck's.

CHEESY CHUCK'S CLASSIC CORN Trial Balance For the Month Ended June 30, 2018	
Revenues	**$85,000**
Expenses:	
Popcorn	22,800
Toppings and seasonings	17,300
Employee wages and benefits	10,700
Lease payments	24,000
Utilities	3,200
Advertising	900
Miscellaneous	300
Cash	**$ 6,200**
Equipment	**$12,500**
Accounts Payable	**$ 650**
Wages Payable	**$ 1,200**
Investment by Owner	**$12,500**
Drawings by Owner	**$ (1,450)**

Figure 2.6 Trial Balance for Cheesy Chuck's Classic Corn. Accountants record and summarize accounting information into accounts, which help to track, summarize, and prepare accounting information. This table is a variation of what accountants call a "trial balance." A trial balance is a summary of accounts and aids accountants in creating financial statements. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

We should note that we are oversimplifying some of the things in this example. First, the amounts in the accounting records were given. We did not explain how the amounts would be derived. This process is explained starting in Analyzing and Recording Transactions. Second, we are ignoring the timing of certain cash flows such as hiring, purchases, and other startup costs. In reality, businesses must invest cash to prepare the store, train employees, and obtain the equipment and inventory necessary to open. These costs will precede the selling of goods and services. In the example to follow, for instance, we use Lease payments of $24,000, which represents lease payments for the building ($20,000) and equipment ($4,000). In practice, when companies lease items, the accountants must determine, based on accounting rules, whether or not the business "owns" the item. If it is determined the business "owns" the building or equipment, the item is listed on the balance sheet at the original cost. Accountants also take into account the building or equipment's value when the item is worn out. The difference in these two values (the original cost and the ending value) will be allocated over a relevant period of time. As an example, assume a business purchased equipment for $18,000 and the equipment will be worth $2,000 after four years, giving an estimated decline in value (due to usage) of $16,000 ($18,000 − $2,000). The business will allocate $4,000 of the equipment cost over each of the four years ($18,000 minus $2,000 over four years). This is called *depreciation* and is one of the topics that is covered in Long-Term Assets.

Also, the Equipment with a value of $12,500 in the financial information provided was purchased at the end of the first accounting period. It is an asset that will be depreciated in the future, but no depreciation expense is allocated in our example.

Income Statement

Let's prepare the income statement so we can inform how Cheesy Chuck's performed for the month of June (remember, an income statement is *for a period of time*). Our first step is to determine the value of goods and services that the organization sold or provided for a given period of time. These are the inflows to the business, and because the inflows relate to the primary purpose of the business (making and selling popcorn), we classify those items as Revenues, Sales, or Fees Earned. For this example, we use Revenue. The revenue for Cheesy Chuck's for the month of June is $85,000.

Next, we need to show the total expenses for Cheesy Chuck's. Because Cheesy Chuck's tracks different types of expenses, we need to add the amounts to calculate total expenses. If you added correctly, you get total expenses for the month of June of $79,200. The final step to create the income statement is to determine the amount of net income or net loss for Cheesy Chuck's. Since revenues ($85,000) are greater than expenses ($79,200), Cheesy Chuck's has a net income of $5,800 for the month of June.

Figure 2.7 displays the June income statement for Cheesy Chuck's Classic Corn.

CHEESY CHUCK'S CLASSIC CORN Income Statement For the Month Ended June 30, 2018		
Revenues		**$85,000**
Expenses:		
Popcorn	$22,800	
Toppings and seasonings	17,300	
Employee wages and benefits	10,700	
Lease payments	24,000	
Utilities	3,200	
Advertising	900	
Miscellaneous	300	
Total Expenses		**$79,200**
Net Income		**$ 5,800**

To be used in Statement of Owner's Equity

Figure 2.7 Income Statement for Cheesy Chuck's Classic Corn. The income statement for Cheesy Chuck's shows the business had Net Income of $5,800 for the month ended June 30. This amount will be used to prepare the next financial statement, the statement of owner's equity. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Financial statements are created using numerous standard conventions or practices. The standard conventions provide consistency and help assure financial statement users the information is presented in a similar manner, regardless of the organization issuing the financial statement. Let's look at the standard conventions shown in the Cheesy Chuck's income statement:

- The heading of the income statement includes three lines.
  - The first line lists the business name.
  - The middle line indicates the financial statement that is being presented.
  - The last line indicates the time frame of the financial statement. Do not forget the income statement is *for a period of time* (the month of June in our example).
- There are three columns.
  - Going from left to right, the first column is the category heading or account.
  - The second column is used when there are numerous accounts in a particular category (Expenses, in our example).
  - The third column is a total column. In this illustration, it is the column where subtotals are listed and net income is determined (subtracting Expenses from Revenues).
- Subtotals are indicated by a single underline, while totals are indicated by a double underline. Notice the amount of Miscellaneous Expense ($300) is formatted with a single underline to indicate that a subtotal will follow. Similarly, the amount of "Net Income" ($5,800) is formatted with a double underline to indicate that it is the final value/total of the financial statement.
- There are no gains or losses for Cheesy Chuck's. Gains and losses are not unusual transactions for businesses, but gains and losses may be infrequent for some, especially small, businesses.

CONCEPTS IN PRACTICE

McDonald's

For the year ended December 31, 2016, McDonald's had sales of $24.6 billion. The amount of sales is often used by the business as the starting point for planning the next year. No doubt, there are a lot of people involved in the planning for a business the size of McDonald's. Two key people at McDonald's are the purchasing manager and the sales manager (although they might have different titles). Let's look at how McDonald's 2016 sales amount might be used by each of these individuals. In each case, do not forget that McDonald's is a global company.

A purchasing manager at McDonald's, for example, is responsible for finding suppliers, negotiating costs, arranging for delivery, and many other functions necessary to have the ingredients ready for the stores to prepare the food for their customers. Expecting that McDonald's will have over $24 billion of sales during 2017, how many eggs do you think the purchasing manager at McDonald's would need to purchase for the year? According to the McDonald's website, the company uses over two billion eggs a year. Take a moment to list the details that would have to be coordinated in order to purchase and deliver over two billion eggs to the many McDonald's restaurants around the world.

A sales manager is responsible for establishing and attaining sales goals within the company. Assume that McDonald's 2017 sales are expected to exceed the amount of sales in 2016. What conclusions would you make based on this information? What do you think might be influencing these amounts? What factors do you think would be important to the sales manager in deciding what action, if any, to take? Now assume that McDonald's 2017 sales are expected to be below the 2016 sales level. What conclusions would you make based on this information? What do you think might be influencing these amounts? What factors do you think would be important to the sales manager in deciding what action, if any, to take?

http://d18rn0p25nwr6d.cloudfront.net/CIK-0000063908/62200c2b-da82-4364-be92-79ed454e3b88.pdf

https://www.mcdonalds.com/us/en-us/about-our-food/our-food-your-questions.html#breakfast

Statement of Owner's Equity

Let's create the statement of owner's equity for Cheesy Chuck's for the month of June. Since Cheesy Chuck's is a brand-new business, there is no beginning balance of Owner's Equity. The first items to account for are the increases in value/equity, which are investments by owners and net income. As you look at the accounting information you were provided, you recognize the amount invested by the owner, Chuck, was $12,500. Next, we account for the increase in value as a result of net income, which was determined in the income statement to be $5,800. Next, we determine if there were any activities that decreased the value of the business. More specifically, we are accounting for the value of distributions to the owners and net loss, if any.

It is important to note that an organization will have either net income or net loss for the period, but not both. Also, small businesses in particular may have periods where there are no investments by, or distributions to, the owner(s). For the month of June, Chuck withdrew $1,450 from the business. This is a good time to recall the

terminology used by accountants based on the legal structure of the particular business. Since the account was titled "Drawings by Owner" and because Chuck is the only owner, we can assume this is a sole proprietorship. If the business was structured as a corporation, this activity would be called something like "Dividends Paid to Owners."

At this stage, remember that since we are working with a sole proprietorship to help simplify the examples, we have addressed the owner's value in the firm as *capital* or *owner's equity*. However, later we switch the structure of the business to a corporation, and instead of owner's equity, we begin using such account titles as *common stock* and *retained earnings* to represent the owner's interests. The corporate treatment is more complicated, because corporations may have a few owners up to potentially thousands of owners (stockholders). The details of accounting for the interests of corporations are covered in Corporation Accounting.

So how much did the value of Cheesy Chuck's change during the month of June? You are correct if you answered $16,850. Since this is a brand-new store, the beginning value of the business is zero. During the month, the owner invested $12,500 and the business had profitable operations (net income) of $5,800. Also, during the month the owner withdrew $1,450, resulting in a net change (and ending balance) to owner's equity of $16,850. Shown in a formula:

Beginning Balance + Investments by Owners ± Net Income (Net Loss) – Distributions, or

$0 + $12,500 + $5,800 – $1,450 = $16,850.

Figure 2.8 shows what the statement of owner's equity for Cheesy Chuck's Classic Corn would look like.

CHEESY CHUCK'S CLASSIC CORN
Statement of Owner's Equity
For the Month Ended June 30, 2018

Chuck, Capital: June 1, 2018		**$ 0**
Increases:		
Investments by owner	$12,500	
Net income for month of June, 2018	5,800	
Total Increase		**$18,300**
Decreases:		
Drawings by owner	(1,450)	
Net loss for month of June, 2018	0	
Total Decrease		**$(1,450)**
Chuck, Capital: June 30, 2018		**$16,850**

Obtained from Income Statement

To be used in Balance Sheet

Figure 2.8 Statement of Owner's Equity for Cheesy Chuck's Classic Corn. The statement of owner's equity demonstrates how the net worth (also called equity) of the business changed over the period of time (the month of June in this case). Notice the amount of net income (or net loss) is brought from the income statement. In a similar manner, the ending equity balance (Capital for Cheesy Chuck's because it is a sole proprietorship) is carried forward to the balance sheet. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Notice the following about the statement of owner's equity for Cheesy Chuck's:

- The format is similar to the format of the income statement (three lines for the heading, three columns).
- The statement follows a chronological order, starting with the first day of the month, accounting for the

changes that occurred throughout the month, and ending with the final day of the month.

The statement uses the final number from the financial statement previously completed. In this case, the statement of owner's equity uses the net income (or net loss) amount from the income statement (Net Income, $5,800).

Balance Sheet

Let's create a balance sheet for Cheesy Chuck's for June 30. To begin, we look at the accounting records and determine what assets the business owns and the value of each. Cheesy Chuck's has two assets: Cash ($6,200) and Equipment ($12,500). Adding the amount of assets gives a total asset value of $18,700. As discussed previously, the equipment that was recently purchased will be depreciated in the future, beginning with the next accounting period.

Next, we determine the amount of money that Cheesy Chuck's owes (liabilities). There are also two liabilities for Cheesy Chuck's. The first account listed in the records is Accounts Payable for $650. Accounts Payable is the amount that Cheesy Chuck's must pay *in the future* to vendors (also called suppliers) for the ingredients to make the gourmet popcorn. The other liability is Wages Payable for $1,200. This is the amount that Cheesy Chuck's must pay in the future to employees for work that has been performed. Adding the two amounts gives us total liabilities of $1,850. (Here's a hint as you develop your understanding of accounting: Liabilities often include the word "payable." So, when you see "payable" in the account title, know these are amounts owed in the future—liabilities.)

Finally, we determine the amount of equity the owner, Cheesy Chuck, has in the business. The amount of owner's equity was determined on the statement of owner's equity in the previous step ($16,850). Can you think of another way to confirm the amount of owner's equity? Recall that equity is also called net assets (assets minus liabilities). If you take the total assets of Cheesy Chuck's of $18,700 and subtract the total liabilities of $1,850, you get owner's equity of $16,850. Using the basic accounting equation, the balance sheet for Cheesy Chuck's as of June 30 is shown in Figure 2.9.

CHEESY CHUCK'S CLASSIC CORN Balance Sheet As of June 30, 2018			
Assets		**Liabilities**	
Cash	$ 6,200	Accounts Payable	$ 650
Equipment	12,500	Wages Payable	1,200
		Total Liabilities	**$ 1,850**
		Owner's Equity	
		Cheesy Chuck, Capital	16,850
		Total Owner's Equity	**$ 16,850**
Total Assets	**$18,700**	**Total Liabilities and Owner's Equity**	**$18,700**

Figure 2.9 Balance Sheet for Cheesy Chuck's Classic Corn. The balance sheet shows what the business owns (Assets), owes (Liabilities), and is worth (equity) on a given date. Notice the amount of Owner's Equity (Capital for Cheesy Chuck's) was brought forward from the statement of owner's equity. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Connecting the Income Statement and the Balance Sheet

Another way to think of the connection between the income statement and balance sheet (which is aided by

the statement of owner's equity) is by using a sports analogy. The income statement summarizes the financial *performance* of the business for a given period of time. The income statement reports how the business performed financially each month—the firm earned either net income or net loss. This is similar to the outcome of a particular game—the team either won or lost.

The balance sheet summarizes the financial *position* of the business on a given date. Meaning, because of the financial *performance* over the past twelve months, for example, this is the financial *position* of the business as of December 31. Think of the balance sheet as being similar to a team's overall win/loss record—to a certain extent a team's strength can be perceived by its win/loss record.

However, because different companies have different sizes, you do not necessarily want to compare the balance sheets of two different companies. For example, you would not want to compare a local retail store with Walmart. In most cases you want to compare a company with its past balance sheet information.

Statement of Cash Flows

In Describe the Income Statement, Statement of Owner's Equity, Balance Sheet, and Statement of Cash Flows, and How They Interrelate, we discussed the function of and the basic characteristics of the statement of cash flows. This fourth and final financial statement lists the cash inflows and cash outflows for the business *for a period of time*. It was created to fill in some informational gaps that existed in the other three statements (income statement, owner's equity/retained earnings statement, and the balance sheet). A full demonstration of the creation of the statement of cash flows is presented in Statement of Cash Flows.

Creating Financial Statements: A Summary

In this example using a fictitious company, Cheesy Chuck's, we began with the account balances and demonstrated how to prepare the financial statements for the month of June, the first month of operations for the business. It will be helpful to revisit the process by summarizing the information we started with and how that information was used to create the four financial statements: income statement, statement of owner's equity, balance sheet, and statement of cash flows.

We started with the account balances shown in Figure 2.10.

CHEESY CHUCK'S CLASSIC CORN Account Balances For the Month Ended June 30, 2018	
Revenues	**$85,000**
Expenses:	
Popcorn	22,800
Toppings and seasonings	17,300
Employee wages and benefits	10,700
Lease payments	24,000
Utilities	3,200
Advertising	900
Miscellaneous	300
Cash	**$ 6,200**
Equipment	**$12,500**
Accounts Payable	**$ 650**
Wages Payable	**$ 1,200**
Investment by Owner	**$12,500**
Drawings by Owner	**$ (1,450)**

Figure 2.10 Account Balances for Cheesy Chuck's Classic Corn. Obtaining the account balances is the starting point for preparing financial statements. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

The next step was to create the income statement, which shows the financial *performance* of the business. The income statement is shown in Figure 2.11.

CHEESY CHUCK'S CLASSIC CORN Income Statement For the Month Ended June 30, 2018		
Revenues		**$85,000**
Expenses:		
Popcorn	$22,800	
Toppings and seasonings	17,300	
Employee wages and benefits	10,700	
Lease payments	24,000	
Utilities	3,200	
Advertising	900	
Miscellaneous	300	
Total Expenses		**$79,200**
Net Income		**$ 5,800**

Figure 2.11 Income Statement for Cheesy Chuck's Classic Corn. The income statement uses information from the trial balance, which lists the accounts and account totals. The income statement shows the financial performance of a business for a period of time. The net income or net loss will be carried forward to the statement of owner's equity. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Next, we created the statement of owner's equity, shown in Figure 2.12. The statement of owner's equity demonstrates how the equity (or net worth) of the business changed for the month of June. Do not forget that the Net Income (or Net Loss) is carried forward to the statement of owner's equity.

CHEESY CHUCK'S CLASSIC CORN Statement of Owner's Equity For the Month Ended June 30, 2018		
Chuck, Capital: June 1, 2018		**$ 0**
Increases:		
Investments by owner	$12,500	
Net Income for month of June, 2018	5,800	
Total Increase		**$18,300**
Decreases:		
Drawings by owner	$(1,450)	
Total Decrease		**$(1,450)**
Chuck, Capital: June 30, 2018		**$16,850**

Figure 2.12 Statement of Owner's Equity for Cheesy Chuck's Classic Corn. The statement of owner's equity shows how the net worth/value (or equity) of business changed for the period of time. This statement includes Net Income (or Net Loss), which was brought forward from the income statement. The ending balance is carried forward to the balance sheet. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

The third financial statement created is the balance sheet, which shows the company's financial *position* on a given date. Cheesy Chuck's balance sheet is shown in Figure 2.13.

CHEESY CHUCK'S CLASSIC CORN Balance Sheet As of June 30, 2018			
Assets		**Liabilities**	
Cash	$ 6,200	Accounts Payable	$ 650
Equipment	12,500	Wages Payable	1,200
		Total Liabilities	**$ 1,850**
		Owner's Equity	
		Cheesy Chuck, Capital	16,850
		Total Owner's Equity	**$16,850**
Total Assets	**$18,700**	**Total Liabilities and Owner's Equity**	**$18,700**

Figure 2.13 Balance Sheet for Cheesy Chuck's Classic Corn. The balance sheet shows the assets, liabilities, and owner's equity of a business on a given date. Notice the balance sheet is the accounting equation in financial statement form: Assets = Liabilities + Owner's Equity. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

THINK IT THROUGH

Financial Statement Analysis

In Why It Matters, we pointed out that accounting information from the financial statements can be useful to business owners. The financial statements provide feedback to the owners regarding the financial performance and financial position of the business, helping the owners to make decisions about the business.

Using the June financial statements, analyze Cheesy Chuck's and prepare a brief presentation. Consider this from the perspective of the owner, Chuck. Describe the financial performance of and financial position of the business. What areas of the business would you want to analyze further to get additional information? What changes would you consider making to the business, if any, and why or why not?

ETHICAL CONSIDERATIONS

Financial Statement Manipulation at Waste Management Inc.

Accountants have an ethical duty to accurately report the financial results of their company and to ensure that the company's annual reports communicate relevant information to stakeholders. If accountants and company management fail to do so, they may incur heavy penalties.

For example, in 2002 the Securities and Exchange Commission (SEC) charged the top management of Waste Management, Inc. with inflating profits by 1.7 billion to meet earnings targets. The SEC stated "that defendants fraudulently manipulated the company's financial results to meet predetermined earnings targets. The company's revenues were not growing fast enough to meet these targets, so defendants instead resorted to improperly eliminating and deferring current period expenses to inflate earnings. They employed a multitude of improper accounting practices to achieve this objective."[10] Because they failed to accurately report the financial results of their company, the top accountants and management of Waste Management, Inc. face charges.

Thomas C. Newkirk, the associate director of the SEC's Division of Enforcement, stated, "For years, these defendants cooked the books, enriched themselves, preserved their jobs, and duped unsuspecting shareholders.... Defendants' fraudulent conduct was driven by greed and a desire to retain their corporate positions and status in the business and social communities. Our goal is to take the profit out of securities fraud and to prevent fraudsters from serving as officers or directors of public companies."[11]

Liquidity Ratios

In addition to reviewing the financial statements in order to make decisions, owners and other stakeholders

10 U.S. Securities and Exchange Commission. "Waste Management Founder, Five Other Former Top Officers Sued for Massive Fraud." March 26, 2002. https://www.sec.gov/news/headlines/wastemgmt6.htm

11 U.S. Securities and Exchange Commission. "Waste Management Founder, Five Other Former Top Officers Sued for Massive Fraud." March 26, 2002. https://www.sec.gov/news/headlines/wastemgmt6.htm

may also utilize financial ratios to assess the financial health of the organization. While a more in-depth discussion of financial ratios occurs in Appendix A: Financial Statement Analysis, here we introduce *liquidity ratios*, a common, easy, and useful way to analyze the financial statements.

Liquidity refers to the business's ability to convert assets into cash. Examples of the most liquid assets include accounts receivable and inventory for merchandising or manufacturing businesses). The reason these are among the most liquid assets is that these assets will be turned into cash more quickly than land or buildings, for example. Accounts receivable represents goods or services that have already been sold and will typically be paid/collected within thirty to forty-five days. Inventory is less liquid than accounts receivable because the product must first be sold before it generates cash (either through a cash sale or sale on account). Inventory is, however, more liquid than land or buildings because, under most circumstances, it is easier and quicker for a business to find someone to purchase its goods than it is to find a buyer for land or buildings.

Working Capital

The starting point for understanding liquidity ratios is to define **working capital**—current assets minus current liabilities. Recall that current assets and current liabilities are amounts generally settled in one year or less. Working capital (current assets minus current liabilities) is used to assess the dollar amount of assets a business has available to meet its short-term liabilities. A positive working capital amount is desirable and indicates the business has sufficient current assets to meet short-term obligations (liabilities) and still has financial flexibility. A negative amount is undesirable and indicates the business should pay particular attention to the composition of the current assets (that is, how liquid the current assets are) and to the timing of the current liabilities. It is unlikely that all of the current liabilities will be due at the same time, but the amount of working capital gives stakeholders of both small and large businesses an indication of the firm's ability to meet its short-term obligations.

One limitation of working capital is that it is a dollar amount, which can be misleading because business sizes vary. Recall from the discussion on materiality that $1,000, for example, is more material to a small business (like an independent local movie theater) than it is to a large business (like a movie theater chain). Using percentages or ratios allows financial statement users to more easily compare small and large businesses.

Current Ratio

The **current ratio** is closely related to working capital. The current ratio utilizes the same amounts as working capital (current assets and current liabilities) but presents the amount in ratio, rather than dollar, form. That is, the current ratio is defined as current assets/current liabilities. The interpretation of the current ratio is similar to working capital. A ratio of greater than one indicates that the firm has the ability to meet short-term obligations with a buffer, while a ratio of less than one indicates that the firm should pay close attention to the composition of its current assets as well as the timing of the current liabilities.

Sample Working Capital and Current Ratio Calculations

Assume that Chuck, the owner of Cheesy Chuck's, wants to assess the liquidity of the business. Figure 2.14 shows the June 30, 2018, balance sheet. Assume the Equipment listed on the balance sheet is a noncurrent asset. This is a reasonable assumption as this is the first month of operation and the equipment is expected to last several years. We also assume the Accounts Payable and Wages Payable will be paid within one year and are, therefore, classified as current liabilities.

CHEESY CHUCK'S CLASSIC CORN Balance Sheet As of June 30, 2018			
Assets		**Liabilities**	
Cash	$ 6,200	Accounts Payable	$ 650
Equipment	12,500	Wages Payable	1,200
		Total Liabilities	**$ 1,850**
		Owner's Equity	
		Cheesy Chuck, Capital	16,850
		Total Owner's Equity	**$16,850**
Total Assets	**$18,700**	**Total Liabilities and Owner's Equity**	**$18,700**

Figure 2.14 Balance Sheet for Cheesy Chuck's Classic Corn. The balance sheet provides a snapshot of the company's financial position. By showing the total assets, total liabilities, and total equity of the business, the balance sheet provides information that is useful for decision-making. In addition, using ratios can give stakeholders another view of the company, allowing for comparisons to prior periods and to other businesses. (attribution: Copyright Rice University, OpenStax, under CC BY-NC-SA 4.0 license)

Working capital is calculated as current assets minus current liabilities. Cheesy Chuck's has only two assets, and one of the assets, Equipment, is a noncurrent asset, so the value of current assets is the cash amount of $6,200. The working capital of Cheesy Chuck's is $6,200 – $1,850 or $4,350. Since this amount is over $0 (it is well over $0 in this case), Chuck is confident he has nothing to worry about regarding the liquidity of his business.

Let's further assume that Chuck, while attending a popcorn conference for store owners, has a conversation with the owner of a much larger popcorn store—Captain Caramel's. The owner of Captain Caramel's happens to share the working capital for his store is $52,500. At first Chuck feels his business is not doing so well. But then he realizes that Captain Caramel's is located in a much bigger city (with more customers) and has been around for many years, which has allowed them to build a solid business, which Chuck aspires to do. How would Chuck compare the liquidity of his new business, opened just one month, with the liquidity of a larger and more-established business in another market? The answer is by calculating the current ratio, which removes the size differences (materiality) of the two businesses.

The current ratio is calculated as current assets/current liabilities. We use the same amounts that we used in the working capital calculation, but this time we divide the amounts rather than subtract the amounts. So Cheesy Chuck's current ratio is $6,200 (current assets)/$1,850 (current liabilities), or 3.35. This means that for every dollar of current liabilities, Cheesy Chuck's has $3.35 of current assets. Chuck is pleased with the ratio but does not know how this compares to another popcorn store, so he asked his new friend from Captain Caramel's. The owner of Captain Caramel's shares that his store has a current ratio of 4.25. While it is still better than Cheesy Chuck's, Chuck is encouraged to learn that his store is performing at a more competitive level than he previously thought by comparing the dollar amounts of working capital.

IFRS CONNECTION

IFRS and US GAAP in Financial Statements

Understanding the elements that make up financial statements, the organization of those elements within the financial statements, and what information each statement relays is important, whether analyzing the financial statements of a US company or one from Honduras. Since most US companies apply generally accepted accounting principles (GAAP)[12] as prescribed by the Financial Accounting Standards Board (FASB), and most international companies apply some version of the International Financial Reporting Standards (IFRS),[13] knowing how these two sets of accounting standards are similar or different regarding the elements of the financial statements will facilitate analysis and decision-making.

Both IFRS and US GAAP have the same elements as components of financial statements: assets, liabilities, equity, income, and expenses. Equity, income, and expenses have similar subcategorization between the two types of GAAP (US GAAP and IFRS) as described. For example, income can be in the form of earned income (a lawyer providing legal services) or in the form of gains (interest earned on an investment account). The definition of each of these elements is similar between IFRS and US GAAP, but there are some differences that can influence the value of the account or the placement of the account on the financial statements. Many of these differences are discussed in detail later in this course when that element—for example, the nuances of accounting for liabilities—is discussed. Here is an example to illustrate how these minor differences in definition can impact placement within the financial statements when using US GAAP versus IFRS. ACME Car Rental Company typically rents its cars for a time of two years or 60,000 miles. At the end of whichever of these two measures occurs first, the cars are sold. Under both US GAAP and IFRS, the cars are noncurrent assets during the period when they are rented. Once the cars are being "held for sale," under IFRS rules, the cars become current assets. However, under US GAAP, there is no specific rule as to where to list those "held for sale" cars; thus, they could still list the cars as noncurrent assets. As you learn more about the analysis of companies and financial information, this difference in placement on the financial statements will become more meaningful. At this point, simply know that financial analysis can include ratios, which is the comparison of two numbers, and thus any time you change the denominator or the numerator, the ratio result will change.

There are many similarities and some differences in the actual presentation of the various financial statements, but these are discussed in The Adjustment Process at which point these similarities and differences will be more meaningful and easier to follow.

12 Publicly traded companies in the United States must file their financial statements with the SEC, and those statements must be compiled using US GAAP. However, in some states, private companies can apply IFRS for SMEs (small and medium entities).

13 The following site identifies which countries require IFRS, which use a modified version of IFRS, and which countries prohibit the use of IFRS. https://www.iasplus.com/en/resources/ifrs-topics/use-of-ifrs

Key Terms

accounting equation assets = liabilities + owner's equity

accounts payable value of goods or services purchased that will be paid for at a later date

accounts receivable value of goods or services sold for which payment will be received at a later date

accrual basis accounting accounting system in which revenue is recorded or recognized when earned yet not necessarily received, and in which expenses are recorded when legally incurred and not necessarily when paid

asset tangible or intangible resource owned or controlled by a company, individual, or other entity with the intent that it will provide economic value

balance sheet financial statement that lists what the organization owns (assets), owes (liabilities), and is worth (equity) on a *specific date*

cash basis accounting method of accounting in which transactions are not recorded in the financial statements until there is an exchange of cash

common stock ownership interests in a corporation

comprehensive income change in equity of a business enterprise during a period from transactions and other events and circumstances from nonowner sources

corporation legal business structure involving one or more individuals (owners) who are legally distinct (separate) from the business

current asset asset that will be used or consumed in one year or less

current liability liability that will (generally) be settled in one year or less

current ratio current assets/current liabilities

distribution to owner periodic "reward" distributed to owner of cash or other assets

dividend portion of the net worth (equity) that is returned to owners of a corporation as a reward for their investment

elements of the financial statements categories or groupings used to record transactions and prepare financial statements

equity residual interest in the assets of an entity that remains after deducting its liabilities

expense cost associated with providing goods or services

gain increase in organizational value from activities that are "incidental or peripheral" to the primary purpose of the business

income statement financial statement that measures the organization's financial performance for a given period of time

initial public offering (IPO) organization's first time issuing common stock

intangible asset has value, but often lacks a physical existence or corpus

inventory value of products to be sold or items to be converted into sellable products

investment by owner exchange of cash or other assets in exchange for an ownership interest in the organization

liability probable future sacrifice of economic benefits arising from present obligations of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions or events

liquidity ability to convert assets into cash

long-term asset asset not expected to be converted into cash or used up within one year

long-term liability liability typically expected to be due for payment more than one year past the current balance sheet date

loss decrease in organizational value from activities that are "incidental or peripheral" to the primary purpose of the business
net income when revenues and gains are greater than expenses and losses
net loss when expenses and losses are greater than revenues and gains
noncurrent asset asset that will be used or consumed over more than one year
noncurrent liability liability that is expected to be settled in more than one year
notes payable value of amounts borrowed that will be paid in the future with interest
notes receivable value of amounts loaned that will be received in the future with interest
partnership legal business structure involving two or more individuals
publicly traded company company issuing stock that can be purchased by the investing public
retained earnings cumulative, undistributed net income or net loss for the business since its inception
revenue inflows or other enhancements of assets of an entity or settlements of its liabilities (or a combination of both) from delivering or producing goods, rendering services, or other activities that constitute the entity's ongoing major or central operations
Securities and Exchange Commission (SEC) governmental agency that has responsibility for oversight of financial investments
short-term asset asset typically used up, sold, or converted to cash in one year or less
short-term liability liability typically expected to be paid within one year or less
sole proprietorship legal business structure consisting of a single individual
stakeholders those having a claim in some aspect of a company's products, operations, markets, industry, and outcome
statement of cash flows financial statement listing the cash inflows and cash outflows for the business for a period of time
statement of owner's equity financial statement showing how the equity of the organization changed for a period of time
tangible asset asset that has physical substance
working capital current assets – current liabilities

Summary

2.1 Describe the Income Statement, Statement of Owner's Equity, Balance Sheet, and Statement of Cash Flows, and How They Interrelate

- Financial statements provide financial information to stakeholders to help them in making decisions.
- There are four financial statements: income statement, statement of owner's equity, balance sheet, and statement of cash flows.
- The income statement measures the financial *performance* of the organization for a period of time. The income statement lists revenues, expenses, gains, and losses, which make up net income (or net loss).
- The statement of owner's equity shows how the net worth of the organization changes for a period of time. In addition to showing net income or net loss, the statement of owner's equity shows the investments by and distributions to owners.
- The balance sheet shows the organization's financial *position* on a given date. The balance sheet lists assets, liabilities, and owners' equity.
- The statement of cash flows shows the organization's cash inflows and cash outflows for a given period of time. The statement of cash flows is necessary because financial statements are usually prepared using *accrual* accounting, which records transactions when they occur rather than waiting until cash is exchanged.

2.2 Define, Explain, and Provide Examples of Current and Noncurrent Assets, Current and Noncurrent Liabilities, Equity, Revenues, and Expenses

- Assets and liabilities are categorized into current and noncurrent, based on when the item will be settled. Assets and liabilities that will be settled in one year or less are classified as current; otherwise, the items are classified as noncurrent.
- Assets are also categorized based on whether or not the asset has physical substance. Assets with physical substance are considered tangible assets, while intangible assets lack physical substance.
- The distinction between current and noncurrent assets and liabilities is important because it helps financial statement users assess the timing of the transactions.
- Three broad categories of legal business structures are sole proprietorship, partnership, and corporation, with each structure having advantages and disadvantages.
- The accounting equation is Assets = Liabilities + Owner's Equity. It is important to the study of accounting because it shows what the organization owns and the sources of (or claims against) those resources.
- Owners' equity can also be thought of as the net worth or value of the business. There are many factors that influence equity, including net income or net loss, investments by and distributions to owners, revenues, gains, losses, expenses, and comprehensive income.

2.3 Prepare an Income Statement, Statement of Owner's Equity, and Balance Sheet

- There are ten financial statement elements: revenues, expenses, gains, losses, assets, liabilities, equity, investments by owners, distributions to owners, and comprehensive income.
- There are standard conventions for the order of preparing financial statements (income statement, statement of owner's equity, balance sheet, and statement of cash flows) and for the format (three-line heading and columnar structure).
- Financial ratios, which are calculated using financial statement information, are often beneficial to aid in financial decision-making. Ratios allow for comparisons between businesses and determining trends between periods within the same business.
- Liquidity ratios assess the firm's ability to convert assets into cash.
- Working Capital (Current Assets – Current Liabilities) is a liquidity ratio that measures a firm's ability to meet current obligations.
- The Current Ratio (Current Assets/Current Liabilities) is similar to Working Capital but allows for comparisons between firms by determining the proportion of current assets to current liabilities.

Multiple Choice

1. LO 2.1 Which of these statements is *not* one of the financial statements?

A. income statement
B. balance sheet
C. statement of cash flows
D. statement of owner investments

2. LO 2.1 Stakeholders are less likely to include which of the following groups?

A. owners
B. employees
C. community leaders
D. competitors

3. LO 2.1 Identify the correct components of the income statement.

A. revenues, losses, expenses, and gains
B. assets, liabilities, and owner's equity
C. revenues, expenses, investments by owners, distributions to owners
D. assets, liabilities, and dividends

4. LO 2.1 The balance sheet lists which of the following?

A. assets, liabilities, and owners' equity
B. revenues, expenses, gains, and losses
C. assets, liabilities, and investments by owners
D. revenues, expenses, gains, and distributions to owners

5. LO 2.1 Assume a company has a $350 credit (not cash) sale. How would the transaction appear if the business uses *accrual* accounting?

A. $350 would show up on the balance sheet as a sale.
B. $350 would show up on the income statement as a sale.
C. $350 would show up on the statement of cash flows as a cash outflow.
D. The transaction would not be reported because the cash was not exchanged.

6. LO 2.2 Which of the following statements is true?

A. Tangible assets lack physical substance.
B. Tangible assets will be consumed in a year or less.
C. Tangible assets have physical substance.
D. Tangible assets will be consumed in over a year.

7. LO 2.2 Owners have no personal liability under which legal business structure?

A. a corporation
B. a partnership
C. a sole proprietorship
D. There is liability in every legal business structure.

8. LO 2.2 The accounting equation is expressed as _____.

A. Assets + Liabilities = Owner's Equity
B. Assets – Noncurrent Assets = Liabilities
C. Assets = Liabilities + Investments by Owners
D. Assets = Liabilities + Owner's Equity

9. LO 2.2 Which of the following decreases owner's equity?

A. investments by owners
B. losses
C. gains
D. short-term loans

10. LO 2.2 Exchanges of assets for assets have what effect on equity?

A. increase equity
B. may have no impact on equity
C. decrease equity
D. There is no relationship between assets and equity.

11. LO 2.2 All of the following increase owner's equity *except* for which one?
- A. gains
- B. investments by owners
- C. revenues
- D. acquisitions of assets by incurring liabilities

12. LO 2.3 Which of the following is not an element of the financial statements?
- A. future potential sales price of inventory
- B. assets
- C. liabilities
- D. equity

13. LO 2.3 Which of the following is the correct order of preparing the financial statements?
- A. income statement, statement of cash flows, balance sheet, statement of owner's equity
- B. income statement, statement of owner's equity, balance sheet, statement of cash flows
- C. income statement, balance sheet, statement of owner's equity, statement of cash flows
- D. income statement, balance sheet, statement of cash flows, statement of owner's equity

14. LO 2.3 The three heading lines of financial statements typically include which of the following?
- A. company, statement title, time period of report
- B. company headquarters, statement title, name of preparer
- C. statement title, time period of report, name of preparer
- D. name of auditor, statement title, fiscal year end

15. LO 2.3 Which financial statement shows the financial *performance* of the company on a cash basis?
- A. balance sheet
- B. statement of owner's equity
- C. statement of cash flows
- D. income statement

16. LO 2.3 Which financial statement shows the financial *position* of the company?
- A. balance sheet
- B. statement of owner's equity
- C. statement of cash flows
- D. income statement

17. LO 2.3 Working capital is an indication of the firm's _____.
- A. asset utilization
- B. amount of noncurrent liabilities
- C. liquidity
- D. amount of noncurrent assets

Questions

1. LO 2.1 Identify the four financial statements and describe the purpose of each.

2. LO 2.1 Define the term *stakeholders*. Identify two stakeholder groups, and explain how each group might use the information contained in the financial statements.

3. LO 2.1 Identify one similarity and one difference between revenues and gains. Why is this distinction important to stakeholders?

4. LO 2.1 Identify one similarity and one difference between expenses and losses. Why is this distinction important to stakeholders?

5. LO 2.1 Explain the concept of equity, and identify some activities that affect equity of a business.

6. LO 2.2 Explain the difference between current and noncurrent assets and liabilities. Why is this distinction important to stakeholders?

7. LO 2.2 Identify/discuss one similarity and one difference between tangible and intangible assets.

8. LO 2.2 Name the three types of legal business structure. Describe one advantage and one disadvantage of each.

9. LO 2.2 What is the "accounting equation"? List two examples of business transactions, and explain how the accounting equation would be impacted by these transactions.

10. LO 2.3 Identify the order in which the four financial statements are prepared, and explain how the first three statements are interrelated.

11. LO 2.3 Explain how the following items affect equity: revenue, expenses, investments by owners, and distributions to owners.

12. LO 2.3 Explain the purpose of the statement of cash flows and why this statement is needed.

Exercise Set A

EA1. LO 2.1 For each independent situation below, calculate the missing values.

Revenues	–	Expenses	+	Gains	–	Losses	=	Net Income/(Loss)
$ 1,250		$ 1,100		$ 125		$ 75		?
?		100,755		0		1,550		$ (485)
75,560		68,600		?		1,675		6,485
26,390		?		320		600		(990)
872,300		856,995		11,000		?		26,305

EA2. LO 2.1 For each independent situation below, calculate the missing values for owner's equity

Beginning Balance	+	Investments	–	Distributions	=	Ending Balance
$ 0		$ 22,750		$ 12,000		?
17,630		?		7,500		$ 66,330
?		75,300		163,200		138,900
0		175,300		?		159,530
85,800		62,750		43,900		?

EA3. LO 2.1 For each independent situation below, calculate the missing values.

Assets	–	Liabilities	=	Owner's Equity
$ 32,000		$ 17,000		?
168,700		?		$146,300
17,500		16,830		?
?		232,000		330,700
382,170		?		125,270

EA4. LO 2.1 For each independent situation below, place an (X) by the transactions that would be included in the statement of cash flows.

Transaction	Included
Sold items on account	
Wrote check to pay utilities	
Received cash investment by owner	
Recorded wages owed to employees	
Received bill for advertising	

Table 2.3

EA5. LO 2.2 For each of the following items, identify whether the item is considered current or noncurrent, and explain why.

Item	Current or Noncurrent?
Cash	
Inventory	
Machines	
Trademarks	
Accounts Payable	
Wages Payable	
Owner, Capital	
Accounts Receivable	

Table 2.4

EA6. LO 2.2 For the items listed below, indicate how the item affects equity (increase, decrease, or no impact).

Item	Increase? Decrease? or No Impact?
Expenses	
Assets	
Gains	
Liabilities	
Dividends	

Table 2.5

EA7. LO 2.2 Forest Company had the following transactions during the month of December. What is the December 31 cash balance?

Cash sales	$3,250
Payments for inventory	1,760
Investments by owners	3,000
Supplies used	175
Cash withdrawals	260
Inventory received	2,500
Wages paid	2,390
Cash balance Dec. 1	4,250

EA8. LO 2.2 Here are facts for the Hudson Roofing Company for December.

Hudson Alexander, Capital Dec. 1	$175,300
Dec. revenue	56,400
Dec. expenses	59,800

Assuming no investments or withdrawals, what is the ending balance in the owners' capital account?

EA9. LO 2.3 Prepare an income statement using the following information for DL Enterprises for the month of July 2018.

Sales revenue	$62,500
Rental revenue	15,300
Product expense	52,200
Wages expense	18,900
Owner investment	12,000
Equipment purchases	56,000
Utilities expense	1,800
Taxes expense	400

EA10. LO 2.3 Prepare a statement of owner's equity using the information provided for Pirate Landing for the month of October 2018.

Cash	$14,500
Pirate Pete, Capital Oct. 1	56,000
Net loss Oct. 2017	7,800
Owner investments	1,500
Wages payable	3,250
Supplies expense	750
Owner withdrawals	100

EA11. LO 2.3 Prepare a balance sheet using the following information for the Ginger Company as of March 31, 2019.

Accounts payable	$ 1,730
Cash	11,050
Ginger Ale, Capital Mar. 1	17,300
Inventory	8,230
Wages payable	2,150
Sales	13,600
Product expenses	8,200
Ginger Ale, Capital Mar. 31	22,700
Equipment	7,300

Exercise Set B

EB1. LO 2.1 For each independent situation below, calculate the missing values.

Revenues	–	Expenses	+	Gains	–	Losses	=	Net Income/(Loss)
$ 1,813		$ 1,595		$ 181		$ 109		?
?		146,095		$ 0		2,248		$ (703)
109,562		99,470		?		2,429		9,403
38,266		?		464		870		(1,436)
1,264,835		1,242,643		15,950		?		38,142

EB2. LO 2.1 For each independent situation below, calculate the missing values for Owner's Equity.

Beginning Balance	+	Investments	–	Distributions	=	Ending Balance
$ 0		$ 14,333		$ 7,560		?
11,107		?		4,725		$ 41,788
?		47,439		102,816		87,507
0		110,439		?		100,504
54,054		39,533		27,657		?

EB3. LO 2.1 For each independent situation below, calculate the missing values.

Assets	–	Liabilities	=	Owner's Equity
$ 81,600		$ 17,000		?
430,185		?		$373,065
44,625		42,917		?
?		591,600		843,285
974,534		?		319,439

EB4. LO 2.1 For each of the following independent situations, place an (X) by the transactions that would be included in the statement of cash flows.

Transaction	Included
Purchased supplies with check	
Received inventory (a bill was included)	
Paid cash to owner for withdrawal	
Gave cash donation to local charity	
Received bill for utilities	

Table 2.6

EB5. LO 2.2 For each of the following items, identify whether the item is considered current or noncurrent, and explain why.

Item	Current or Noncurrent?
Inventory	
Buildings	
Accounts Receivable	
Cash	
Trademarks	
Accounts Payable	
Wages Payable	
Common Stock	

Table 2.7

EB6. LO 2.2 For the items listed below, indicate how the item affects equity (increase, decrease, or no impact).

Item	Increase? Decrease? or No Impact?
Revenues	
Gains	
Losses	
Drawings	
Investments	

Table 2.8

EB7. LO 2.2 Gumbo Company had the following transactions during the month of December. What was the December 1 cash balance?

Dividends paid	$ 221
Credit sales	149
Payments for equipment	1,496
Taxes paid	2,032
Common stock sold	2,550
Inventory received	2,125
Cash sales	2,763
Cash balance Dec. 31	9,869

EB8. LO 2.2 Here are facts for Hailey's Collision Service for January.

Hailey Shusher, Capital Jan. 1	$61,355
Jan. revenue	23,240
Jan. expenses	20,930

Assuming no investments or withdrawals, what is the ending balance in the owners' capital account?

EB9. LO 2.3 Prepare an income statement using the following information for CK Company for the month of February 2019.

Sales revenue	$26,250
Rental revenue	6,426
Product expense	21,924
Wages expense	7,938
Owner investment	5,040
Equipment purchases	23,520
Utilities expense	756
Taxes expense	168

EB10. LO 2.3 Prepare a statement of owner's equity using the following information for the Can Due Shop for the month of September 2018.

Cash	$ 51,040
Steve due, Capital Sep.1	197,120
Net income Sep. 2018	27,456
Owner investments	5,280
Wages payable	11,440
Supplies expense	2,640
Owner withdraws	352

EB11. LO 2.3 Prepare a balance sheet using the following information for Mike's Consulting as of January 31, 2019.

Accounts payable	$ 570
Cash	3,646
Mike Michael, Capital Jan. 1	5,709
Inventory	2,716
Wages payable	710
Sales	4,488
Product expenses	2,706
Mike Michael, Capital Jan. 31	7,491
Equipment	2,409

Problem Set A

PA1. LO 2.1 The following information is taken from the records of Baklava Bakery for the year 2019.

Revenues: Jan.	$22,500
Gains: Feb.	1,200
Losses: Mar.	3,700
Expenses: Feb.	21,620
Gains: Jan.	0
Revenues: Mar.	42,800
Losses: Feb.	1,600
Expenses: Mar.	45,100
Losses: Jan.	0
Revenues: Feb.	37,550
Expenses: Jan.	20,760
Gains: Mar.	5,600

A. Calculate net income or net loss for January.
B. Calculate net income or net loss for February.
C. Calculate net income or net loss for March.
D. For each situation, comment on how a stakeholder might view the firm's performance. (Hint: Think about the source of the income or loss.)

PA2. LO 2.1 Each situation below relates to an independent company's owners' equity.

	Beginning Balance	+	Net Income	–	Net Loss	+	Investments	–	Distributions	=	Ending Balance
Co.1	?		$16,500		$ 0		$22,300		$ 1,750		$ 37,050
Co.2	$ 63,180		0		12,000		0		?		44,880
Co.3	275,300		?		0		0		24,100		299,400

A. Calculate the missing values.

B. Based on your calculations, make observations about each company.

PA3. LO 2.1 The following information is from a new business. Comment on the year-to-year changes in the accounts and possible sources and uses of funds (how were the funds obtained and used).

	Assets	–	Liabilities	=	Owner's Equity
End of Year 1	$245,000		$120,000		$125,000
End of Year 2	286,000		150,000		136,000
End of Year 3	212,000		80,000		132,000

PA4. LO 2.1 Each of the following situations relates to a different company.

		Company A	Company B	Company C	Company D
1	Revenues	$16,500	$167,320	?	$235,000
2	Expenses	12,400	?	$72,300	241,000
3	Gains	750	1,350	0	?
4	Losses	900	6,240	5,200	0
5	Net Income or (Loss)	?	(9,250)	5,100	6,300

A. For each of these independent situations, find the missing amounts.

B. How would stakeholders view the financial performance of each company? Explain.

PA5. LO 2.2 For each of the following independent transactions, indicate whether there was an increase, a decrease, or no impact for each financial statement element.

Transaction	Assets	Liabilities	Owners' Equity
Paid cash for expenses			
Sold common stock for cash			
Owe vendor for purchase of asset			
Paid owners for dividends			
Paid vendor for amount previously owed			

Table 2.9

PA6. LO 2.2 Olivia's Apple Orchard had the following transactions during the month of September, the first month in business.

Transaction	Amount	Asset	–	Liability	=	Owner's Equity
Amount owed for land purchase	$50,000	$50,000		$50,000		$0
Apple sales: cash	3,000	?		?		?
Apple sales: credit	6,000	?		?		?
Collections of credit sales	4,000	?		?		?
Cash purchase of equipment	10,000	?		?		?
Owner investments	25,000	?		?		?
Wages expenses paid	6,000	?		?		?
Fuel expenses paid	400	?		?		?
Amount owed for utility expense	1,000	?		?		?
Current totals		$50,000		$50,000		$0

Complete the chart to determine the ending balances. As an example, the first transaction has been completed. Note: Negative amounts should be indicated with minus signs (–) and unaffected should be noted as $0.

(Hints: 1. each transaction will involve two financial statement elements; 2. the net impact of the transaction may be $0.)

PA7. LO 2.2 Using the information in this problem, determine the amount of revenue and expenses for Olivia's Apple Orchard for the month of September.

PA8. LO 2.3 The following ten transactions occurred during the July grand opening of the Pancake Palace. Assume all Retained Earnings transactions relate to the primary purpose of the business.

	Assets			Liabilities		Owner's Equity	
	Cash	Inventory	Equipment	Accounts Payable	Wages Payable	Common Stock	Retained Earnings
1	$50,000					$50,000	
2	(6,000)	$6,000					
3			$22,000	$22,000			
4	1,250						$ 1,250
5	(750)						(750)
6				600			(600)
7					$3,000		(3,000)
8	3,200						3,200
9				175			(175)
10	(1,000)		1,000				
Ending Balance							

A. Calculate the ending balance for each account.
B. Create the income statement.
C. Create the statement of owner's equity.
D. Create the balance sheet.

Problem Set B

PB1. LO 2.1 The following information is taken from the records of Rosebloom Flowers for the year 2019.

Revenues: Jan.	$36,425
Gains: Feb.	2,820
Losses: Mar.	8,695
Expenses: Feb.	50,807
Gains: Jan.	0
Revenues: Mar.	53,580
Losses: Feb.	3,760
Expenses: Mar.	58,985
Losses: Jan.	0
Revenues: Feb.	88,243
Expenses: Jan.	48,786
Gains: Mar.	13,160

A. Calculate net income or net loss for January.
B. Calculate net income or net loss for February.
C. Calculate net income or net loss for March.
D. For each situation, comment on how a stakeholder might view the firm's performance. (Hint: think about the source of the income or loss.)

PB2. LO 2.1 Each situation below relates to an independent company's Owners' Equity.

	Beginning Balance	+	Net Income	–	Net Loss	+	Investments	–	Distributions	=	Ending Balance
Co.1	$163,800		$16,500		$ 0		?		$ 1,750		$254,150
Co.2	63,180		0		12,000		$ 0		51,180		?
Co.3	0		0		?		150,000		0		101,400

A. Calculate the missing values.
B. Based on your calculations, make observations about each company.

PB3. LO 2.1 The following information is from a new business. Comment on the year-to-year changes in the accounts and possible sources and uses funds (how were the funds obtained and used).

	Assets	–	Liabilities	=	Owner's Equity
End of Year 1	$137,000		$62,000		$75,000
End of Year 2	148,000		57,000		91,000
End of Year 3	168,000		80,000		88,000

PB4. LO 2.1 Each of the following situations relates to a different company.

		Company A	Company B	Company C	Company D
1	Revenues	?	$1,480,500	$103,950	$1,054,116
2	Expenses	$455,490	1,518,300	78,120	?
3	Gains	0	?	4,725	8,505
4	Losses	32,760	0	5,670	39,312
5	Net Income or (Loss)	32,130	39,690	?	(58,275)

A. For each of these independent situations, find the missing amounts.
B. How would stakeholders view the financial performance of each company? Explain.

PB5. LO 2.2 For each of the following independent transactions, indicate whether there was an increase, decrease, or no impact on each financial statement element.

Transaction	Assets	Liabilities	Owners' Equity
Received cash for sale of asset (no gain or loss)			
Cash distribution to owner			
Cash sales			
Investment by owners			
Owe vendor for inventory purchase			

Table 2.10

PB6. LO 2.2 Mateo's Maple Syrup had the following transactions during the month of February, its first month in business.

Transaction	Amount	Asset	–	Liability	=	Owner's Equity
Common stock sold	$ 3,000	$3,000		$0		$3,000
Amount owed for tax expense	1,950	?		?		?
Amount owed for insurance expense	750	?		?		?
Syrup sales: cash	13,000	?		?		?
Syrup sales: credit	6,000	?		?		?
Dividends paid	40	?		?		?
Collections of credit sales	1,700	?		?		?
Cash purchase for supplies expenses	250	?		?		?
Cash paid for amounts owed	1,600	?		?		?
Utility expenses paid	400	?		?		?
Taxes paid	600	?		?		?
		$3,000		$0		$3,000

Complete the chart to determine the ending balances. As an example, the first transaction has been completed. Note: negative amounts should be indicated with minus signs (–).

(Hints: 1. each transaction will involve two financial statement elements; 2. the net impact of the transaction may be $0.)

PB7. LO 2.2 Using the information in this problem, determine the amount of revenue and expenses for Mateo's Maple Syrup for the month of February.

Thought Provokers

TP1. LO 2.1 Choose three stakeholders (or stakeholder groups) for Walmart and prepare a written response for each stakeholder. In your written response, consider the factors about the business the particular stakeholder would be interested in. Consider the financial and any nonfinancial factors that would be relevant to the stakeholder (or stakeholder group). Explain why these factors are important. Do some research and see if you can find support for your points.

TP2. LO 2.1 Assume you purchased ten shares of Roku during the company's IPO. Comment on why this might be a good investment. Consider factors such as what you expect to get from your investment, why you think Roku would become a publicly traded company, and what you think is the landscape of the industry Roku is in. What other factors might be relevant to your decision to invest in Roku?

TP3. LO 2.2 A trademark is an intangible asset that has value to a business. Assume that you are an accountant with the responsibility of valuing the trademark of a well-known company such as Nike or McDonald's. What makes each of these companies unique and adds value? While the value of a trademark may not necessarily be recorded on the company's balance sheet, discuss what factors you think would affect (increase or decrease) the value of the company's trademark? Consider your answer through the perspective of various stakeholders.

TP4. LO 2.3 For each of the following ten independent transactions, provide a written description of what occurred in each transaction. Figure 2.4 might help you.

	Assets			Liabilities		Owner's Equity	
	Cash	Inventory	Equipment	Accounts Payable	Wages Payable	Common Stock	Retained Earnings
1	$57,500					$57,500	
2	(6,900)	$6,900					
3			$25,300	$25,300			
4	1,438						$ 1,438
5	(863)						(863)
6				460			(460)
7					$3,450		(3,450)
8	3,680						3,680
9				102			(102)
10	(1,150)		1,150				

TP5. LO 2.3 The following historical information is from Assisi Community Markets.

	Current Assets			Current Liabilities	
	Cash	Accounts Receivable	Inventory	Accounts Payable	Wages Payable
Year 1	$42,000	$12,500	$ 6,200	$12,500	$3,200
Year 2	37,500	16,800	7,600	14,600	3,700
Year 3	26,800	22,900	10,300	19,800	4,500
Year 4	22,100	28,000	15,400	20,600	6,000
Year 5	15,700	29,500	16,700	22,900	8,200

Calculate the working capital and current ratio for each year. What observations do you make, and what actions might the owner consider taking?

6 Merchandising Transactions

Figure 6.1 J&J Games. Proper recognition of merchandising transactions gives management a clear inventory picture to make informed business decisions. (credit: modification of "Video game retail store, consumerism at its finest" by Bas de Reuver/Flickr, CC BY 2.0)

Chapter Outline

Why It Matters

Jason and his brother James own a small business called J&J Games, specializing in the sale of video games and accessories. They purchase their merchandise from a Marcus Electronics manufacturer and sell directly to consumers.

When J&J Games (J&J) purchases merchandise from Marcus, they establish a contract detailing purchase costs, payment terms, and shipping charges. It is important to establish this contract so that J&J and Marcus understand the inventory responsibilities of each party. J&J Games typically does not pay with cash immediately and is given an option for delayed payment with the possibility of a discount for early payment. The delayed payment helps continue the strong relationship between the two parties, but the option for early

payment gives J&J a monetary incentive to pay early and allow Marcus to use the funds for other business purposes. Until J&J pays on their account, this outstanding balance remains a liability for J&J.

J&J Games successfully sells merchandise on a regular basis to customers. As the business grows, the company later considers selling gaming accessories in bulk orders to other businesses. While these bulk sales will provide a new growth opportunity for J&J, the company understands that these clients may need time to pay for their orders. This can create a dilemma; J&J Games needs to offer competitive incentives for these clients while also maintaining the ability to pay their own obligations. They will carefully consider sales discounts, returns, and allowance policies that do not overextend their company's financial position while giving them an opportunity to create lasting relationships with a new customer base.

6.1 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 timeframe between cash disbursement to obtain goods or services and cash collection for providing those goods or services. 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).

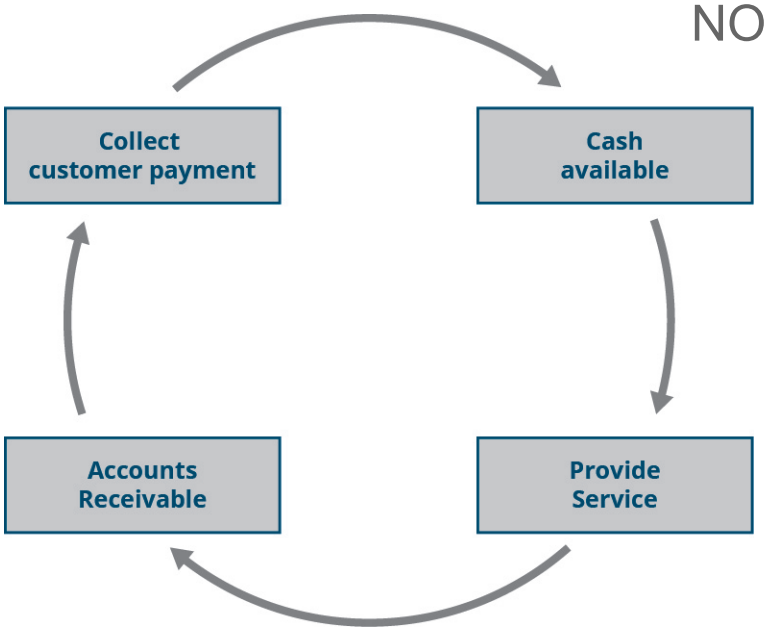


Figure 6.2 Typical Operating Cycle for a Service Firm. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

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 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).

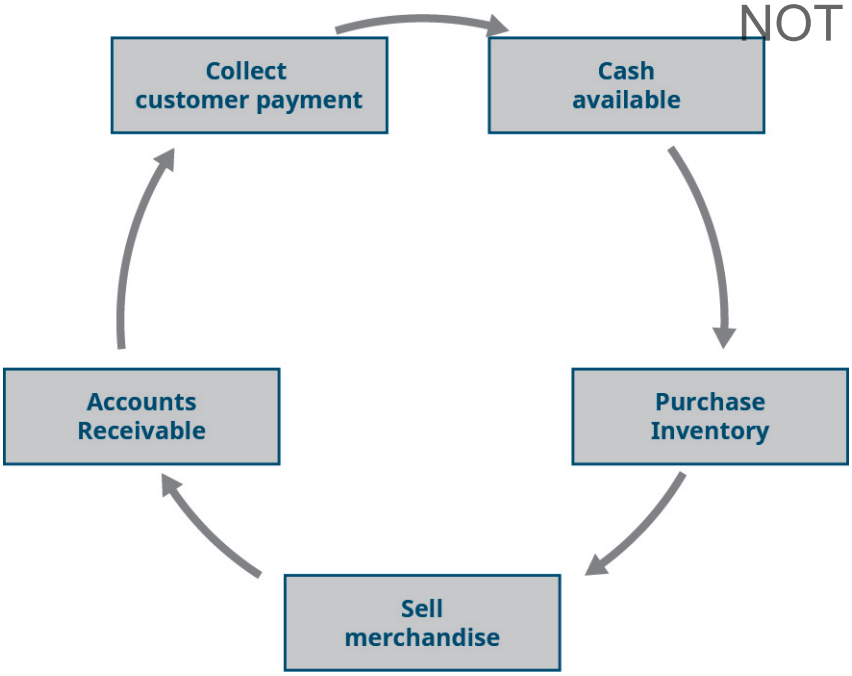


Figure 6.4 Typical Operating Cycle for a Merchandising Company. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

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 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 Cash *To recognize purchase with cash*	1,250	1,250

If this same company decides to purchase merchandise on credit, Accounts Payable is credited instead of Cash.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Merchandise Inventory Accounts Payable *To recognize purchase on credit*	1,250	1,250

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.

Income Statement
Gross Purchases – Purchase Discounts – Purchase Returns – Purchase Allowances = Net Purchases

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 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 Cash Merchandise Inventory *To recognize purchase payment with discount taken*	1,600	 1,568 32

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 Cash *To recognize purchase payment without discount applied*	1,600	 1,600

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 Accounts Payable *To record purchase on credit*	3,400	3,400

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 Merchandise Inventory *To recognize purchase return for full refund*	100	100
	Accounts Payable Merchandise Inventory *To recognize purchase allowance with partial refund*	20	20

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

1 Committee of Sponsoring Organizations of the Treadway Commission (COSO). *Internal Control—Integrated Framework*. May 2013. https://na.theiia.org/standards-guidance/topics/Documents/Executive_Summary.pdf

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.

Income Statement
Gross Sales – Sales Discounts – Sales Returns – Sales Allowances = Net Sales

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 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. **Cost of Goods Sold** 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 Principle requires 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.

Sales Discounts 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 Sales *To reflect the sale on credit*	1,000	1,000

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 Merchandise inventory *To reflect the sale of inventory*	560	560

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 Sales Discounts Accounts Receivable *To recognize a sales discount and collection of receivable ($1,000 × 2%)*	980 20	1,000

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 Accounts Receivable *To reflect the collection of accounts receivable*	1,000	1,000

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.

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, **Sales Returns and Allowances** 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 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 (COGS) 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 Sales *To recognize the sale of 300 plants*	3,000	 3,000
	Cost of goods sold Merchandise inventory *To reflect the cost of goods sold for sale of 300 plants*	1,200	 1,200

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 Accounts Receivable *To recognize a sales return*	3,000	 3,000
	Merchandise Inventory Cost of Goods Sold *To return inventory to stock for resale*	1,200	 1,200

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 Accounts Receivable *To record a sales allowance for 100 plants*	1,000	1,000

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 Cost of Goods Sold *To reflect the return of 100 plants*	400	400

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 (https://cnx.org/content/m68137/latest/) and Compare and Contrast Traditional and Activity-Based Costing Systems (https://cnx.org/content/m68138/latest/) , 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 (https://openstax.org/l/50StockAnalyNet) to find out how they do this and to see a comparison of operating cycles for top retail brands.

6.2 Compare and Contrast Perpetual versus Periodic Inventory Systems

There are two ways in which a company may account for their inventory. They can use a perpetual or periodic

inventory system. Let's look at the characteristics of these two systems.

Characteristics of the Perpetual and Periodic Inventory Systems

A **perpetual inventory system** automatically updates and records the inventory account every time a sale, or purchase of inventory occurs. You can consider this "recording as you go." The recognition of each sale or purchase happens immediately upon sale or purchase.

A **periodic inventory system** updates and records the inventory account at certain, scheduled times at the end of an operating cycle. The update and recognition could occur at the end of the month, quarter, and year. There is a gap between the sale or purchase of inventory and when the inventory activity is recognized.

Generally Accepted Accounting Principles (GAAP) do not state a required inventory system, but the periodic inventory system uses a Purchases account to meet the requirements for recognition under GAAP. IFRS requirements are very similar. The main difference is that assets are valued at net realizable value and can be increased or decreased as values change. Under GAAP, once values are reduced they cannot be increased again.

Figure 6.8 Inventory Systems. Perpetual and periodic inventory systems. (credit: "Untitled" by Marcin Wichary/Flickr, CC BY 2.0)

CONTINUING APPLICATION AT WORK

Merchandising Transactions

Gearhead Outfitters is a retailer of outdoor-related gear such as clothing, footwear, backpacks, and camping equipment. Therefore, one of the biggest assets on Gearhead's balance sheet is inventory. The proper presentation of inventory in a company's books leads to a number of accounting challenges, such as:

- What method of accounting for inventory is appropriate?
- How often should inventory be counted?
- How will inventory in the books be valued?
- Is any of the inventory obsolete and, if so, how will it be accounted for?

- Is all inventory included in the books?
- Are items included as inventory in the books that should not be?

Proper application of accounting principles is vital to keep accurate books and records. In accounting for inventory, matching principle, valuation, cutoff, completeness, and cost flow assumptions are all important. Did Gearhead match the cost of sale with the sale itself? Was only inventory that belonged to the company as of the period end date included? Did Gearhead count all the inventory? Perhaps some goods were in transit (on a delivery truck for a sale just made, or en route to Gearhead). What is the correct cost flow assumption for Gearhead to accurately account for inventory? Should it use a first-in, first-out method, or last-in, first-out?

These are all accounting challenges Gearhead faces with respect to inventory. As inventory will represent one of the largest items on the balance sheet, it is vital that Gearhead management take due care with decisions related to inventory accounting. Keeping in mind considerations such as gross profit, inventory turnover, meeting demand, point-of-sale systems, and timeliness of accounting information, what other accounting challenges might arise regarding the company's inventory accounting processes?

Inventory Systems Comparison

There are some key differences between perpetual and periodic inventory systems. When a company uses the perpetual inventory system and makes a purchase, they will automatically update the Merchandise Inventory account. Under a periodic inventory system, Purchases will be updated, while Merchandise Inventory will remain unchanged until the company counts and verifies its inventory balance. This count and verification typically occur at the end of the annual accounting period, which is often on December 31 of the year. The Merchandise Inventory account balance is reported on the balance sheet while the Purchases account is reported on the Income Statement when using the periodic inventory method. The Cost of Goods Sold is reported on the Income Statement under the perpetual inventory method.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Perpetual			
	Merchandise Inventory	$$$	
	Accounts Payable		$$$
Periodic			
	Purchases	$$$	
	Accounts Payable		$$$

A purchase return or allowance under perpetual inventory systems updates Merchandise Inventory for any decreased cost. Under periodic inventory systems, a temporary account, Purchase Returns and Allowances, is updated. Purchase Returns and Allowances is a contra account and is used to reduce Purchases.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Perpetual			
	Accounts Payable	$$$	
	Merchandise Inventory		$$$
Periodic			
	Accounts Payable	$$$	
	Purchase Returns and Allowances		$$$

When a purchase discount is applied under a perpetual inventory system, Merchandise Inventory decreases for the discount amount. Under a periodic inventory system, Purchase Discounts (a temporary, contra account), increases for the discount amount and Merchandise Inventory remains unchanged.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Perpetual			
	Accounts Payable	$$$	
	Cash		$$$
	Merchandise Inventory		$$$
Periodic			
	Accounts Payable	$$$	
	Cash		$$$
	Purchase Discounts		$$$

When a sale occurs under perpetual inventory systems, two entries are required: one to recognize the sale, and the other to recognize the cost of sale. For the cost of sale, Merchandise Inventory and Cost of Goods Sold are updated. Under periodic inventory systems, this cost of sale entry does not exist. The recognition of merchandise cost only occurs at the end of the period when adjustments are made and temporary accounts are closed.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Perpetual			
	Accounts Receivable	$$$	
	Sales		$$$
	Cost of Goods Sold	$$$	
	Merchandise Inventory		$$$
Periodic			
	Accounts Receivable	$$$	
	Sales		$$$

When a sales return occurs, perpetual inventory systems require recognition of the inventory's condition. This means a decrease to COGS and an increase to Merchandise Inventory. Under periodic inventory systems, only

the sales return is recognized, but not the inventory condition entry.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Perpetual			
	Sales Returns and Allowances	$$$	
	Accounts Receivable		$$$
	Merchandise Inventory	$$$	
	Cost of Goods Sold		$$$
Periodic			
	Sales Returns and Allowances	$$$	
	Accounts Receivable		$$$

A sales allowance and sales discount follow the same recording formats for either perpetual or periodic inventory systems.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Perpetual and Periodic			
	Sales Returns and Allowances	$$$	
	Accounts Receivable		$$$
	Cash	$$$	
	Sales Discount	$$$	
	Accounts Receivable		$$$

Adjusting and Closing Entries for a Perpetual Inventory System

You have already explored adjusting entries and the closing process in prior discussions, but merchandising activities require additional adjusting and closing entries to inventory, sales discounts, returns, and allowances. Here, we'll briefly discuss these additional closing entries and adjustments as they relate to the perpetual inventory system.

At the end of the period, a perpetual inventory system will have the Merchandise Inventory account up-to-date; the only thing left to do is to compare a physical count of inventory to what is on the books. A **physical inventory count** requires companies to do a manual "stock-check" of inventory to make sure what they have recorded on the books matches what they physically have in stock. Differences could occur due to mismanagement, shrinkage, damage, or outdated merchandise. Shrinkage is a term used when inventory or other assets disappear without an identifiable reason, such as theft. For a perpetual inventory system, the adjusting entry to show this difference follows. This example assumes that the merchandise inventory is overstated in the accounting records and needs to be adjusted downward to reflect the actual value on hand.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Cost of Goods Sold Merchandise Inventory *To adjust merchandise inventory of books*	$$$	 $$$

If a physical count determines that merchandise inventory is understated in the accounting records, Merchandise Inventory would need to be increased with a debit entry and the COGS would be reduced with a credit entry. The adjusting entry is:

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Merchandise Inventory Cost of Goods Sold *To adjust merchandise inventory of books*	$$$	 $$$

To sum up the potential adjustment process, after the merchandise inventory has been verified with a physical count, its book value is adjusted upward or downward to reflect the actual inventory on hand, with an accompanying adjustment to the COGS.

Not only must an adjustment to Merchandise Inventory occur at the end of a period, but closure of temporary merchandising accounts to prepare them for the next period is required. Temporary accounts requiring closure are Sales, Sales Discounts, Sales Returns and Allowances, and Cost of Goods Sold. Sales will close with the temporary credit balance accounts to Income Summary.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Sales Income Summary	$$$	 $$$

Sales Discounts, Sales Returns and Allowances, and Cost of Goods Sold will close with the temporary debit balance accounts to Income Summary.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Income Summary Sales Discounts Sales Returns and Allowances Cost of Goods Sold	$$$	 $$$ $$$ $$$

Note that for a periodic inventory system, the end of the period adjustments require an update to COGS. To determine the value of Cost of Goods Sold, the business will have to look at the beginning inventory balance, purchases, purchase returns and allowances, discounts, and the ending inventory balance.

The formula to compute COGS is:

Cost of Goods Sold = Beginning inventory + Net Purchases – Ending inventory

where:

Net Purchases = (Gross) Purchases – Purchase Discounts – Purchase Returns and Allowances

Once the COGS balance has been established, an adjustment is made to Merchandise Inventory and COGS, and COGS is closed to prepare for the next period.

Table 6.1 summarizes the differences between the perpetual and periodic inventory systems.

Perpetual and Periodic Transaction Comparison

Transaction	Perpetual Inventory System	Periodic Inventory System
Purchase of Inventory	Record cost to Inventory account	Record cost to Purchases account
Purchase Return or Allowance	Record to update Inventory	Record to Purchase Returns and Allowances
Purchase Discount	Record to update Inventory	Record to Purchase Discounts
Sale of Merchandise	Record two entries: one for sale and one for cost of sale	Record one entry for the sale
Sales Return	Record two entries: one for sales return, one for cost of inventory returned	Record one entry: sales return, cost not recognized
Sales Allowance	Same under both systems	Same under both systems
Sales Discount	Same under both systems	Same under both systems

Table 6.1 There are several differences in account recognition between the perpetual and periodic inventory systems.

There are advantages and disadvantages to both the perpetual and periodic inventory systems.

CONCEPTS IN PRACTICE

Point-of-Sale Systems

Advancements in point-of-sale (POS) systems have simplified the once tedious task of inventory management. POS systems connect with inventory management programs to make real-time data available to help streamline business operations. The cost of inventory management decreases with this connection tool, allowing all businesses to stay current with technology without “breaking the bank.”

One such POS system is Square. Square accepts many payment types and updates accounting records every time a sale occurs through a cloud-based application. Square, Inc. has expanded their product offerings to include Square for Retail POS. This enhanced product allows businesses to connect sales and

inventory costs immediately. A business can easily create purchase orders, develop reports for cost of goods sold, manage inventory stock, and update discounts, returns, and allowances. With this application, customers have payment flexibility, and businesses can make present decisions to positively affect growth.

Advantages and Disadvantages of the Perpetual Inventory System

The perpetual inventory system gives real-time updates and keeps a constant flow of inventory information available for decision-makers. With advancements in point-of-sale technologies, inventory is updated automatically and transferred into the company's accounting system. This allows managers to make decisions as it relates to inventory purchases, stocking, and sales. The information can be more robust, with exact purchase costs, sales prices, and dates known. Although a periodic physical count of inventory is still required, a perpetual inventory system may reduce the number of times physical counts are needed.

The biggest disadvantages of using the perpetual inventory systems arise from the resource constraints for cost and time. It is costly to keep an automatic inventory system up-to-date. This may prohibit smaller or less established companies from investing in the required technologies. The time commitment to train and retrain staff to update inventory is considerable. In addition, since there are fewer physical counts of inventory, the figures recorded in the system may be drastically different from inventory levels in the actual warehouse. A company may not have correct inventory stock and could make financial decisions based on incorrect data.

Advantages and Disadvantages of the Periodic Inventory System

The periodic inventory system is often less expensive and time consuming than perpetual inventory systems. This is because there is no constant maintenance of inventory records or training and retraining of employees to upkeep the system. The complexity of the system makes it difficult to identify the cost justification associated with the inventory function.

While both the periodic and perpetual inventory systems require a physical count of inventory, periodic inventorying requires more physical counts to be conducted. This updates the inventory account more frequently to record exact costs. Knowing the exact costs earlier in an accounting cycle can help a company stay on budget and control costs.

However, the need for frequent physical counts of inventory can suspend business operations each time this is done. There are more chances for shrinkage, damaged, or obsolete merchandise because inventory is not constantly monitored. Since there is no constant monitoring, it may be more difficult to make in-the-moment business decisions about inventory needs.

While each inventory system has its own advantages and disadvantages, the more popular system is the perpetual inventory system. The ability to have real-time data to make decisions, the constant update to inventory, and the integration to point-of-sale systems, outweigh the cost and time investments needed to maintain the system. (While our main coverage focuses on recognition under the perpetual inventory system, Appendix: Analyze and Record Transactions for Merchandise Purchases and Sales Using the Periodic Inventory System discusses recognition under the periodic inventory system.)

THINK IT THROUGH

Comparing Inventory Systems

Your company uses a perpetual inventory system to control its operations. They only check inventory once every six months. At the 6-month physical count, an employee notices several inventory items missing and many damaged units. In the company records, it shows an inventory balance of $300,000. The actual physical count values inventory at $200,000. This is a significant difference in valuation and has jeopardized the future of the company. As a manager, how might you avoid this large discrepancy in the future? Would a change in inventory systems benefit the company? Are you constrained by any resources?

6.3 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 6.7.

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.

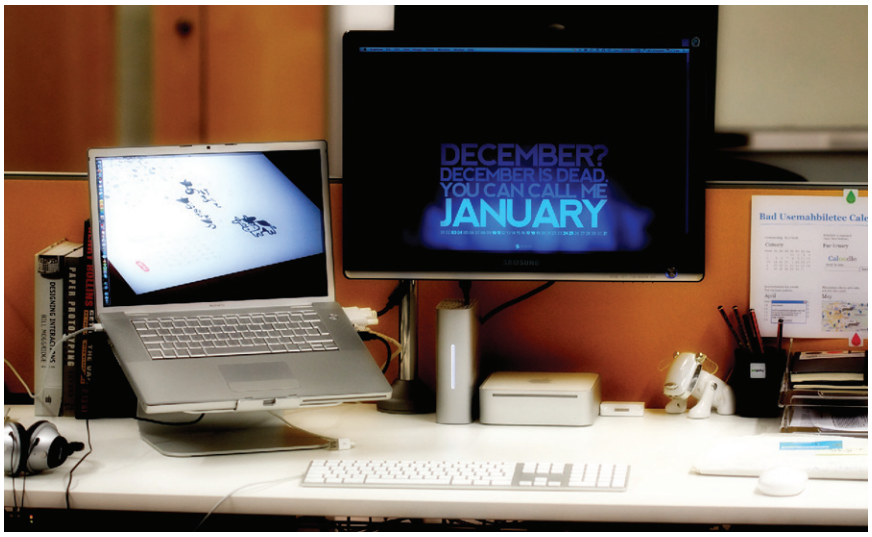


Figure 6.9 California Business Solutions. Providing businesses electronic hardware solutions. (credit: modification of "Professionnal desk" by "reynermedia"/Flickr, CC BY 2.0)

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 Cash *To recognize purchase of 10 packages*	6,200	6,200

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 Cash *To recognize phone purchase with cash*	18,000	18,000

Both Merchandise Inventory-Phones increases (debit) and Cash decreases (credit) by $18,000 ($60 × 300).

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jun. 3	Cash Merchandise Inventory: Phones *To recognize return of 25 phones, cash refund*	1,500	1,500

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 Merchandise Inventory: Phones *To recognize allowance for 60 phones*	480	480

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 Accounts Payable *To recognize printer purchase on credit, 5/15, n/40*	8,000	8,000

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 Merchandise Inventory: Printers *To recognize return of 15 printers, AP reduction*	1,500	1,500

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.

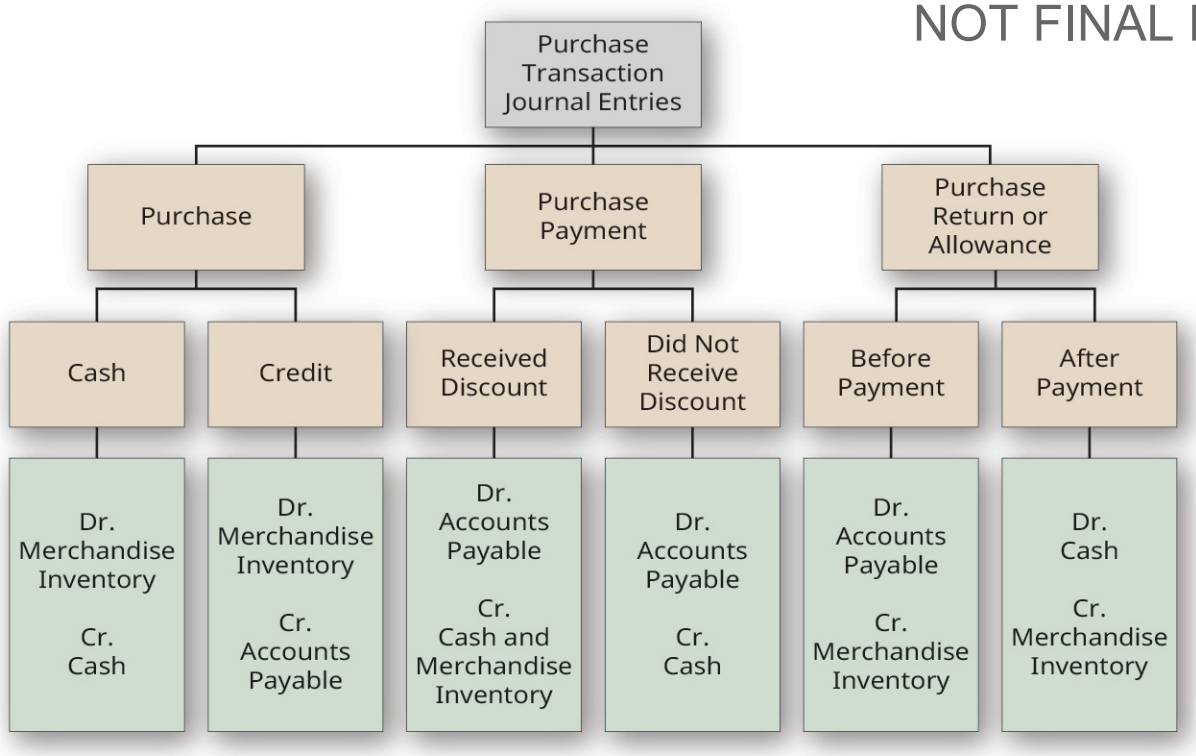


Figure 6.10 Purchase Transaction Journal Entries Using a Perpetual Inventory System. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

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 (https://openstax.org/l/50BeanCounter) to see what you can learn.

6.4 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 6.7.

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 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 Accounts Receivable *To recognize payment in full*	15,000	 15,000

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 Sales *To recognize sale of 56 tablet computers, 2/10, n/30*	16,800	 16,800
Aug. 1	Cost of Goods Sold Merchandise Inventory: Tablet Computers *To recognize cost of sale, 56 tablet computers*	3,360	 3,360

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 Sales Discounts Accounts Receivable *To recognize payment, less sales discount*	16,464 336	 16,800

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 Accounts Receivable *To recognize payment for tablets, no discount*	16,800	 16,800

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 Sales *To recognize sale on credit, 2/10, n/30*	2,450	 2,450
Jan. 5	Cost of Goods Sold Merchandise Inventory *To recognize cost of sale*	1,000	 1,000
Jan. 9	Sales Returns and Allowances Accounts Receivable *To recognize customer return*	500	 500
Jan. 9	Merchandise Inventory Cost of Goods Sold *To recognize merchandise return to inventory*	130	 130
Jan. 14	Cash Sales Discounts Accounts Receivable *To recognize payment, less discount and return*	1,911 39	 1,950

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 Sales *To recognize sale of 55 printers on credit, 10/15, n/40*	19,250	 19,250
Oct. 1	Cost of Goods Sold Merchandise Inventory: Printers *To recognize cost of sale, 55 printers*	5,500	 5,500

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 Accounts Receivable *To recognize return of 10 printers*	3,500	 3,500
Oct. 6	Merchandise Inventory: Printers Cost of Goods Sold *To return merchandise to inventory, sellable condition*	1,000	 1,000

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.

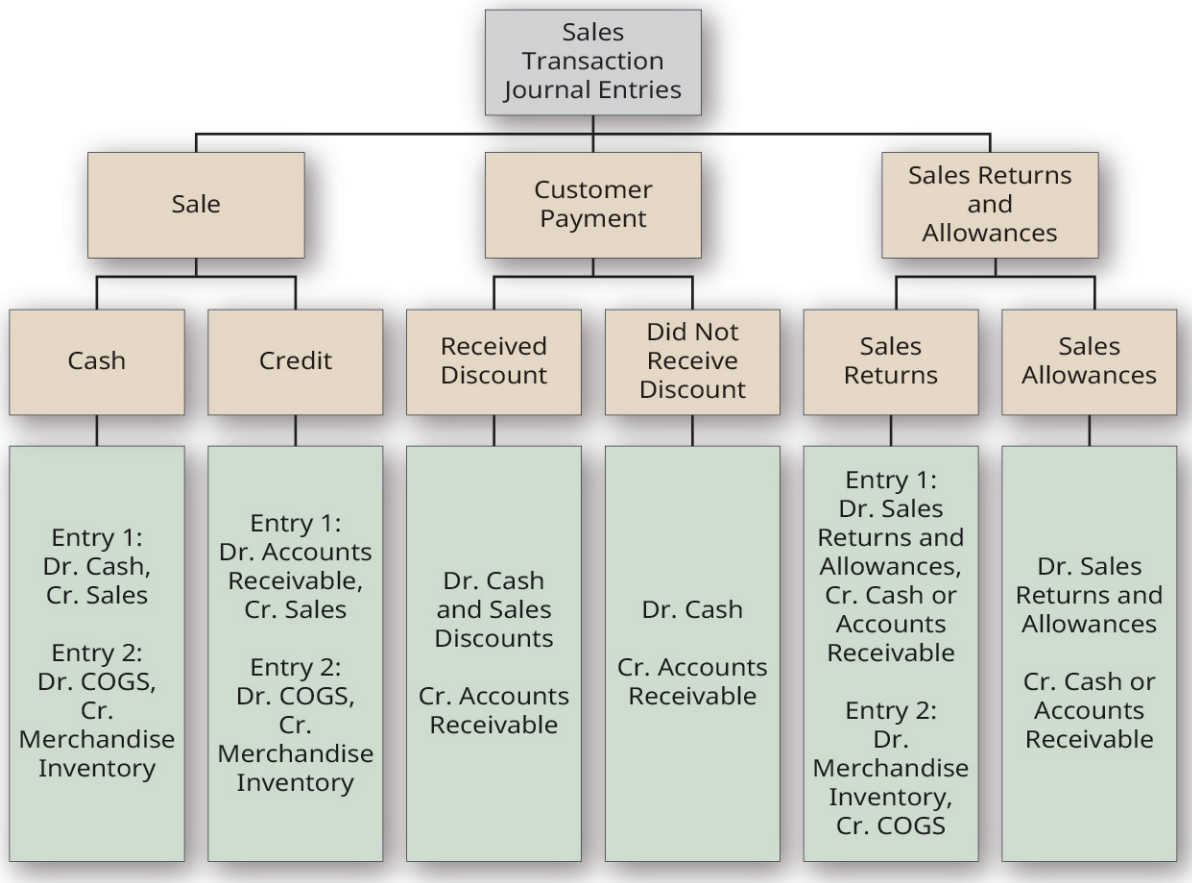


Figure 6.12 Journal Entry Requirements for Merchandise Sales Transaction. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

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		

6.5 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 Sales *To recognize sale, FOB Destination, 30 × $150*	4,500	4,500
	Cost of Goods Sold Merchandise Inventory *To recognize cost of sale, 30 × $60*	1,800	1,800
	Delivery Expense Cash *To recognize freight-out shipping costs*	120	120

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 Cash *To recognize freight-out shipping costs*	100	100

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 (https://openstax.org/l/50ShippingTerms) 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** 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 Sales *To recognize sale, FOB Destination, 30 × $150*	4,500	4,500
	COGS Merchandise Inventory *To recognize cost of sale, 30 × $60*	1,800	1,800
	Delivery Expense Cash *To recognize freight-out shipping costs*	120	120

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 Accounts Payable *To recognize purchase on credit, FOB Shipping Point, 40 × $65*	2,600	2,600

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.

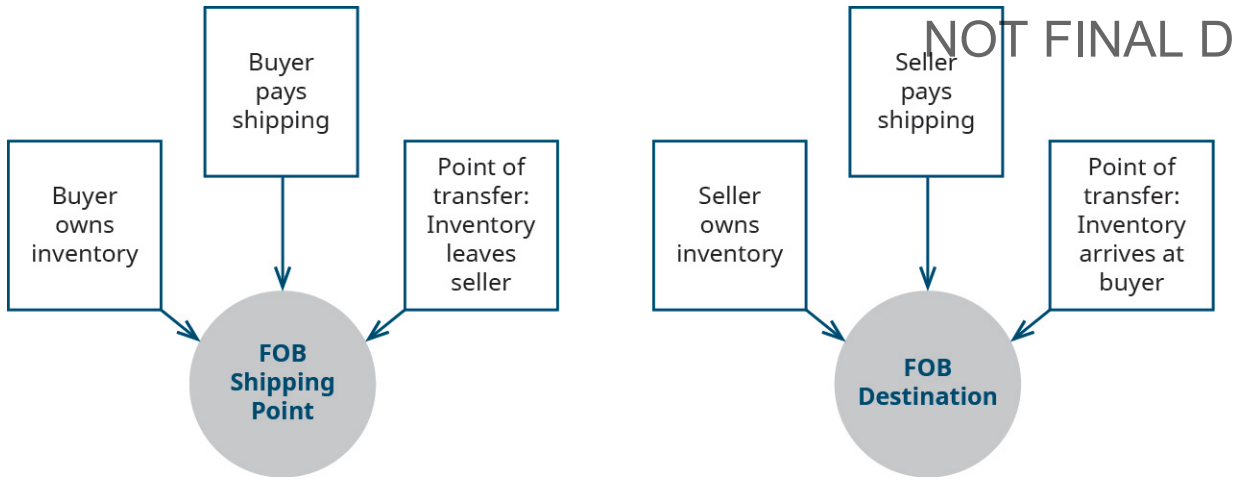


Figure 6.14 FOB Shipping Point versus FOB Destination. A comparison of shipping terms. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

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?

6.6 Describe and Prepare Multi-Step and Simple Income Statements for Merchandising Companies

Merchandising companies prepare financial statements at the end of a period that include the income statement, balance sheet, statement of cash flows, and statement of retained earnings. The presentation format for many of these statements is left up to the business. For the income statement, this means a company could prepare the statement using a multi-step format or a simple format (also known as a single-step format). Companies must decide the format that best fits their needs.

Similarities and Differences between the Multi-Step and Simple Income Statement Format

A multi-step income statement is more detailed than a simple income statement. Because of the additional detail, it is the option selected by many companies whose operations are more complex. Each revenue and expense account is listed individually under the appropriate category on the statement. The multi-step statement separates cost of goods sold from operating expenses and deducts cost of goods sold from net sales to obtain a **gross margin**.

Operating expenses are daily operational costs. Operating expenses are broken down into selling expenses (such as advertising and marketing expenses) and general and administrative expenses (such as office supplies expense, and depreciation of office equipment). Deducting the operating expenses from gross margin produces **income from operations**.

Following income from operations are **other revenue and expenses** not obtained from selling goods or services or other daily operations. Other revenue and expenses examples include interest revenue, gains or losses on sales of assets (buildings, equipment, and machinery), and interest expense. Other revenue and expenses added to (or deducted from) income from operations produces **net income** (loss).

A simple income statement is less detailed than the multi-step format. A simple income statement combines all revenues into one category, followed by all expenses, to produce net income. There are very few individual accounts and the statement does not consider cost of sales separate from operating expenses.

Demonstration of the Multi-Step Income Statement Format

To demonstrate the use of the multi-step income statement format, let’s continue to discuss California Business Solutions (CBS). The following is select account data from the adjusted trial balance for the year ended, December 31, 2018. We will use this information to create a multi-step income statement. Note that the statements prepared are using a perpetual inventory system.

CALIFORNIA BUSINESS SOLUTIONS Trial Balance For Year Ended December 31, 2018		
Account	**Debit**	**Credit**
Sales		$300,000
Sales Discounts	$ 2,000	
Sales Returns and Allowances	4,500	
Interest Revenue		5,650
Cost of Goods Sold	180,000	
Interest Expense	8,400	
Advertising Expense	6,250	
Sales Salaries Expense	40,000	
Depreciation Expense: Office Equipment	4,700	
Office Supplies Expense	1,200	
Insurance Expense	6,900	

The following is the multi-step income statement for CBS.

CALIFORNIA BUSINESS SOLUTIONS Multi-step Income Statement For Year Ended December 31, 2018		
Sales		$300,000
Less:		
Sales Discounts	$ 2,000	
Sales Returns and Allowances	4,500	6,500
Net sales		293,500
Cost of Goods Sold		180,000
Gross Margin		113,500
Operating Expenses		
Selling Expenses		
Advertising Expense	6,250	
Sales Salaries Expense	40,000	
Total Selling Expenses	46,250	
General and Administrative Expenses		
Depreciation Expense: Office Equipment	4,700	
Office Supplies Expense	1,200	
Insurance Expense	6,900	
Total General and Administrative Expenses	12,800	
Total Operating Expenses		59,050
Income from Operations		54,450
Other Revenue and Expenses		
Interest Revenue	5,650	
Interest Expense	(8,400)	
Total other revenue and expenses		(2,750)
Net Income		$ 51,700

Demonstration of the Simple Income Statement Format

We will use the same adjusted trial balance information for CBS but will now create a simple income statement.

The following is the simple income statement for CBS.

CALIFORNIA BUSINESS SOLUTIONS Simple Income Statement For Year Ended December 31, 2018		
Revenues		
Net sales		$293,500
Interest Revenue		5,650
Total Revenues		299,150
Expenses		
Cost of Goods Sold	$180,000	
Total Selling Expenses	46,250	
Total General and Administrative Expenses	12,800	
Interest Expense	8,400	
Total Expenses		247,450
Net Income		$ 51,700

Final Analysis of the Two Income Statement Options

While companies may choose the format that best suits their needs, some might choose a combination of both the multi-step and simple income statement formats. The multi-step income statement may be more beneficial for internal use and management decision-making because of the detail in account information. The simple income statement might be more appropriate for external use, as a summary for investors and lenders.

From the information obtained on the income statement, a company can make decisions related to growth strategies. One ratio that can help them in this process is the Gross Profit Margin Ratio. The **gross profit margin ratio** shows the margin of revenue above the cost of goods sold that can be used to cover operating expenses and profit. The larger the margin, the more availability the company has to reinvest in their business, pay down debt, and return dividends to shareholders.

$$\textbf{Gross Profit Margin Ratio} = \frac{\textbf{(Net sales – COGS)}}{\textbf{Net sales}}$$

Taking our example from CBS, net sales equaled $293,500 and cost of goods sold equaled $180,000. Therefore, the Gross Profit Margin Ratio is computed as 0.39 (rounded to the nearest hundredth). This means that CBS has a margin of 39% to cover operating expenses and profit.

$$\text{Gross profit margin ratio} = \frac{(\$293{,}500 - \$180{,}000)}{\$293{,}500} = 0.39, \text{ or } 39\%$$

THINK IT THROUGH

Which Income Statement Format Do I Choose?

You are an accountant for a small retail store and are tasked with determining the best presentation for your income statement. You may choose to present it in a multi-step format or a simple income statement format. The information on the statement will be used by investors, lenders, and management to make financial decisions related to your company. It is important to the store owners that you give enough information to assist management with decision-making, but not too much information to

possibly deter investors or lenders. Which statement format do you choose? Why did you choose this format? What are the benefits and challenges of your statement choice for each stakeholder group?

Solution

Answers will vary. Responses should discuss the differences between the multi-step and simple income statement formats. They will think about the information needed by the end users and explain which format is more useful for each user. Based on this analysis, students can choose an income statement format to use and explain their choice.

LINK TO LEARNING

Target Brands, Inc. is an international retailer providing a variety of resale products to consumers. Target uses a multi-step income statement format found at Target Brands, Inc. annual report (https://openstax.org/l/50TargetAnnual) to present information to external stakeholders.

6.7 Appendix: Analyze and Record Transactions for Merchandise Purchases and Sales Using the Periodic Inventory System

Some organizations choose to report merchandising transactions using a periodic inventory system rather than a perpetual inventory system. This requires different account usage, transaction recognition, adjustments, and closing procedures. We will not explore the entries for adjustment or closing procedures but will look at some of the common situations that occur with merchandising companies and how these transactions are reported using the periodic inventory system.

Merchandise Purchases

The following example transactions and subsequent journal entries for merchandise purchases are recognized using a periodic inventory system.

Basic Analysis of Purchase Transaction Journal Entries

To better illustrate merchandising activities under the periodic system, let’s return to the example of California Business Solutions (CBS). CBS is a retailer providing electronic hardware packages to meet small business needs. Each electronics hardware package contains a desktop computer, tablet computer, landline telephone, and a 4-in-1 desktop printer with a printer, copier, scanner, and fax machine.

CBS purchases each electronic product from a manufacturer. The per-item purchase prices from the manufacturer are shown.

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	Purchases: Packages Cash *To recognize purchase of 10 packages*	6,200	6,200

Purchases-Packages increases (debit) by $6,200 ($620 × 10), and Cash decreases (credit) by the same amount because the company paid with cash. Under a periodic system, Purchases is used instead of Merchandise Inventory.

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	Purchases: Desktop Computers Accounts Payable *To recognize purchase of 30 computers on credit, n/15*	12,000	12,000

Purchases-Desktop Computers increases (debit) for the value of the computers, $12,000 ($400 × 30). Since the computers were purchased on credit by CBS, Accounts Payable increases (credit) instead of cash.

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. Terms are 5/10, n/30, and invoice dated May 1. The following entry occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
May 1	Purchases: Tablet Computers Accounts Payable *To recognize purchase of 67 tablets, 5/10, n/30*	4,020	 4,020

Purchases–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 earlier example. These credit terms include a discount opportunity (5/10). This means that 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 Purchase Discounts 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, thus receiving a discount of 5%. Cash decreases (credit) for the amount owed, less the discount. Purchase Discounts increases (credit) for the amount of the discount ($4,020 × 5%). Purchase Discounts is considered a contra account and will reduce Purchases at the end of the period.

Let's take the same example purchase with the same credit terms, but now assume that CBS paid their account on May 25. The following entry occurs.

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	Purchases: Phones Cash *To recognize phone purchase with cash*	18,000	18,000

Purchases-Phones increases (debit) and Cash decreases (credit) by $18,000 ($60 × 300).

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jun. 3	Cash Purchase Returns and Allowances *To recognize return of 25 phones, cash refund*	1,500	1,500

Since CBS already paid in full for their purchase, a full cash refund is issued. This increases Cash (debit) and increases (credit) Purchase Returns and Allowances. Purchase Returns and Allowances is a contra account and decreases Purchases at the end of a period.

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 Purchase Returns and Allowances *To recognize allowance for 60 phones*	480	480

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 increases Purchase Returns and Allowances.

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	Purchases: Printers Accounts Payable *To recognize printer purchase on credit, 5/15, n/40*	8,000	8,000

Purchases-Printers increases (debit) and Accounts Payable increases (credit) by $8,000 ($100 × 80).

JOURNAL			
Date	**Account**	**Debit**	**Credit**
July 6	Accounts Payable Purchase Returns and Allowances *To recognize return of 15 printers, AP reduction*	1,500	1,500

Accounts Payable decreases (debit) and Purchase Returns and Allowances increases (credit) by $1,500 (15 × $100). The purchase was on credit and the return occurred before payment. Thus Accounts Payable is debited.

On July 10, CBS discovers that 4 more printers from the July 1 purchase are slightly damaged but decides to keep them because the manufacturer issues an allowance of $30 per printer. The following entry recognizes the allowance.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
July 10	Accounts Payable Purchase Returns and Allowances *To recognize allowance for 4 printers, AP reduction*	120	 120

Accounts Payable decreases (debit) and Purchase Returns and Allowances increases (credit) by $120 (4 × $30). The purchase was on credit and the allowance occurred before payment. Thus, Accounts Payable is debited.

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 Purchase Discount 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 and received a discount of 5%. Cash decreases (credit) for the amount owed, less the discount. Purchase Discounts increases (credit) for the amount of the discount ($6,380 × 5%).

Summary of Purchase Transaction Journal Entries

The chart in Figure 6.15 represents the journal entry requirements based on various merchandising purchase transactions using the periodic inventory system.

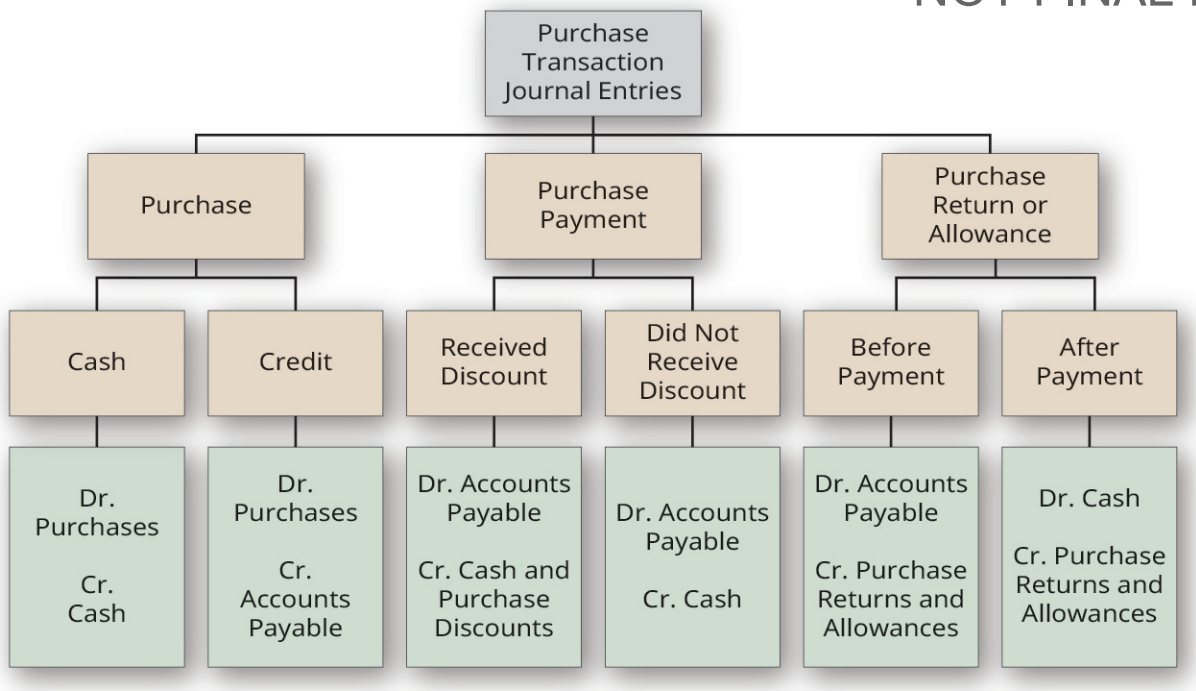


Figure 6.15 Purchase Transaction Journal Entries Flow Chart. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

YOUR TURN

Recording a Retailer's Purchase Transactions using a Periodic Inventory System

Record the journal entries for the following purchase transactions of a retailer, using the periodic inventory system.

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	Customer paid the account in full, less the return.

Solution

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 3	Purchases	500	
	Accounts Payable		500
	To recognize inventory purchase, 2/10, n/30		
Dec. 6	Accounts Payable	150	
	Purchase Returns and Allowances		150
	To recognize inventory return		
Dec. 9	Accounts Payable	350	
	Purchase Discounts		7
	Cash		343
	To recognize payment, less discount and return		

Merchandise Sales

The following example transactions and subsequent journal entries for merchandise sales are recognized using a periodic inventory system.

Basic Analysis of Sales Transaction Journal Entries

Let's continue to follow California Business Solutions (CBS) and the sale of electronic hardware packages to business customers. As previously stated, each package contains a desktop computer, tablet computer, landline telephone, and 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. The following is the list of 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

Cash and Credit Sales Transaction Journal Entries

On July 1, CBS sells 10 electronic 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		

Cash increases (debit) and Sales increases (credit) by the selling price of the packages, $12,000 ($1,200 × 10). Unlike the perpetual inventory system, there is no entry for the cost of the sale. This recognition occurs at the end of the period with an adjustment to Cost of Goods Sold.

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 Sales *To recognize sale of 20 desktop computers, n/15*	15,000	15,000

Since the computers were purchased on credit by the customer, Accounts Receivable increases (debit) and Sales increases (credit) by the selling price of the computers, $15,000 ($750 × 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 Accounts Receivable *To recognize payment in full*	15,000	15,000

Accounts Receivable decreases (credit) and Cash increases (debit) by 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. Terms are 2/10, n/30, and invoice dated August 1. The following entries occur.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Aug. 1	Accounts Receivable Sales *To recognize sale of 56 tablet computers, 2/10, n/30*	16,800	16,800

Accounts Receivable increases (debit) and Sales increases (credit) 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). This means that the customer has 10 days from the invoice date to pay on their account to receive a 2% discount on their purchase.

On August 10, the customer pays their account in full. The following entry occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Aug. 10	Cash Sales Discounts Accounts Receivable *To recognize payment, less sales discount*	16,464 336	 16,800

Since the customer paid on August 10, they made the 10-day window, thus receiving a discount of 2%. Cash increases (debit) for the amount paid to CBS, less the discount. Sales Discounts increases (debit) by the amount of the discount ($16,800 × 2%), and Accounts Receivable decreases (credit) by 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 that the customer paid their account on August 25. The following entry occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Aug. 25	Cash Accounts Receivable *To recognize payment for tablets, no discount*	16,800	 16,800

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.

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. The following entries occur for the sale and subsequent return.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Sept. 1	Cash Sales *To recognize sale of 250 phones with cash*	37,500	 37,500

Cash increases (debit) and Sales increases (credit) by $37,500 (250 × $150), the sales price of the phones.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Sept. 3	Sales Returns and Allowances Cash *To recognize return of 40 phones, cash refund*	6,000	 6,000

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). Unlike in the perpetual inventory system, CBS does not recognize the return of merchandise to inventory. Instead, CBS will make an adjustment to Merchandise Inventory at the end of the period.

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 Cash *To recognize allowance for 20 phones*	200	200

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.

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 discovers 10 of the printers are damaged and returns them to CBS for a full refund. The following entries show the sale and subsequent return.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Oct. 1	Accounts Receivable Sales *To recognize sale of 55 printers on credit, 10/15, n/40*	19,250	19,250

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.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Oct. 6	Sales Returns and Allowances Accounts Receivable *To recognize return of 10 printers*	3,500	3,500

The customer has not yet paid for their purchase as of October 6. This increases Sales Returns and Allowances (debit) and decreases Accounts Receivable (credit) by $3,500 (10 × $350).

On October 10, the customer discovers that 5 more printers from the October 1 purchase are slightly damaged, but decides to keep them because 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.

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 and 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 6.16 represents the journal entry requirements based on various merchandising sales transactions using a periodic inventory system.

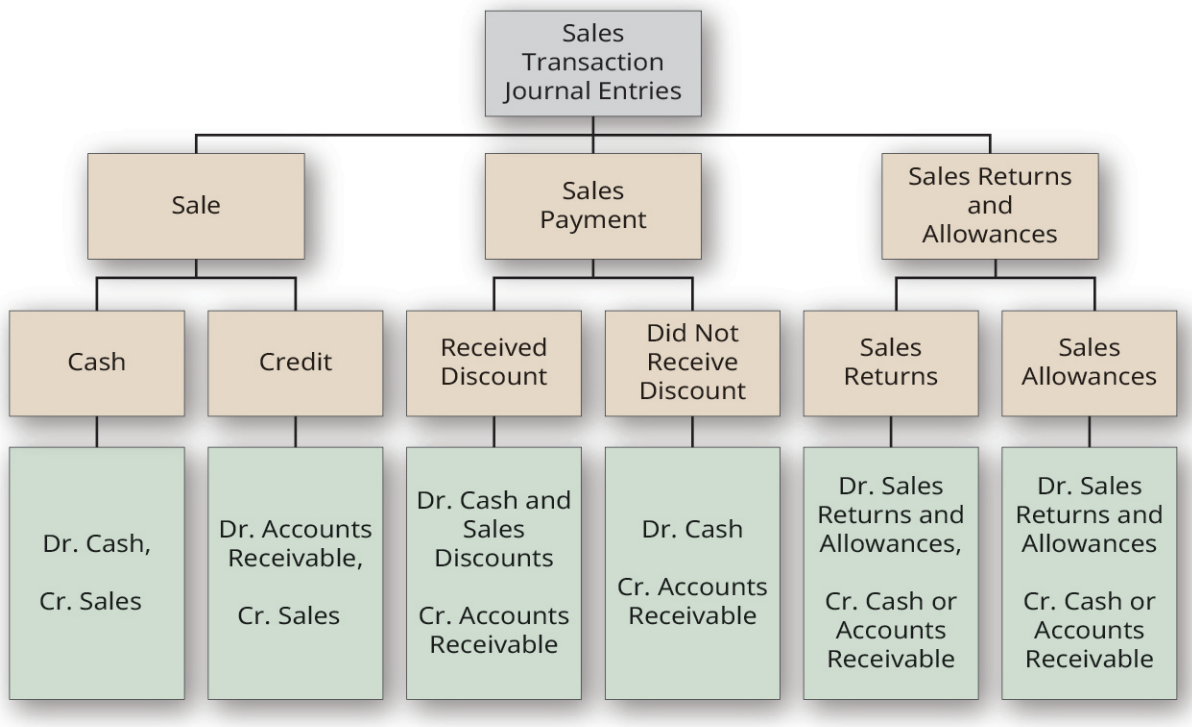


Figure 6.16 Journal Entry Requirements for Merchandise Sales Transaction Using a Periodic Inventory System. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

YOUR TURN

Recording a Retailer's Sales Transactions using a Periodic Inventory System

Record the journal entries for the following sales transactions of a retailer using the periodic inventory system.

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.
Jan. 14	Customer paid the account in full, less the return.

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. 9	Sales Returns and Allowances	500	
	Accounts Receivable		500
	To recognize customer return		
Jan. 14	Cash	1,911	
	Sales Discounts	39	
	Accounts Receivable		1,950
	To recognize payment, less discount and return		

Key Terms

cash discount provides a discount on the final price after purchase, if a retailer pays within a discount window, typically stated in days

cost of goods sold (COGS) expense account that houses all costs associated with getting the product ready for sale

FOB destination seller pays the shipping charges, ownership transfers when goods reach the buyer, and the seller owns the goods in transit

FOB shipping point buyer pays the shipping charges, ownership transfers when goods leave the seller, and the buyer owns the goods in transit

freight-in buyer is responsible for when receiving shipment from a seller

freight-out seller is responsible for when shipping to a buyer

goods in transit time in which the merchandise is being transported from the seller to the buyer

gross margin amount available after deducting cost of goods sold from net sales, to cover operating expenses and profit

gross profit margin ratio proportion of margin a company attains, above their cost of goods sold to cover operating expenses and profit, calculated by subtracting cost of goods sold from total net revenue to arrive at gross profit and then taking gross profit divided by total net revenues

gross purchases original amount of the purchase without factoring in reductions for purchase discounts, returns, or allowances

gross sales original amount of the sale without factoring in reductions for sales discounts, returns, or allowances

income from operations gross margin less deductions for operating expenses

merchandising company resells finished goods produced by a manufacturer (supplier) to customers

net income outcome of other revenue and expenses added to (or deducted from) income from operations

net purchases outcome of purchase discounts, returns, and allowances deducted from gross purchases

net sales outcome of sales discounts, returns, and allowances deducted from gross sales

operating cycle timeframe between cash disbursement to obtain goods or services, and cash collection for providing those goods or services

operating expenses daily operational costs

other revenue and expenses revenues and expenses not associated with daily operations, or the sale of goods and services

ownership of inventory which party owns the inventory at a particular point in time, the buyer or the seller

periodic inventory system updates and records the inventory account at certain, scheduled times at the end of an operating cycle

perpetual inventory system automatically updates and records the inventory account every time a sale or purchase of inventory occurs

physical inventory count manual stock check of inventory to make sure what is recorded on the books matches what is actually in the warehouse and on the sales floor

point of transfer when the responsibility for the inventory transfers from the seller to the buyer

purchase discounts provide an incentive for the retailer to pay early on their accounts, by issuing a reduced rate on their final purchase cost; the discount reduces the value of merchandise inventory

purchase returns and allowances retailer receives a partial or full refund from the manufacturer for defective merchandise

sales discounts reduction in the selling price offered to customers who pay their account within the discount

period; the actual account is a contra revenue account that reduces sales

sales returns and allowances contra revenue account with a normal debit balance that reduces the gross sales figure at the end of the period; the customer returns merchandise with a sales return, and keeps the merchandise with a sales allowance

service company provides intangible services to customers, and does not have inventory

trade discount reduction to the advertised manufacturer's price during negotiation of a final purchase price

Summary

6.1 Compare and Contrast Merchandising versus Service Activities and Transactions

- Service companies sell intangible services and do not have inventory. Their operating cycle begins with cash-on-hand, providing service to customers, and collecting customer payments.
- Merchandising companies resell goods to consumers. Their operating cycle begins with cash-on-hand, purchasing inventory, selling merchandise, and collecting customer payments.
- A purchase discount is an incentive for a retailer to pay their account early. Credit terms establish the percentage discount, and Merchandise Inventory decreases if the discount is taken.
- A retailer receives a full or partial refund for returning or keeping defective merchandise. This can reduce the value of the Merchandise Inventory account.
- A customer receives an incentive for paying on their account early. Sales Discounts is a contra revenue account that will reduce Sales at the end of a period.
- A customer receives a refund for returning or keeping defective merchandise. Sales returns and allowances is a contra revenue account that will reduce Sales at the end of a period.

6.2 Compare and Contrast Perpetual versus Periodic Inventory Systems

- A perpetual inventory system inventory updates purchase and sales records constantly, particularly impacting Merchandise Inventory and COGS.
- A periodic inventory system only records updates to inventory and costs of sales at scheduled times throughout the year, not constantly. Merchandise Inventory and COGS are updated at the end of a period.
- Cost of goods sold (COGS) includes all elements of cost related to the sale of merchandise. The formula to determine COGS if one is using the periodic inventory system, is Beginning Inventory + Net Purchases – Ending Inventory.
- The perpetual inventory system keeps real-time data and the information is more robust. However, it is costly and time consuming, and physical counts of inventory are scarce.
- With the periodic inventory system, there are more frequent inventory counts and reduced chances for shrinkage and damaged merchandise. However, the periodic system makes it difficult for businesses to keep track of inventory costs and to make present decisions about their business.

6.3 Analyze and Record Transactions for Merchandise Purchases Using the Perpetual Inventory System

- A retailer can pay with cash or on credit. If paying with cash, Cash decreases. If paying on credit instead of cash, Accounts Payable increases.
- If a company pays for merchandise within the discount window, they debit Accounts Payable, credit Merchandise Inventory, and credit Cash. If they pay outside the discount window, the company debits Accounts Payable and credits Cash.
- If a company returns merchandise before remitting payment, they would debit Accounts Payable and credit Merchandise Inventory. If the company returns merchandise after remitting payment, they would debit Cash and credit Merchandise Inventory.

- If a company obtains an allowance for damaged merchandise before remitting payment, they would debit Accounts Payable and credit Merchandise Inventory. If the company obtains an allowance for damaged merchandise after remitting payment, they would debit Cash and credit Merchandise Inventory.

6.4 Analyze and Record Transactions for the Sale of Merchandise Using the Perpetual Inventory System

- A customer can pay with cash or on credit. If paying on credit instead of cash, Accounts Receivable increases rather than Cash; Sales increases in both instances. A company must also record the cost of sale entry, where Merchandise Inventory decreases and COGS increases.
- If a customer pays for merchandise within the discount window, the company would debit Cash and Sales Discounts while crediting Accounts Receivable. If the customer pays outside the discount window, the company debits Cash and credits Accounts Receivable only.
- If a customer returns merchandise before remitting payment, the company would debit Sales Returns and Allowances and credit Accounts Receivable or Cash. The company may return the merchandise to their inventory by debiting Merchandise Inventory and crediting COGS.
- If a customer obtains an allowance for damaged merchandise before remitting payment, the company would debit Sales Returns and Allowances and credit Accounts Receivable or Cash. The company does not have to consider the merchandise condition because the customer keeps the merchandise in this instance.

6.5 Discuss and Record Transactions Applying the Two Commonly Used Freight-In Methods

- Establishing ownership of inventory is important because it helps determine who is responsible for shipping charges, goods in transit, and transfer points. Ownership also determines reporting requirements for the buyer and seller. The buyer is responsible for the merchandise, and the cost of shipping, insurance, purchase price, taxes, and fees are held in inventory in its Merchandise Inventory account. The buyer would record an increase (debit) to Merchandise Inventory and either a decrease to Cash or an increase to Accounts Payable (credit) depending on payment method.
- FOB Shipping Point means the buyer should record the merchandise as inventory when it leaves the seller’s location. FOB destination means the seller should continue to carry the merchandise in inventory until it reaches the buyer’s location. This becomes really important at year-end when each party is trying to determine their actual balance sheet inventory accounts.
- FOB Destination means the seller is responsible for the merchandise, and the cost of shipping is expensed immediately in the period as a delivery expense. The seller would record an increase (debit) to Delivery Expense, and a decrease to Cash (credit).
- In FOB Destination, the seller is responsible for the shipping charges and like expenses. The point of transfer is when the merchandise reaches the buyer’s place of business, and the seller owns the inventory in transit.
- In FOB Shipping Point, the buyer is responsible for the shipping charges and like expenses. The point of transfer is when the merchandise leaves the seller’s place of business, and the buyer owns the inventory in transit.

6.6 Describe and Prepare Multi-Step and Simple Income Statements for Merchandising Companies

- Multi-step income statements provide greater detail than simple income statements. The format differentiates sales costs from operating expenses and separates other revenue and expenses from operational activities. This statement is best used internally by managers to make pricing and cost reduction decisions.
- Simple income statements are not as detailed as multi-step income statements and combine all revenues and all expenses into general categories. There is no differentiation between operational and non-

operational activities. Therefore, this statement is sometimes used as a summary for external users to view general company information.

- The gross profit margin ratio can show a company if they have a significant enough margin after sales revenue and cost data are computed to cover operational costs and profit goals. If a company is not meeting their target for this ratio, they may consider increasing prices or decreasing costs.

6.7 Appendix: Analyze and Record Transactions for Merchandise Purchases and Sales Using the Periodic Inventory System

- A retailer can pay with cash or credit. Unlike in the perpetual inventory system, purchases of inventory in the periodic inventory system will debit Purchases rather than Merchandise Inventory.
- If a company pays for merchandise within the discount window, it debits Accounts Payable, credits Purchase Discounts, and credits Cash. If they pay outside the discount window, the company debits Accounts Payable and credits Cash.
- If a company returns merchandise before remitting payment, they would debit Accounts Payable and credit Purchase Returns and Allowances. If the company returns merchandise after remitting payment, they would debit Cash and credit Purchase Returns and Allowances.
- If a company obtains an allowance for damaged merchandise before remitting payment, they would debit Accounts Payable and credit Purchase Returns and Allowances. If the company obtains an allowance for damaged merchandise after remitting payment, they would debit Cash and credit Purchase Returns and Allowances.
- A customer can pay with cash or on credit. Unlike a perpetual inventory system, when recording a sale under a periodic system, there is no cost entry.
- If a customer pays for merchandise within the discount window, the company would debit Cash and Sales Discounts and credit Accounts Receivable. If the customer pays outside the discount window, the company debits Cash and credits Accounts Receivable only.
- If a customer returns merchandise before remitting payment, the company would debit Sales Returns and Allowances and credit Accounts Receivable or Cash.
- If a customer obtains an allowance for damaged merchandise before remitting payment, the company would debit Sales Returns and Allowances and credit Accounts Receivable or Cash.

Note: All of the following assessments assume a periodic inventory system unless otherwise noted.

Multiple Choice

1. LO 6.1 Which of the following is an example of a contra revenue account?

A. sales
B. merchandise inventory
C. sales discounts
D. accounts payable

2. LO 6.1 What accounts are used to recognize a retailer's purchase from a manufacturer on credit?

A. accounts receivable, merchandise inventory
B. accounts payable, merchandise inventory
C. accounts payable, cash
D. sales, accounts receivable

3. LO 6.1 Which of the following numbers represents the discount percentage applied if a customer pays within a discount window and credit terms are 3/15, n/60?

A. 3
B. 15
C. 60
D. 3 and 15

4. LO 6.1 If a customer purchases merchandise on credit and returns the defective merchandise before payment, what accounts would recognize this transaction?

A. sales discount, cash
B. sales returns and allowances, cash
C. accounts receivable, sales discount
D. accounts receivable, sales returns and allowances

5. LO 6.2 Which of the following is a disadvantage of the perpetual inventory system?

A. Inventory information is in real-time.
B. Inventory is automatically updated.
C. It allows managers to make current decisions about purchases, stock, and sales.
D. It is cost-prohibitive.

6. LO 6.2 Which of the following is an advantage of the periodic inventory system?

A. frequent physical inventory counts
B. cost prohibitive
C. time consuming
D. real-time information for managers

7. LO 6.2 Which of the following is *not* a reason for the physical inventory count to differ from what is recognized on the company's books?

A. mismanagement
B. shrinkage
C. damage
D. sale of services to customers

8. LO 6.2 Which of the following is not included when computing Net Purchases?

A. purchase discounts
B. beginning inventory
C. purchase returns
D. purchase allowances

9. LO 6.3 Which of the following accounts are used when recording a purchase?

A. cash, merchandise inventory
B. accounts payable, merchandise inventory
C. A or B
D. cash, accounts payable

10. LO 6.3 A retailer pays on credit for $650 worth of inventory, terms 3/10, n/40. If the merchandiser pays within the discount window, how much will the retailer remit in cash to the manufacturer?

A. $19.50
B. $630.50
C. $650
D. $195

11. LO 6.3 A retailer returns $400 worth of inventory to a manufacturer and receives a full refund. What accounts recognize this return before the retailer remits payment to the manufacturer?

A. accounts payable, merchandise inventory
B. accounts payable, cash
C. cash, merchandise inventory
D. merchandise inventory, cost of goods sold

12. LO 6.3 A retailer obtains a purchase allowance from the manufacturer in the amount of $600 for faulty inventory parts. Which of the following represents the journal entry for this transaction if the retailer has already remitted payment?

A.

Accounts Payable	600	
Merchandise Inventory		600

B.

Cash	600	
Merchandise Inventory		600

C.

Accounts Payable	600	
Merchandise Inventory		10
Cash		590

13. LO 6.4 Which of the following accounts are used when recording the sales entry of a sale on credit?

A. merchandise inventory, cash
B. accounts receivable, merchandise inventory
C. accounts receivable, sales
D. sales, cost of goods sold

14. LO 6.4 A customer pays on credit for $1,250 worth of merchandise, terms 4/15, n/30. If the customer pays within the discount window, how much will they remit in cash to the retailer?

A. $1,250
B. $1,200
C. $50
D. $500

15. LO 6.4 A customer returns $870 worth of merchandise and receives a full refund. What accounts recognize this sales return (disregarding the merchandise condition entry) if the return occurs before the customer remits payment to the retailer?

A. accounts receivable, sales returns and allowances
B. accounts receivable, cash
C. sales returns and allowances, merchandise inventory
D. accounts receivable, cost of goods sold

16. LO 6.4 A customer obtains a purchase allowance from the retailer in the amount of $220 for damaged merchandise. Which of the following represents the journal entry for this transaction if the customer has not yet remitted payment?

A.

Sales Returns and Allowances	220	
Cash		220

B.

Sales Returns and Allowances	220	
Accounts Receivable		220

C.

Cash	200	
Sales Returns and Allowances	20	
Accounts Receivable		220

17. LO 6.5 Which of the following is *not* a characteristic of FOB Destination?

A. The seller pays for shipping.
B. The seller owns goods in transit.
C. The point of transfer is when the goods leave the seller's place of business.
D. The point of transfer is when the goods arrive at the buyer's place of business.

18. LO 6.5 Which two accounts are used to recognize shipping charges for a buyer, assuming the buyer purchases with cash and the terms are FOB Shipping Point?

A. delivery expense, cash
B. merchandise inventory, cash
C. merchandise inventory, accounts payable
D. The buyer does not record anything for shipping since it is FOB Shipping Point.

19. LO 6.5 Which of the following is *not* a characteristic of FOB Shipping Point?

A. The buyer pays for shipping.
B. The buyer owns goods in transit.
C. The point of transfer is when the goods leave the seller's place of business.
D. The point of transfer is when the goods arrive at the buyer's place of business.

20. LO 6.6 A multi-step income statement _____.

A. separates cost of goods sold from operating expenses
B. considers interest revenue an operating activity
C. is another name for a simple income statement
D. combines cost of goods sold and operating expenses

21. LO 6.6 Which of the following accounts would be reported under operating expenses on a multi-step income statement?

A. sales
B. advertising expense
C. sales returns and allowances
D. interest expense

22. LO 6.6 A simple income statement _____.

A. combines all revenues into one category
B. does not combine all expenses into one category
C. separates cost of goods sold from operating expenses
D. separates revenues into several categories

23. LO 6.6 Which of the following accounts would *not* be reported under revenue on a simple income statement?

A. interest revenue
B. net sales
C. rent revenue
D. operating expenses

24. LO 6.7 Which of the following accounts are used when recording a purchase using a periodic inventory system?

A. cash, purchases
B. accounts payable, sales
C. accounts payable, accounts receivable
D. cash, merchandise inventory

25. LO 6.7 A retailer obtains a purchase allowance from the manufacturer in the amount of $600 for faulty inventory parts. Which of the following represents the journal entry for this transaction, assuming the retailer has already remitted payment?

A.

Accounts Payable	600	
Merchandise Inventory		600

B.

Cash	600	
Purchase Returns and Allowances		600

C.

Accounts Payable	600	
Purchase Discounts		10
Cash		590

26. LO 6.7 A customer returns $690 worth of merchandise and receives a full refund. What accounts recognize this sales return, assuming the customer has not yet remitted payment to the retailer?

A. accounts receivable, sales returns and allowances
B. accounts receivable, cash
C. sales returns and allowances, purchases
D. sales discounts, cost of goods sold

27. LO 6.7 A customer obtains an allowance from the retailer in the amount of $450 for damaged merchandise. Which of the following represents the journal entry for this transaction, assuming the customer has not remitted payment?

A.

Sales Returns and Allowances	450	
Cash		450

B.

Sales Returns and Allowances	450	
Accounts Receivable		450

C.

Cash	400	
Sales Returns and Allowances	50	
Accounts Receivable		450

Questions

1. LO 6.1 What are some benefits to a retailer for offering a discount to a customer?

2. LO 6.1 What do credit terms of 4/10, n/30 mean in regard to a purchase?

3. LO 6.1 What is the difference between a sales return and a sales allowance?

4. LO 6.1 If a retailer made a purchase in the amount of $350 with credit terms of 2/15, n/60. What would the retailer pay in cash if they received the discount?

5. LO 6.2 What are two advantages and disadvantages of the perpetual inventory system?

6. LO 6.2 What are two advantages and disadvantages of the periodic inventory system?

7. LO 6.2 Sunrise Flowers sells flowers to a customer on credit for $130 on October 18, with a cost of sale to Sunrise of $50. What entry to recognize this sale is required if Sunrise Flowers uses a *periodic* inventory system?

8. LO 6.2 Sunrise Flowers sells flowers to a customer on credit for $130 on October 18, with a cost of sale to Sunrise of $50. What entry to recognize this sale is required if Sunrise Flowers uses a *perpetual* inventory system?

9. LO 6.3 Name two situations where cash would be remitted to a retailer from a manufacturer after purchase.

10. LO 6.3 If a retailer purchased inventory in the amount of $750, terms 2/10, n/60, returned $30 of the inventory for a full refund, and received an allowance for $95, how much would the discount be if the retailer remitted payment within the discount window?

11. LO 6.3 A retailer discovers that 50% of the total inventory items delivered from the manufacturer are damaged. The original purchase for all inventory was $1,100. The retailer decides to return 20% of the damaged inventory for a full refund and keep the remaining 80% of damaged inventory. What is the value of the merchandise returned?

12. LO 6.4 Name two situations where cash would be remitted to a customer from a retailer after purchase.

13. LO 6.4 If a customer purchased merchandise in the amount of $340, terms 3/10, n/30, returned $70 of the inventory for a full refund, and received an allowance for $65, how much discount would be applied if the customer remitted payment within the discount window?

14. LO 6.4 A customer discovers 60% of the total merchandise delivered from a retailer is damaged. The original purchase for all merchandise was $3,600. The customer decides to return 35% of the damaged merchandise for a full refund and keep the remaining 65%. What is the value of the merchandise returned?

15. LO 6.5 What are the main differences between FOB Destination and FOB Shipping Point?

16. LO 6.5 A buyer purchases $250 worth of goods on credit from a seller. Shipping charges are $50. The terms of the purchase are 2/10, n/30, FOB Destination. What, if any, journal entry or entries will the buyer record for these transactions?

17. LO 6.5 A seller sells $800 worth of goods on credit to a customer, with a cost to the seller of $300. Shipping charges are $100. The terms of the sale are 2/10, n/30, FOB Destination. What, if any, journal entry or entries will the seller record for these transactions?

18. LO 6.5 Which statement and where on the statement is freight-out recorded? Why is it recorded there?

19. LO 6.6 The following is select account information for Sunrise Motors. Sales: $256,400; Sales Returns and Allowances: $34,890; COGS: $120,470; Sales Discounts: $44,760. Given this information, what is the Gross Profit Margin Ratio for Sunrise Motors? (Round to the nearest whole percentage.)

20. LO 6.6 What is the difference between a multi-step and simple income statement?

21. LO 6.6 How can an investor or lender use the Gross Profit Margin Ratio to make financial contribution decisions?

22. LO 6.6 The following is select account information for August Sundries. Sales: $850,360; Sales Returns and Allowances: $148,550; COGS: $300,840; Operating Expenses: $45,770; Sales Discounts: $231,820. If August Sundries uses a multi-step income statement format, what is their gross margin?

23. LO 6.7 If a retailer purchased inventory in the amount of $680, terms 3/10, n/60, returned $120 of the inventory for a full refund, and received an allowance for $70, how much would the discount be if the retailer remitted payment within the discount window?

24. LO 6.7 A customer discovers 50% of the total merchandise delivered from the retailer is damaged. The original purchase for all merchandise was $5,950. The customer decides to return 40% of the damaged merchandise for a full refund and keep the remaining 60%. What is the value of the merchandise returned?

25. LO 6.7 What is the difference in reporting requirements for customer-returned merchandise in sellable condition under a perpetual inventory system versus a periodic inventory system?

Exercise Set A

EA1. LO 6.1 On March 1, Bates Board Shop sells 300 surfboards to a local lifeguard station at a sales price of $400 per board. The cost to Bates is $140 per board. The terms of the sale are 3/15, n/30, with an invoice date of March 1. Create the journal entries for Bates to recognize the following transactions.

A. the initial sale
B. the subsequent customer payment on March 10

EA2. LO 6.1 Marx Corp. purchases 135 fax machines on credit from a manufacturer on April 7 at a price of $250 per machine. Terms of the purchase are 4/10, n/20 with an invoice date of April 7. Marx Corp pays in full for the fax machines on April 17. Create the journal entries for Marx Corp. to record:

A. the initial purchase
B. the subsequent payment on April 17

EA3. LO 6.1 Match each of the following terms with the best corresponding definition.

A. Sales allowance	i. A customer returns merchandise for a full refund
B. Purchase return	ii. A retailer receives a partial refund but keeps the defective merchandise
C. Sales discount	iii. A customer receives a partial refund but keeps the defective merchandise
D. Purchase discount	iv. A customer pays their account in full within the discount window
E. Sales return	v. A type of purchase discount negotiated between a manufacturer and a retailer before settlement on a final price
F. Trade discount	vi. A retailer returns merchandise for a full refund
G. Purchase allowance	vii. A retailer pays their account in full within the discount window

EA4. LO 6.2 The following is selected information from Mars Corp. Compute net purchases, and cost of goods sold for the month of March.

Inventory, February 28, 2018	$450,000
Inventory, March 31, 2018	330,500
Purchase discounts	12,450
Purchase returns and allowances	23,870
Sales	276,900
Sales discounts	34,660
Gross purchases	120,400

EA5. LO 6.2 On April 5, a customer returns 20 bicycles with a sales price of $250 per bike to Barrio Bikes. Each bike cost Barrio Bikes $100. The customer had yet to pay on their account. The bikes are in sellable condition. Prepare the journal entry or entries to recognize this return if the company uses

A. the perpetual inventory system
B. the periodic inventory system

EA6. LO 6.3 Record journal entries for the following purchase transactions of Flower Company.

Oct. 13	Purchased 85 bushels of flowers with cash for $1,300.
Oct. 20	Purchased 240 bushels of flowers for $20 per bushel on credit. Terms of the purchase are 5/10, n/30, invoice dated October 20.
Oct. 30	Paid account in full from the October 20 purchase.

EA7. LO 6.3 Record journal entries for the following purchase transactions of Apex Industries.

Nov. 6	Purchased 24 computers on credit for $560 per computer. Terms of the purchase are 4/10, n/60, invoice dated November 6.
Nov. 10	Returned 5 defective computers for a full refund from the manufacturer.
Nov. 22	Paid account in full from the November 6 purchase.

EA8. LO 6.3 Record the journal entry for each of the following transactions. Glow Industries purchases 750 strobe lights at $23 per light from a manufacturer on April 20. The terms of purchase are 10/15, n/40, invoice dated April 20. On April 22, Glow discovers 100 of the lights are the wrong model and is granted an allowance of $8 per light for the error. On April 30, Glow pays for the lights, less the allowance.

EA9. LO 6.4 Record journal entries for the following sales transactions of Flower Company.

Oct. 12	Sold 25 bushels of flowers to a customer for $1,000 cash; cost of sale $700.
Oct. 21	Sold 40 bushels of flowers for $30 per bushel on credit. Terms of the sale are 4/10, n/30, invoice dated October 21. Cost per bushel is $20 to Flower Company.
Oct. 31	Received payment in full from the October 21 sale.

EA10. LO 6.4 Record the journal entries for the following sales transactions of Apache Industries.

Nov. 7	Sold 10 computers on credit for $870 per computer. Terms of the sale are 5/10, n/60, invoice dated November 7. The cost per computer to Apache is $560.
Nov. 14	The customer returned 2 computers for a full refund from Apache. Apache returns the computers to their inventory at full cost of $560 per computer.
Nov. 21	The customer paid their account in full from the November 7 sale.

EA11. LO 6.4 Record the journal entry or entries for each of the following sales transactions. Glow Industries sells 240 strobe lights at $40 per light to a customer on May 9. The cost to Glow is $23 per light. The terms of the sale are 5/15, n/40, invoice dated May 9. On May 13, the customer discovers 50 of the lights are the wrong color and are granted an allowance of $10 per light for the error. On May 21, the customer pays for the lights, less the allowance.

EA12. LO 6.5 Review the following situations and record any necessary journal entries for Mequon's Boutique.

May 10	Mequon's Boutique purchases $2,400 worth of merchandise with cash from a manufacturer. Shipping charges are an extra $130 cash. Terms of the purchase are FOB Shipping Point.
May 14	Mequon's Boutique sells $3,000 worth of merchandise to a customer who pays with cash. The merchandise has a cost to Mequon's of $1,750. Shipping charges are an extra $150 cash. Terms of the sale are FOB Shipping Point.

EA13. LO 6.5 Review the following situations and record any necessary journal entries for Letter Depot.

Mar. 9	Letter Depot purchases $11,420 worth of merchandise on credit from a manufacturer. Shipping charges are an extra $480 cash. Terms of the purchase are 2/10, n/40, FOB Destination, invoice dated March 9.
Mar. 20	Letter Depot sells $7,530 worth of merchandise to a customer who pays on credit. The merchandise has a cost to Letter Depot of $2,860. Shipping charges are an extra $440 cash. Terms of the sale are 3/15, n/50, FOB Destination, invoice dated March 20.

EA14. LO 6.5 Review the following situations and record any necessary journal entries for Nine Lives Inc.

Jan. 15	Nine Lives Inc. purchases $8,770 worth of merchandise with cash from a manufacturer. Shipping charges are an extra $345 cash. Terms of the purchase are FOB Shipping Point.
Jan. 23	Nine Lives Inc. sells $4,520 worth of merchandise to a customer who pays with cash. The merchandise has a cost to Nine Lives of $3,600. Shipping charges are an extra $190 cash. Terms of the sale are FOB Destination.

EA15. LO 6.6 The following select account data is taken from the records of Reese Industries for 2019.

Sales	$640,363
Merchandise inventory	582,620
Sales discounts	58,040
Interest expense	3,677
Sales returns and allowances	90,232
Interest revenue	10,268
Cost of goods sold	224,598
Rent expense	15,080
Depreciation expense: office equipment	3,200
Insurance expense	2,450
Advertising expense	12,906
Accounts receivable	100,440
Office supplies expense	1,600
Rent revenue	23,622
Sales salaries expense	30,410
Accounts payable	135,404
Common stock	59,419
Marketing expense	31,000

A. Use the data provided to compute net sales for 2019.
B. Prepare a simple income statement for the year ended December 31, 2019.
C. Compute the gross margin for 2019.
D. Prepare a multi-step income statement for the year ended December 31, 2019.

EA16. LO 6.7 Record journal entries for the following purchase transactions of Flower Company.

A. On October 13, Flower Company purchased 85 bushels of flowers with cash for $1,300.
B. On October 20, Flower Company purchased 240 bushels of flowers for $20 per bushel on credit. Terms of the purchase were 5/10, n/30, invoice dated October 20.
C. On October 30, Flower Company paid its account in full for the October 20 purchase.

EA17. LO 6.7 Record journal entries for the following purchase transactions of Apex Industries.

Nov. 6	Purchased 24 computers on credit for $560 per computer. Terms of the purchase are 4/10, n/60, invoice dated November 6.
Nov. 10	Returned 5 defective computers for a full refund from the manufacturer.
Nov. 22	Paid account in full from the November 6 purchase.

EA18. LO 6.7 Record the journal entries for the following sales transactions of Julian Sundries.

Nov. 7	Sold 10 tables on credit for $870 per table. Terms of the sale are 5/10, n/60, invoice dated November 7. The cost per table to Julian is $560.
Nov. 14	The customer returned 2 slightly damaged tables for a full refund from Julian.
Nov. 21	The customer paid their account in full from the November 7 sale.

EA19. LO 6.7 Record the journal entry or entries for each of the following sales transactions. Glow Industries sells 240 strobe lights at $40 per light to a customer on May 9. The cost to Glow is $23 per light. The terms of the sale are 5/15, n/40, invoice dated May 9. On May 13, the customer discovers 50 of the lights are the wrong color and are granted an allowance of $10 per light for the error. On May 21, the customer pays for the lights, less the allowance.

Exercise Set B

EB1. LO 6.1 On June 1, Lupita Candy Supplies sells 1,250 candy buckets to a local school at a sales price of $10 per bucket. The cost to Lolita is $2 per bucket. The terms of the sale are 2/10, n/60, with an invoice date of June 1. Create the journal entries for Lupita to recognize the following transactions.

A. the initial sale
B. the subsequent customer payment on July 12

EB2. LO 6.1 Ariel Enterprises purchases 32 cellular telephones on credit from a manufacturer on November 3 at a price of $400 per phone. Terms of the purchase are 3/5, n/30 with an invoice date of November 3. Ariel Enterprises pays in full for the phones on November 6. Create the journal entries for Ariel Enterprises for the following transactions.

A. the initial purchase
B. the subsequent payment on November 6

EB3. LO 6.1 For each of the following statements, fill in the blanks with the correct account names.

A. A retailer purchases merchandise on credit. The retailer would recognize this transaction by debiting ____ and crediting _____.
B. A retailer pays for purchased merchandise within the discount window. The retailer would recognize this transaction by debiting _____ and crediting _____ and _____.
C. A customer returns merchandise to the retailer and receives a full refund. The retailer would recognize this transaction by debiting _____ and crediting _____ if the customer had not yet paid on their account.
D. A customer pays for purchased merchandise within the discount window. The retailer would recognize this transaction by debiting _____ and _____, and crediting _____.

EB4. LO 6.2 The following is selected information from Orange Industries. Compute net purchases, and cost of goods sold for the month of June.

Sales	$870,000
Gross purchases	435,080
Sales discounts	82,650
Purchase returns and allowances	50,932
Beginning inventory	321,908
Purchase discounts	14,664
Ending inventory	254,075

EB5. LO 6.2 On April 20, Barrio Bikes purchased 30 bicycles at a cost of $100 per bike. Credit terms were 4/10, n/30, with an invoice date of April 20. On April 26, Barrio Bikes pays in full for the purchase. Prepare the journal entry or entries to recognize the purchase and subsequent payment if Barrio Bikes uses:

A. the perpetual inventory system
B. the periodic inventory system

EB6. LO 6.3 Blue Barns purchased 888 gallons of paint at $19 per gallon from a supplier on June 3. Terms of the purchase are 2/15, n/45, invoice dated June 3. Blue Barns pays their account in full on June 20. On June 22, Blue Barns discovers 20 gallons are the wrong color and returns the gallons for a full cash refund. Record the journal entries to recognize these transactions for Blue Barns.

EB7. LO 6.3 Canary Lawnmowers purchased 300 lawnmower parts at $3.50 per part from a supplier on December 4. Terms of the purchase are 4/10, n/25, invoice dated December 4. Canary Lawnmowers pays their account in full on December 16. On December 21, Canary discovers 34 of the parts are the wrong size but decides to keep them after the supplier gives Canary an allowance of $1.00 per part. Record the journal entries to recognize these transactions for Canary Lawnmowers.

EB8. LO 6.3 Record journal entries for the following purchase transactions of Balloon Depot.

Feb. 8	Purchased 3,000 balloon bundles on credit for $25 per bundle. Terms of the purchase are 10/10, n/30, invoice dated February 8.
Feb. 11	Returned 450 defective bundles for a full refund from the manufacturer.
Feb. 18	Paid account in full from the February 8 purchase.

EB9. LO 6.4 Blue Barns sold 136 gallons of paint at $31 per gallon on July 6 to a customer with a cost of $19 per gallon to Blue Barns. Terms of the sale are 2/15, n/45, invoice dated July 6. The customer pays their account in full on July 24. On July 28, the customer discovers 17 gallons are the wrong color and returns the paint for a full cash refund. Blue Barns returns the gallons to their inventory at the original cost per gallon. Record the journal entries to recognize these transactions for Blue Barns.

EB10. LO 6.4 Canary Lawnmowers sold 70 lawnmower parts at $5.00 per part to a customer on December 4 with a cost to Canary of $3.00 per part. Terms of the sale are 5/10, n/25, invoice dated December 4. The customer pays their account in full on December 16. On December 21, the customer discovers 22 of the parts are the wrong size but decides to keep them after Canary gives them an allowance of $1.00 per part. Record the journal entries to recognize these transactions for Canary Lawnmowers.

EB11. LO 6.4 Record journal entries for the following sales transactions of Balloon Depot.

Mar. 8	Sold 570 balloon bundles to a customer on credit for $38 per bundle. The cost to Balloon Depot was $25 per bundle. Terms of the sale are 3/10, n/30, invoice dated March 8.
Mar. 11	The customer returned 70 bundles for a full refund from Balloon Depot. Balloon Depot returns the balloons to their inventory at the original cost of $25 per bundle.
Mar. 18	The customer paid their account in full from the March 8 purchase.

EB12. LO 6.5 Review the following situations and record any necessary journal entries for Lumber Farm.

Feb. 13	Lumber Farm purchases $9,650 worth of merchandise with cash from a manufacturer. Shipping charges are an extra $210 cash. Terms of the purchase are FOB Destination.
Feb. 19	Lumber Farm sells $5,670 worth of merchandise to a customer who pays with cash. The merchandise has a cost to Lumber Farm of $2,200. Shipping charges are an extra $230 cash. Terms of the sale are FOB Destination.

EB13. LO 6.5 Review the following situations and record any necessary journal entries for Clubs Unlimited.

Jun. 12	Clubs Unlimited purchases $3,540 worth of merchandise on credit from a manufacturer. Shipping charges are an extra $150 cash. Terms of the purchase are 2/10, n/45, FOB Shipping Point, invoice dated June 12.
Jun. 18	Clubs Unlimited sells $8,200 worth of merchandise to a customer who pays on credit. The merchandise has a cost to Clubs Unlimited of $3,280. Shipping charges are an extra $150 cash. Terms of the sale are 3/15, n/30, FOB Shipping Point, invoice dated June 18.

EB14. LO 6.5 Review the following situations and record any necessary journal entries for Wall World.

Dec. 6	Wall World purchases $5,510 worth of merchandise on credit from a manufacturer. Shipping charges are an extra $146 cash. Terms of the purchase are 2/15, n/40, FOB Shipping Point, invoice dated December 6.
Dec. 10	Wall World sells $3,590 worth of merchandise to a customer, who pays on credit. The merchandise has a cost to Wall World of $1,400. Shipping charges are an extra $115 cash. Terms of the sale are 4/10, n/30, FOB Destination, invoice dated December 10.

EB15. LO 6.6 The following select account data is taken from the records of Carnival Express for 2019.

Sales	$790,866
Merchandise inventory	465,000
Accounts receivable	115,509
Office supplies expense	2,312
Rent revenue	42,900
Sales salaries expense	65,300
Accounts payable	158,234
Common stock	80,963
Marketing expense	25,450
Sales discounts	62,750
Interest expense	5,444
Sales returns and allowances	100,043
Interest revenue	12,321
Cost of goods sold	295,840
Rent expense	12,678
Depreciation expense: office equipment	4,210
Insurance expense	2,000
Advertising expense	14,650

A. Use the data provided to compute net sales for 2019.
B. Prepare a simple income statement for the year ended December 31, 2019.
C. Compute the gross margin for 2019.
D. Prepare a multi-step income statement for the year ended December 31, 2019.

EB16. LO 6.7 Canary Lawnmowers purchased 300 lawnmower parts at $3.50 per part from a supplier on December 4. Terms of the purchase are 4/10, n/25, invoice dated December 4. Canary Lawnmowers pays their account in full on December 16. On December 21, Canary discovers 34 of the parts are the wrong size, but decides to keep them after the supplier gives Canary an allowance of $1.00 per part. Record the journal entries to recognize these transactions for Canary Lawnmowers.

EB17. LO 6.7 Record journal entries for the following purchase transactions of Balloon Depot.

Feb. 8	Purchased 3,000 balloon bundles on credit for $25 per bundle. Terms of the purchase are 2/10, n/30, invoice dated February 8.
Feb. 11	Returned 450 defective bundles for a full refund from the manufacturer.
Feb. 18	Paid account in full from the February 8 purchase.

EB18. LO 6.7 Canary Lawnmowers sold 75 lawnmower parts at $5.00 per part to a customer on December 4. The cost to Canary is $3.00 per part. Terms of the sale are 4/10, n/25, invoice dated December 4. The customer pays their account in full on December 16. On December 21, the customer discovers 22 of the parts are the wrong size, but decides to keep them after Canary gives them an allowance of $1.00 per part. Record the journal entries to recognize these transactions for Canary Lawnmowers.

EB19. LO 6.7 Record journal entries for the following sales transactions of Balloon Depot.

Mar. 8	Sold 570 balloon bundles to a customer on credit for $38 per bundle. The cost to Balloon Depot is $25 per bundle. Terms of the sale are 3/10, n/30, invoice dated March 8.
Mar. 11	The customer returned 70 bundles for a full refund from Balloon Depot.
Mar. 18	The customer paid their account in full from the March 8 purchase.

Problem Set A

PA1. LO 6.1 Record journal entries for the following transactions of Furniture Warehouse.

A. Aug. 3: Sold 15 couches at $500 each to a customer, credit terms 2/15, n/30, invoice date August 3; the couches cost Furniture Warehouse $150 each.
B. Aug. 8: Customer returned 2 couches for a full refund. The merchandise was in sellable condition at the original cost.
C. Aug. 15: Customer found 4 defective couches but kept the merchandise for an allowance of $1,000.
D. Aug. 18: Customer paid their account in full with cash.

PA2. LO 6.1 Record journal entries for the following transactions of Barrera Suppliers.

A. May 12: Sold 32 deluxe hammers at $195 each to a customer, credit terms 10/10, n/45, invoice date May 12; the deluxe hammers cost Barrera Suppliers $88 each.
B. May 15: Customer returned 6 hammers for a full refund. The merchandise was in sellable condition at the original cost.
C. May 20: Customer found 2 defective hammers but kept the merchandise for an allowance of $200.
D. May 22: Customer paid their account in full with cash.

PA3. LO 6.2 Costume Warehouse sells costumes and accessories. Review the following transactions and prepare the journal entry or entries if Costume Warehouse uses:

A. the perpetual inventory system
B. the periodic inventory system

May 3	A customer purchases 45 costumes at a sales price of $35 per costume. The cost to Costume Warehouse per costume is $15. The terms of the sale are 3/15, n/60, with an invoice date of May 3.
May 10	The customer who made the May 3 purchase returns 5 of the costumes to the store for a full refund, claiming they were the wrong size. The costumes were returned to Costume Warehouse's inventory at $15 per costume.
May 16	The customer pays in full for the remaining costumes, less the return.

PA4. LO 6.2 Pharmaceutical Supplies sells medical supplies to customers. Review the following transactions and prepare the journal entry or entries if Pharmaceutical Supplies uses:

A. the perpetual inventory system
B. the periodic inventory system

Jul. 9	A customer purchases 50 pairs of crutches at a sales price of $20 per pair. The cost to Pharmaceutical Supplies per pair is $8.00. The terms of the sale are 5/10, n/30, with an invoice date of July 9.
Jul. 12	The customer who made the July 9 purchase returns 9 of the pairs to the store for a full refund, claiming they were the wrong size. The crutch pairs were returned to the store's inventory at $8.00 per pair.
Jul. 18	The customer pays in full for the remaining crutches, less the return.

PA5. LO 6.3 Review the following transactions for Birdy Birdhouses and record any required journal entries.

Sep. 6	Birdy Birdhouses purchases 55 birdhouses at $40 each with cash.
Sep. 8	Birdy Birdhouses purchases 80 birdhouses at $45 each on credit. Terms of the purchase are 2/10, n/30, invoice date September 8.
Sep. 10	Birdy discovers 10 of the birdhouses are damaged from the Sept 6 purchase and returns them to the supplier for a full refund. Birdy also discovers that 10 of the birdhouses from the Sept 8 purchase are painted the wrong color but keeps them since the supplier granted an allowance of $20 per birdhouse.
Sep. 18	Birdy pays their account in full from the September 8 purchase, less any returns, allowances, and/or discounts.

PA6. LO 6.3 Review the following transactions for Dish Mart and record any required journal entries. Note that all purchase transactions are with the same supplier.

Nov. 5	Dish Mart purchases 26 sets of dishes for $460 per set with cash.
Nov. 9	Dish Mart purchases 30 sets of dishes for $430 per set on credit. Terms of the purchase are 10/15, n/60, invoice date November 9.
Nov. 13	Dish Mart discovers 5 of the dish sets are damaged from the November 9 purchase and returns them to the supplier for a full refund.
Nov. 14	Dish Mart purchases 10 sets of dishes for $450 per set, on credit. Terms of the purchase are 10/10, n/60, invoice date November 14.
Nov. 15	Dish Mart discovers that 2 of the dish sets from the November 14 purchase and 4 of the dish sets from the November 5 purchase are missing a few dishes but keeps them since the supplier granted an allowance of $50 per set for the November 14 dish sets and $75 per set for the November 5 dish sets. Dish Mart and the supplier have agreed to reduce the amount Dish Mart has outstanding debt, instead of sending a separate check for the November 5 allowance in cash.
Nov. 24	Dish Mart pays their account in full for all outstanding purchases, less any returns, allowances, and/or discounts.

PA7. LO 6.4 Review the following sales transactions for Birdy Birdhouses and record any required journal entries.

Aug. 10	Birdy Birdhouses sells 20 birdhouses to customer Julia Brand at a price of $70 each in exchange for cash. The cost to Birdy is $46 per birdhouse.
Aug. 12	Birdy Birdhouses sells 30 birdhouses to customer Julia Brand at a price of $68 each on credit. The cost of sale for Birdy is $44 per birdhouse. Terms of the sale are 2/10, n/30, invoice date August 12.
Aug. 14	Julia discovers 6 of the birdhouses are slightly damaged from the August 10 purchase and returns them to Birdy for a full refund. Birdy is able to return the birdhouses to their inventory at the original cost of $46 each. Julia also discovers that 10 of the birdhouses from the August 12 purchase are painted the wrong color but keeps them since Birdy granted an allowance of $24 per birdhouse.
Aug. 20	Julia pays her account in full from the August 12 purchase, less any returns, allowances, and/or discounts.

PA8. LO 6.4 Review the following sales transactions for Dish Mart and record any required journal entries. Note that all sales transactions are with the same customer, Emma Purcell.

Mar. 5	Dish Mart made a cash sale of 13 sets of dishes at a price of $700 per set to customer Emma Purcell. The cost per set is $460 to Dish Mart.
Mar. 9	Dish Mart sold 23 sets of dishes to Emma for $650 per set on credit, at a cost to Dish Mart of $435 per set. Terms of the sale are 5/15, n/60, invoice date March 9.
Mar. 13	Emma returns eight of the dish sets from the March 9 sale to Dish Mart for a full refund. Dish Mart returns the dish sets to inventory at their original cost of $435 per set.
Mar. 14	Dish Mart sells 6 sets of dishes to Emma for $670 per set on credit, at a cost to Dish Mart of $450 per set. Terms of the sale are 5/10, n/60, invoice date March 14.
Mar. 15	Emma discovers that 3 of the dish sets from the March 14 purchase, and 7 of the dish sets from the March 5 sale are missing a few dishes, but keeps them since Dish Mart granted an allowance of $2,670 for all 10 dish sets. Dish Mart and Emma have agreed to reduce the amount Dish Mart has outstanding instead of sending a separate check for the March 5 allowance in cash.
Mar. 24	Emma Purcell pays her account in full for all outstanding purchases, less any returns, allowances, and/or discounts.

PA9. LO 6.5 Record the following purchase transactions of Money Office Supplies.

Aug. 3	Purchased 45 chairs on credit, at a cost of $55 per chair. Shipping charges are an extra $3 cash per chair and are not subject to discount. Terms of the purchase are 4/10, n/60, FOB Shipping Point, invoice dated August 3.
Aug. 7	Purchased 30 chairs with cash, at a cost of $50 per chair. Shipping charges are an extra $4.50 cash per chair and are not subject to discount. Terms of the purchase are FOB Destination.
Aug. 12	Money Office Supplies pays in full for their purchase on August 3.

PA10. LO 6.6 The following is the adjusted trial balance data for Nino's Pizzeria as of December 31, 2019.

NINO'S PIZZERIA
Adjusted Trial Balance
Year Ended December 31, 2019

	Debit	Credit
Cash	$ 775,984	
Accounts Receivable	45,688	
Buildings	200,460	
Merchandise Inventory	135,624	
Accounts Payable		$437,880
Common Stock		410,542
Sales		555,696
Interest Revenue		84,652
Rent Revenue		86,900
Sales Salaries Expense	24,500	
Office Supplies Expense	6,270	
Sales Discounts	102,890	
Interest Expense	4,577	
Sales Returns and Allowances	105,854	
Cost of goods sold	122,853	
Rent Expense	20,000	
Depreciation Expense: Office Equipment	10,555	
Insurance Expense	2,780	
Advertising Expense	17,635	
Totals	**$1,575,670**	**$1,575,670**

A. Use the data provided to compute net sales for 2019.
B. Compute the gross margin for 2019.
C. Compute the gross profit margin ratio (rounded to nearest hundredth).
D. Prepare a simple income statement for the year ended December 31, 2019.
E. Prepare a multi-step income statement for the year ended December 31, 2019.

PA11. LO 6.6 The following is the adjusted trial balance data for Emma's Alterations as of December 31, 2019:

EMMA'S ALTERATIONS Adjusted Trial Balance Year Ended December 31, 2019		
	Debit	**Credit**
Cash	$ 600,538	
Accounts Receivable	50,689	
Equipment	199,430	
Merchandise Inventory	169,744	
Accounts Payable		$ 234,893
Common Stock		502,200
Sales		393,426
Interest Revenue		100,976
Rent Revenue		65,500
Sales Salaries Expense	26,750	
Office Supplies Expense	4,903	
Sales Discounts	61,347	
Interest Expense	3,570	
Sales Returns and Allowances	55,432	
Cost of Goods Sold	90,333	
Rent Expense	10,400	
Depreciation Expense: Office Equipment	8,560	
Insurance Expense	3,421	
Advertising Expense	11,878	
Totals	**$1,296,995**	**$1,296,995**

A. Use the data provided to compute net sales for 2019.
B. Compute the gross margin for 2019.
C. Compute the gross profit margin ratio (rounded to nearest hundredth).
D. Prepare a simple income statement for the year ended December 31, 2019.
E. Prepare a multi-step income statement for the year ended December 31, 2019.

PA12. LO 6.7 Review the following transactions for Birdy Birdhouses and record any required journal entries.

Sep. 6	Birdy Birdhouses purchases 57 birdhouses at $46 each with cash.
Sep. 8	Birdy Birdhouses purchases 94 birdhouses at $44 each on credit. Terms of the purchase are 2/10, n/30, invoice date September 8.
Sep. 10	Birdy discovers 12 of the birdhouses are damaged from the Sept 6 purchase and returns them to the supplier for a full refund. Birdy also discovers that 11 of the birdhouses from the Sept 8 purchase are painted the wrong color but keeps them since the supplier granted an allowance of $136.
Sep. 18	Birdy pays their account in full from the September 8 purchase, less any returns, allowances, and/or discounts.

PA13. LO 6.7 Review the following sales transactions for Dish Mart and record any required journal entries. Note that all sales transactions are with the same customer, Emma Purcell.

Mar. 5	Dish Mart made a cash sale of 13 sets of dishes at a price of $700 per set to customer Emma Purcell. The cost per set is $460 to Dish Mart.
Mar. 9	Dish Mart sold 23 sets of dishes to Emma for $650 per set on credit, at a cost to Dish Mart of $435 per set. Terms of the sale are 10/15, n/60, invoice date March 9.
Mar. 13	Emma discovers 8 of the dish sets are damaged from the March 9 sale and returns them to Dish Mart for a full refund.
Mar. 14	Dish Mart sells 6 sets of dishes to Emma for $670 per set on credit, at a cost to Dish Mart of $450 per set. Terms of the sale are 10/10, n/60, invoice date March 14.
Mar. 15	Emma discovers that 3 of the dish sets from the March 14 purchase and 7 of the dish sets from the March 5 sale are missing a few dishes but keeps them since Dish Mart granted an allowance of $200 per set for all 10 dish sets. Dish Mart and Emma have agreed to reduce the amount Dish Mart has outstanding instead of sending a separate check for the March 5 allowance in cash.
Mar. 24	Emma Purcell pays her account in full for all outstanding purchases, less any returns, allowances, and/or discounts.

Problem Set B

PB1. LO 6.1 Record journal entries for the following transactions of Furniture Warehouse.

A. July 5: Purchased 30 couches at a cost of $150 each from a manufacturer. Credit terms are 2/15, n/30, invoice date July 5.
B. July 10: Furniture Warehouse returned 5 couches for a full refund.
C. July 15: Furniture Warehouse found 6 defective couches, but kept the merchandise for an allowance of $500.
D. July 20: Furniture Warehouse paid their account in full with cash.

PB2. LO 6.1 Record journal entries for the following transactions of Mason Suppliers.

A. Sep. 8: Purchased 50 deluxe hammers at a cost of $95 each from a manufacturer. Credit terms are 5/20, n/60, invoice date September 8.
B. Sep. 12: Mason Suppliers returned 8 hammers for a full refund.
C. Sep. 16: Mason Suppliers found 4 defective hammers, but kept the merchandise for an allowance of $250.
D. Sep. 28: Mason Suppliers paid their account in full with cash.

PB3. LO 6.2 Costume Warehouse sells costumes and accessories and purchases their merchandise from a manufacturer. Review the following transactions and prepare the journal entry or entries if Costume Warehouse uses

A. the perpetual inventory system
B. the periodic inventory system

Jun. 4	Costume Warehouse purchases 88 costumes on credit at a purchase price of $15 per costume. The terms of the purchase are 5/15, n/30, with an invoice date of June 4.
Jun. 12	Costume Warehouse returns 20 costumes to the manufacturer for a full refund.
Jun. 19	Costume Warehouse pays in full for the remaining costumes, less the return.

PB4. LO 6.2 Pharmaceutical Supplies sells medical supplies and purchases their merchandise from a manufacturer. Review the following transactions and prepare the journal entry or entries if Pharmaceutical Supplies uses

A. the perpetual inventory system
B. the periodic inventory system

Apr. 7	Pharmaceutical Supplies purchases 50 medical stands on credit at a purchase price of $15 per stand. The terms of the purchase are 5/10, n/45, with an invoice date of April 7.
Apr. 11	Pharmaceutical Supplies returns 18 stands to the manufacturer for a full refund.
Apr. 17	Pharmaceutical Supplies pays in full for the remaining stands, less the return.

PB5. LO 6.3 Review the following transactions for April Anglers and record any required journal entries.

Oct. 4	April Anglers purchases 82 fishing poles at $33 each with cash.
Oct. 5	April Anglers purchases 116 fishing poles at $30 each on credit. Terms of the purchase are 3/15, n/30, invoice date October 5.
Oct. 12	April discovers 18 of the fishing poles are damaged from the October 4 purchase and returns them to the supplier for a full refund. April also discovers that 32 of the fishing poles from the October 5 purchase are the wrong length but keeps them since the supplier granted an allowance of $15 per fishing pole.
Oct. 24	April pays their account in full from the October 5 purchase, less any returns, allowances, and/or discounts.

PB6. LO 6.3 Review the following transactions for Dish Mart and record any required journal entries. Note that all purchase transactions are with the same supplier.

Nov. 5	Dish Mart purchases 45 sets of cutlery for $100 per set with cash.
Nov. 9	Dish Mart purchases 50 sets of cutlery for $120 per set on credit. Terms of the purchase are 5/15, n/60, invoice date November 9.
Nov. 13	Dish Mart discovers 15 of the cutlery sets are damaged from the November 9 purchase and returns them to the supplier for a full refund.
Nov. 14	Dish Mart purchases 30 sets of cutlery for $130 per set on credit. Terms of the purchase are 5/10, n/60, invoice date November 14.
Nov. 15	Dish Mart discovers that 10 of the cutlery sets from the November 14 purchase and 20 of the cutlery sets from the November 5 purchase are missing a few spoons but keeps them since the supplier granted an allowance of $30 per set for the November 14 cutlery sets and $35 per set for the November 5 cutlery sets. Dish Mart and the supplier have agreed to reduce the amount of debt Dish Mart has outstanding instead of sending a separate check for the November 5 allowance in cash.
Nov. 24	Dish Mart pays their account in full for all outstanding purchases, less any returns, allowances, and/or discounts.

PB7. LO 6.4 Review the following sales transactions for April Anglers and record any required journal entries.

Oct. 4	April Anglers made a cash sale of 40 fishing poles to customer Billie Dyer at a price of $55 per pole. The cost to April is $33 per pole.
Oct. 5	April Anglers sells 24 fishing poles to customer Billie Dyer at a price of $52 per pole on credit. The cost to April is $30 per pole. Terms of the sale are 2/10, n/30, invoice date October 5.
Oct. 12	Billie returns seven of the fishing poles from the October 4 purchase to April Anglers for a full refund. April returns these poles to their inventory at the original cost per pole. Billie also discovers that 6 of the fishing poles from the October 5 purchase are the wrong color but keeps them since April granted an allowance of $18 per fishing pole.
Oct. 24	April pays their account in full from the October 5 purchase, less any returns, allowances, and/or discounts.

PB8. LO 6.4 Review the following sales transactions for Dish Mart and record any required journal entries. Note that all sales transactions are with the same customer, Bella Davies.

Apr. 5	Dish Mart made a cash sale of 22 sets of cutlery to Bella Davies for $330 per set. The cost per set to Dish Mart is $125 per set.
Apr. 9	Dish Mart sells 14 sets of cutlery to Bella Davies on credit for $345 per set. The cost per set to Dish Mart is $120 per set. Terms of the sale are 2/15, n/60, invoice date April 9.
Apr. 13	Bella returns nine of the cutlery sets from the April 9 sale to Dish Mart for a full refund. Dish Mart restores the cutlery to its inventory at the original cost of $120 per set.
Apr. 14	Bella purchases 18 sets of cutlery for $275 per set on credit, at a cost to Dish Mart of $124 per set. Terms of the sale are 2/10, n/60, invoice date April 14.
Apr. 15	Bella discovers that 5 of the cutlery sets from the April 14 purchase and 10 of the cutlery sets from the April 5 purchase are missing a few spoons but keeps them since Dish Mart granted an allowance of $175 per set for all dish sets. Dish Mart and Bella have agreed to reduce the amount Bella has outstanding instead of sending a separate check for the April 5 allowance in cash.
Apr. 28	Bella Davies pays her account in full for all outstanding purchases, less any returns, allowances, and/or discounts.

PB9. LO 6.5 Record the following purchase transactions of Custom Kitchens Inc.

Oct. 6	Purchased 230 cabinet doors on credit at a cost of $46 per door. Shipping charges are an extra $2 cash per door and are not subject to discount. Terms of the purchase are 5/15, n/35, FOB Shipping Point, invoice dated October 6.
Oct. 9	Purchased 100 cabinet doors with cash at cost of $40 per door. Shipping charges are an extra $3.25 cash per door and are not subject to discount. Terms of the purchase are FOB Destination.
Oct. 20	Custom Kitchens Inc. pays in full for their purchase from October 6.

PB10. LO 6.5 Record the following sales transactions of Money Office Supplies.

Apr. 4	Made a cash sale to a customer for 15 chairs at a sales price of $80 per chair. The cost to Money Office Supplies is $55 per chair. Shipping charges are an extra $4 cash per chair and are not subject to discount. Terms of the sale are FOB Shipping Point.
Apr. 9	Sold 20 chairs on credit for $85 per chair to a customer. The cost per chair to Money Office Supplies is $50 per chair. Shipping charges are an extra $4.50 cash per chair and are not subject to discount. Terms of the sale are 3/10, n/30, FOB Destination, invoice dated April 9.
Apr. 19	The customer pays in full for their purchase on April 9.

PB11. LO 6.5 Record the following sales transactions of Custom Kitchens Inc.

Nov. 12	Made a cash sale to a customer for 34 cabinet doors at a sales price of $72 per door. The cost to Custom Kitchens Inc. is $46 per door. Shipping charges are an extra $3.15 cash per door and are not subject to discount. Terms of the sale are FOB Shipping Point.
Nov. 16	Sold 22 doors on credit for $80 per door to a customer. The cost per door to Custom Kitchens Inc. is $40 per door. Shipping charges are an extra $4.00 cash per door and are not subject to discount. Terms of the sale are 5/15, n/40, FOB Destination, invoice dated November 12.
Nov. 24	The customer pays in full for their purchase on November 16.

PB12. LO 6.6 The following is the adjusted trial balance data for Elm Connections as of December 31, 2019.

ELM CONNECTIONS
Adjusted Trial Balance
Year Ended December 31, 2019

	Debit	Credit
Cash	$ 596,823	
Accounts Receivable	34,672	
Buildings	350,000	
Merchandise Inventory	263,909	
Accounts Payable		$ 502,690
Common Stock		432,975
Sales		603,427
Interest Revenue		94,568
Rent Revenue		90,000
Sales Salaries Expense	25,180	
Office Supplies Expense	5,942	
Sales Discounts	99,651	
Interest Expense	3,566	
Sales Returns and Allowances	110,285	
Cost of Goods Sold	180,630	
Rent Expense	15,485	
Depreciation Expense: Office Equipment	9,000	
Insurance Expense	9,324	
Advertising Expense	19,193	
Totals	**$1,723,660**	**$1,723,660**

A. Use the data provided to compute net sales for 2019.
B. Compute the gross margin for 2019.
C. Compute the gross profit margin ratio (rounded to nearest hundredth)
D. Prepare a simple income statement for the year ended December 31, 2019.
E. Prepare a multi-step income statement for the year ended December 31, 2019.

PB13. LO 6.6 Following is the adjusted trial balance data for Garage Parts Unlimited as of December 31, 2019:

GARAGE PARTS UNLIMITED Adjusted Trial Balance Year Ended December 31, 2019		
	Debit	**Credit**
Cash	$ 624,500	
Accounts Receivable	100,233	
Equipment	465,099	
Merchandise Inventory	277,340	
Accounts Payable		$ 287,693
Common Stock		564,500
Sales		885,244
Interest Revenue		216,745
Rent Revenue		101,600
Sales Salaries Expense	29,878	
Office Supplies Expense	5,942	
Sales Discounts	112,431	
Interest Expense	9,560	
Sales Returns and Allowances	162,312	
Cost of Goods Sold	208,016	
Rent Expense	19,191	
Depreciation Expense: Office Equipment	8,657	
Insurance Expense	10,234	
Advertising Expense	22,389	
Totals	**$2,055,782**	**$2,055,782**

A. Use the data provided to compute net sales for 2019.
B. Compute the gross margin or 2019.
C. Compute the gross profit margin ratio (rounded to nearest hundredth)
D. Prepare a simple income statement for the year ended December 31, 2019.
E. Prepare a multi-step income statement for the year ended December 31, 2019.

PB14. LO 6.7 Review the following transactions for April Anglers and record any required journal entries.

Oct. 4	April Anglers purchases 82 fishing poles at $33 each with cash.
Oct. 5	April Anglers purchases 116 fishing poles at $30 each on credit. Terms of the purchase are 3/15, n/30, invoice date October 5.
Oct. 12	April discovers 18 of the fishing poles are damaged from the October 4 purchase and returns them to the supplier for a full refund. April also discovers that 32 of the fishing poles from the October 5 purchase are the wrong length but keeps them since the supplier granted an allowance of $15 per fishing pole.
Oct. 24	April pays their account in full from the October 5 purchase, less any returns, allowances, and/or discounts.

PB15. LO 6.7 Review the following sales transactions for Dish Mart and record any required journal entries. Note that all sales transactions are with the same customer, Bella Davies.

Apr. 5	Dish Mart made a cash sale of 22 sets of cutlery to Bella Davies for $330 per set. The cost per set to Dish Mart is $125 per set.
Apr. 9	Dish Mart sells 14 sets of cutlery to Bella Davies on credit for $345 per set, with a cost to Dish Mart of $120 per set. Terms of the sale are 2/15, n/60, invoice date April 9.
Apr. 13	Bella discovers 9 of the cutlery sets are damaged from the April 9 sale and returns them to Dish Mart for a full refund.
Apr. 14	Bella purchases 18 sets of cutlery for $275 per set on credit, at a cost to Dish Mart of $124 per set. Terms of the sale are 2/10, n/60, invoice date April 14.
Apr. 15	Bella discovers that 5 of the cutlery sets from the April 14 purchase and 10 of the cutlery sets from the April 5 purchase are missing a few spoons but keeps them since Dish Mart granted an allowance of $175 per set for all dish sets. Dish Mart and Bella have agreed to reduce the amount Bella has outstanding instead of sending a separate check for the April 5 allowance in cash.
Apr. 28	Bella Davies pays her account in full for all outstanding purchases, less any returns, allowances, and/or discounts.

Thought Provokers

TP1. LO 6.1 Conduct research on a real-world retailer's trade discounts and policies, and discuss the following questions.

- Which company did you choose? What do they sell?
- What is a trade discount?
- What products are subject to a trade discount?
- Describe the discount terms/program in detail. Give examples.
- Are there any restrictions?
- What incentive does this company have to give a trade discount?
- How does this discount benefit the buyer?
- If the buyer had to choose between receiving a trade discount or regular cash purchase discount, which would benefit them more? Why?

TP2. LO 6.2 You have decided to open up a small convenience store in your hometown. As part of the initial set-up process, you need to determine whether to use a perpetual inventory system or a periodic inventory system. Write an evaluation paper comparing the perpetual and periodic inventory systems. Describe the benefits and challenges of each system as it relates to your industry and to your business size. Compare at least one example transaction using the perpetual and periodic inventory systems (a purchase transaction, for example). Research and describe the impact each system has on your financial statements. Decide which system would be the best fit for your business, and support your decision with research.

TP3. LO 6.5 You own your own outdoor recreation supply store. You are in the process of drafting a standard invoice agreement for customer sales conducted on credit. Create a sample sales invoice with the following minimum information listed:

- Your company information
- Date of sale
- Your customer's information
- An example product you sell with name, description, price per unit, and number of units sold
- Terms of sale including credit terms and shipping charges, with numerical figures for shipping charges
- Any contract language necessary to further establish the terms of sale (for example, warranties, limitations on shipping, and returns)

Write a reflection about your invoice choice, as it relates to format, terms, contract language, and pricing strategies. Conduct a comparison study to others in your industry (such as REI) to evaluate your choices. Make sure to support your decisions with concrete examples and research.

TP4. LO 6.6 Review the most recent yearly (or quarterly) income statement for a publicly-traded company and answer the following questions.

- What company did you choose, and which income statement format do they use (multi-step, simple, or combination)?
- What information is included on the statement?
- Do you agree with the format presentation? Why or why not?
- What are the benefits and limitations with the income statement format choice?
- Compute the Gross Profit Margin Ratio. Discuss the results.

TP5. LO 6.7 You own a clothing store and use a periodic inventory system. Research like companies in the clothing industry and answer the following questions.

- Which inventory system is most used in clothing stores, periodic or perpetual?
- Why can periodic inventory reporting be a better approach to use than perpetual inventory reporting for this type of industry?
- What are some of the advantages and disadvantages to the periodic inventory method?
- What other types of businesses may use the periodic inventory method rather than the perpetual method?

9 Accounting for Receivables

Figure 9.1 Skateboards Unlimited. Business success is realized with effective receivable management. (credit: modification of "2013 Street Arts Festival" by Eli Christman/Flickr, CC BY 2.0)

Chapter Outline

Why It Matters

Marie owns Skateboards Unlimited, a skateboard lifestyle shop offering a variety of skate-specific clothing, equipment, and accessories. Marie prides herself on her ability to accommodate customer needs. One way she accomplishes this goal is by extending to the customer a line of credit, which would create an account receivable for Skateboards Unlimited. Even though she has yet to collect cash from her credit customers, she recognizes the revenue as earned when the sale occurs. This is important, as it allows her to match her sales correctly with sales-associated expenses in the proper period, based on the matching principle and revenue recognition guidelines.

By offering credit terms, Skateboards Unlimited operates in good faith that customers will pay their accounts in full. Sometimes this does not occur, and the bad debt from the receivable has to be written off. Marie

typically estimates this write-off amount, to show potential investors and lenders a consistent financial position. When writing off bad debt, Marie is guided by specific accounting principles that dictate the estimation and bad debt processes. Skateboards Unlimited will need to carefully manage its receivables and bad debt to reach budget projections and grow the business. This chapter explains and demonstrates demonstrate the two major methods of estimating and recording bad debt expenses that Skateboards Unlimited can apply under generally accepted accounting principles (GAAP).

9.1 Explain the Revenue Recognition Principle and How It Relates to Current and Future Sales and Purchase Transactions

You own a small clothing store and offer your customers cash, credit card, or in-house credit payment options. Many of your customers choose to pay with a credit card or charge the purchase to their in-house credit accounts. This means that your store is owed money in the future from either the customer or the credit card company, depending on payment method. Regardless of credit payment method, your company must decide when to recognize revenue. Do you recognize revenue when the sale occurs or when cash payment is received? When do you recognize the expenses associated with the sale? How are these transactions recognized?

Accounting Principles and Assumptions Regulating Revenue Recognition

Revenue and expense recognition timing is critical to transparent financial presentation. **GAAP** governs recognition for publicly traded companies. Even though GAAP is required only for public companies, to display their financial position most accurately, private companies should manage their financial accounting using its rules. Two principles governed by GAAP are the revenue recognition principle and the matching principle. Both the revenue recognition principle and the matching principle give specific direction on revenue and expense reporting.

The **revenue recognition principle** instructs companies to recognize revenue when a four-step process is completed. This may not necessarily be when cash is collected. Revenue can be recognized when all of the following criteria have been met:

- There is credible evidence that an arrangement exists.
- Goods have been delivered or services have been performed.
- The selling price or fee to the buyer is fixed or can be reasonably determined.
- There is reasonable assurance that the amount owed to the seller is collectible.

The **accrual accounting** method aligns with this principle, and it records transactions related to revenue earnings as they occur, not when cash is collected. The revenue recognition principle may be updated periodically to reflect more current rules for reporting.

For example, a landscaping company signs a $600 contract with a customer to provide landscaping services for the next six months (assume the landscaping workload is distributed evenly throughout the six months). The customer sets up an in-house credit line with the company, to be paid in full at the end of the six months. The landscaping company records revenue earnings each month and provides service as planned. To align with the revenue recognition principle, the landscaping company will record one month of revenue ($100) each month as earned; they provided service for that month, even though the customer has not yet paid cash for the service.

Let’s say that the landscaping company also sells gardening equipment. It sells a package of gardening

equipment to a customer who pays on credit. The landscaping company will recognize revenue immediately, given that they provided the customer with the gardening equipment (product), even though the customer has not yet paid cash for the product.

Accrual accounting also incorporates the **matching principle** (otherwise known as the expense recognition principle), which instructs companies to record expenses related to revenue generation in the period in which they are incurred. The principle also requires that any expense not directly related to revenues be reported in an appropriate manner. For example, assume that a company paid $6,000 in annual real estate taxes. The principle has determined that costs cannot effectively be allocated based on an individual month's sales; instead, it treats the expense as a period cost. In this case, it is going to record 1/12 of the annual expense as a monthly period cost. Overall, the "matching" of expenses to revenues projects a more accurate representation of company financials. When this matching is not possible, then the expenses will be treated as period costs.

For example, when the landscaping company sells the gardening equipment, there are costs associated with that sale, such as the costs of materials purchased or shipping charges. The cost is reported in the same period as revenue associated with the sale. There cannot be a mismatch in reporting expenses and revenues; otherwise, financial statements are presented unfairly to stakeholders. Misreporting has a significant impact on company stakeholders. If the company delayed reporting revenues until a future period, net income would be understated in the current period. If expenses were delayed until a future period, net income would be overstated.

Let's turn to the basic elements of accounts receivable, as well as the corresponding transaction journal entries.

ETHICAL CONSIDERATIONS

Ethics in Revenue Recognition

Because each industry typically has a different method for recognizing income, revenue recognition is one of the most difficult tasks for accountants, as it involves a number of ethical dilemmas related to income reporting. To provide an industry-wide approach, Accounting Standards Update No. 2014-09 and other related updates were implemented to clarify revenue recognition rules. The American Institute of Certified Public Accountants (AICPA) announced that these updates would replace U.S. GAAP's current industry-specific revenue recognition practices with a principle-based approach, potentially affecting both day-to-day business accounting and the execution of business contracts with customers.[1] The AICPA and the International Federation of Accountants (IFAC) require professional accountants to act with due care and to remain abreast of new accounting rules and methods of accounting for different transactions, including revenue recognition.

The IFAC states that "the importance of the role of professional accountants in business in ensuring the quality of financial reporting cannot be overly emphasized. Professional accountants in business often find themselves being at the frontline of safeguarding the integrity of financial reporting. Management is responsible for the financial information produced by the company. As such, professional accountants in businesses therefore have the task of defending the quality of financial reporting right at the source where the numbers and figures are produced!"[2] In accordance with proper revenue recognition,

accountants do not recognize revenue before it is earned.

CONCEPTS IN PRACTICE

Gift Card Revenue Recognition

Gift cards have become an essential part of revenue generation and growth for many businesses. Although they are practical for consumers and low cost to businesses, navigating revenue recognition guidelines can be difficult. Gift cards with expiration dates require that revenue recognition be delayed until customer use or expiration. However, most gift cards now have no expiration date. So, when do you recognize revenue?

Companies may need to provide an estimation of projected gift card revenue and usage during a period based on past experience or industry standards. There are a few rules governing reporting. If the company determines that a portion of all of the issued gift cards will never be used, they may write this off to income. In some states, if a gift card remains unused, in part or in full, the unused portion of the card is transferred to the state government. It is considered unclaimed property for the customer, meaning that the company cannot keep these funds as revenue because, in this case, they have reverted to the state government.

Short-Term Revenue Recognition Examples

As mentioned, the revenue recognition principle requires that, in some instances, revenue is recognized before receiving a cash payment. In these situations, the customer still owes the company money. This money owed to the company is a type of receivable for the company and a payable for the company's customer.

A **receivable** is an outstanding amount owed from a customer. One specific receivable type is called accounts receivable. **Accounts receivable** is an outstanding customer obligation for payment on a credit sale. The company expects to receive payment on accounts receivable within the company's operating period (less than a year). Accounts receivable is considered an asset, and it typically does not include an interest payment from the customer. Some view this account as extending a line of credit to a customer. The customer would then be sent an invoice with credit payment terms. If the company has provided the product or service at the time of credit extension, revenue would also be recognized.

For example, Billie's Watercraft Warehouse (BWW) sells various watercraft vehicles. They extend a credit line to customers purchasing vehicles in bulk. A customer bought 10 Jet Skis on credit at a sales price of $100,000. The cost of the sale to BWW is $70,000. The following journal entries occur.

1 American Institute of Certified Public Accountants (AICPA). "Revenue from Contracts with Customers." *Revenue Recognition*. n.d. https://www.aicpa.org/interestareas/frc/accountingfinancialreporting/revenuerecognition.html

2 International Federation of Accountants (IFAC). "Roles and Importance of Professional Accountants in Business." n.d. https://www.ifac.org/news-events/2013-10/roles-and-importance-professional-accountants-business

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Accounts Receivable Sales Revenue *To record the sale of 10 jet skis*	100,000	100,000
	Cost of Goods Sold Merchandise Inventory *To record the cost of sale*	70,000	70,000

Accounts Receivable increases (debit) and Sales Revenue increases (credit) for $100,000. Accounts Receivable recognizes the amount owed from the customer, but not yet paid. Revenue recognition occurs because BWW provided the Jet Skis and completed the earnings process. Cost of Goods Sold increases (debit) and Merchandise Inventory decreases (credit) for $70,000, the expense associated with the sale. By recording both a sale and its related cost entry, the matching principle requirement is met.

When the customer pays the amount owed, the following journal entry occurs.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Cash Accounts Receivable *To record payment in full*	100,000	100,000

Cash increases (debit) and Accounts Receivable decreases (credit) for the full amount owed. If the customer made only a partial payment, the entry would reflect the amount of the payment. For example, if the customer paid only $75,000 of the $100,000 owed, the following entry would occur. The remaining $25,000 owed would remain outstanding, reflected in Accounts Receivable.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Cash Accounts Receivable *To record partial payment*	75,000	75,000

Another credit transaction that requires recognition is when a customer pays with a credit card (Visa and MasterCard, for example). This is different from credit extended directly to the customer from the company. In this case, the third-party credit card company accepts the payment responsibility. This reduces the risk of nonpayment, increases opportunities for sales, and expedites payment on accounts receivable. The tradeoff for the company receiving these benefits from the credit card company is that a fee is charged to use this service. The fee can be a flat figure per transaction, or it can be a percentage of the sales price. Using BWW as the example, let's say one of its customers purchased a canoe for $300, using his or her Visa credit card. The cost to BWW for the canoe is $150. Visa charges BWW a service fee equal to 5% of the sales price. At the time of sale, the following journal entries are recorded.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Accounts Receivable: Visa	285	
	Credit Card Expense	15	
	Sales Revenue		300
	To record the sale of one canoe, Visa credit fee 5%		
	Cost of Goods Sold	150	
	Merchandise Inventory		150
	To record the cost of sale		

Accounts Receivable: Visa increases (debit) for the sale amount ($300) less the credit card fee ($15), for a $285 Accounts Receivable balance due from Visa. BWW's Credit Card Expense increases (debit) for the amount of the credit card fee ($15; 300 × 5%), and Sales Revenue increases (credit) for the original sales amount ($300). BWW recognizes revenue as earned for this transaction because it provided the canoe and completed the earnings process. Cost of Goods Sold increases (debit) and Merchandise Inventory decreases (credit) for $150, the expense associated with the sale. As with the previous example, by recording both a sale and cost entry, the matching principle requirement is met. When Visa pays the amount owed to BWW, the following entry occurs in BMW's records.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Cash	285	
	Accounts Receivable: Visa		285
	To record payment in full, less credit card fee		

Cash increases (debit) and Accounts Receivable: Visa decreases (credit) for the full amount owed, less the credit card fee. Once BWW receives the cash payment from Visa, it may use those funds in other business activities.

An alternative to the journal entries shown is that the credit card company, in this case Visa, gives the merchant immediate credit in its cash account for the $285 due the merchant, without creating an account receivable. If that policy were in effect for this transaction, the following single journal entry would replace the prior two journal entry transactions. In the immediate cash payment method, an account receivable would not need to be recorded and then collected. The separate journal entry—to record the costs of goods sold and to reduce the canoe inventory that reflects the $150 cost of the sale—would still be the same.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
	Cash	285	
	Credit Card Expense	15	
	Sales Revenue		300
	To record the sale of one canoe and Visa credit card fee of 5%		

Here's a final credit transaction to consider. A company allows a sales discount on a purchase if a customer charges a purchase but makes the payment within a stated period of time, such as 10 or 15 days from the point of sale. In such a situation, a customer would see credit terms in the following form: 2/10, n/30. This particular example shows that a customer who pays his or her account within 10 days will receive a 2% discount. Otherwise, the customer will have 30 days from the date of the purchase to pay in full, but will not receive a discount. Both sales discounts and purchase discounts were addressed in detail in Merchandising

Transactions.

YOUR TURN

Maine Lobster Market

Maine Lobster Market (MLM) provides fresh seafood products to customers. It allows customers to pay with cash, an in-house credit account, or a credit card. The credit card company charges Maine Lobster Market a 4% fee, based on credit sales using its card. From the following transactions, prepare journal entries for Maine Lobster Market.

Aug. 5	Pat paid $800 cash for lobster. The cost to MLM was $480.
Aug. 10	Pat purchased 30 pounds of shrimp at a sales price per pound of $25. The cost to MLM was $18.50 per pound and is charged to Pat's in-store account.
Aug. 19	Pat purchased $1,200 of fish with a credit card. The cost to MLM is $865.

Solution

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Aug. 5	Cash	800	
	Sales Revenue		800
	To record cash sale		
Aug. 5	Cost of Goods Sold	480	
	Merchandise Inventory: Lobster		480
	To record cost of sale		
Aug. 10	Accounts Receivable	750	
	Sales Revenue		750
	To record credit sale, 30 × $25		
Aug. 10	Cost of Goods Sold	555	
	Merchandise Inventory: Shrimp		555
	To record cost of sale; 30 × $18.50		
Aug. 19	Accounts Receivable	1,152	
	Credit Card Expense	48	
	Sales Revenue		1,200
	To record credit card sale, 4% fee, 1200 × 4%		
Aug. 19	Cost of Goods Sold	865	
	Merchandise Inventory: Fish		865
	To record cost of sale		

YOUR TURN

Jamal's Music Supply

Jamal's Music Supply allows customers to pay with cash or a credit card. The credit card company charges Jamal's Music Supply a 3% fee, based on credit sales using its card. From the following transactions, prepare journal entries for Jamal's Music Supply.

May 10	Kerry paid $1,790 for music supplies with a credit card. The cost to Jamal's Music Supply was $1,100.
May 19	Kerry purchased 80 drumstick pairs at a sales price per pair of $14 with a credit card. The cost to Jamal's Music Supply was $7.30 per pair.
May 28	Kerry purchased $345 of music supplies with cash. The cost to Jamal's Music Supply was $122.

Solution

JOURNAL			
Date	**Account**	**Debit**	**Credit**
May 10	Accounts Receivable	1,736.30	
	Credit Card Expense	53.70	
	Sales Revenue		1,790
	To record credit card sale, 3% fee, 1790 × 3%		
May 10	Cost of Goods Sold	1,100	
	Merchandise Inventory		1,100
	To record cost of sale		
May 19	Accounts Receivable	1,086.40	
	Credit Card Expense	33.60	
	Sales Revenue		1,120
	To record credit card sale, 3% fee, (80 × $14) x 3%		
May 19	Cost of Goods Sold	584	
	Merchandise Inventory		584
	To record cost of sale; 80 × $7.30		
May 28	Cash	345	
	Sales Revenue		345
	To record cash sale		
May 28	Cost of Goods Sold	122	
	Merchandise Inventory		122
	To record cost of sale		

9.2 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: "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 Accounts Receivable *To record bad debts*	15,000	 15,000

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 Bad Debt Expense *To reverse previous bad debt write-off*	15,000	 15,000
May 1, 2019	Cash Accounts Receivable *To record payment on account*	15,000	 15,000

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** is used to adjust the balance in a financial statement account, and 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 Allowance for Doubtful Accounts *To record estimated bad debt*	1,500	 1,500

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 Allowance for Doubtful Accounts *To record estimated bad debt*	3,500	 3,500

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 Allowance for Doubtful Accounts *To record estimated bad debts, income statement method*	22,911.50	 22,911.50

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 Accounts Receivable: Craft *To record known bad debt*	5,000	 5,000

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 Allowance for Doubtful Accounts *To reinstate previously written-off bad debt*	3,000	 3,000
Jun. 5	Cash Accounts Receivable: Craft *To record bad debt for specific customer*	3,000	 3,000

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 Allowance for Doubtful Accounts *To record estimated bad debts, balance sheet aging method*	58,097	 58,097

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 Allowance for Doubtful Accounts *To record estimated bad debts, balance sheet aging method*	78,097	 78,097

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]

9.3 Determine the Efficiency of Receivables Management Using Financial Ratios

You received an unexpected tax refund this year and want to invest the money in a profitable and growing company. After conducting research, you determine that it is important for a company to collect on outstanding debt quickly, while showing a willingness to offer customers credit options to increase sales opportunities, among other things. You are new to investing, so where do you begin?

Stakeholders, such as investors, lenders, and management, look to financial statement data to make informed decisions about a company's financial position. They will look at each statement—as well as ratio analysis—for trends, industry comparisons, and past performance to help make financing determinations. Because you are reviewing companies for quick debt collection, as well as credit extension to boost sales, you would consider receivables ratios to guide your decision. Discuss the Role of Accounting for Receivables in Earnings Management will explain and demonstrate two popular ratios—the accounts receivable turnover ratio and the number of days' sales in receivables ratio—used to evaluate a company's receivables experiences.

It is important to remember, however, that for a comprehensive evaluation of a company's true potential as an investment, you need to consider other types of ratios, in addition to the receivables ratios. For example, you might want to look at the company's profitability, solvency, and liquidity performances using ratios. (See Appendix A for more information on ratios.)

3 Tara Bannow. "New Bad Debt Accounting Standards Likely to Remake Community Benefit Reporting." *Modern Healthcare*. March 17, 2018. http://www.modernhealthcare.com/article/20180317/NEWS/180319904

Figure 9.3 Which Company Is the Best Investment? Receivables ratios can help make this determination. (credit: "Black Laptop Computer Showing Stock Graph" by "Negative Space"/Pexels, CC0)

Basic Functions of the Receivables Ratios

Receivables ratios show company performance in relation to current debt collection, as well as credit policy effect on sales growth. One receivables ratio is called the **accounts receivable turnover ratio**. This ratio determines how many times (i.e., how often) accounts receivable are collected during an operating period and converted to cash (see Figure 9.3). A higher number of times indicates that receivables are collected quickly. This quick cash collection may be viewed as a positive occurrence, because liquidity improves, and the company may reinvest in its business sooner when the value of the dollar has more buying power (time value of money). The higher number of times may also be a negative occurrence, signaling that credit extension terms are too tight, and it may exclude qualified consumers from purchasing. Excluding these customers means that they may take their business to a competitor, thus reducing potential sales.

In contrast, a lower number of times indicates that receivables are collected at a slower rate. A slower collection rate could signal that lending terms are too lenient; management might consider tightening lending opportunities and more aggressively pursuing outstanding debt. The lower turnover also shows that the company has cash tied up in receivable longer, thus hindering its ability to reinvest this cash in other current projects. The lower turnover rate may signal a high level of bad debt accounts. The determination of a high or low turnover rate really depends on the standards of the company's industry.

Another receivables ratio one must consider is the **number of days' sales in receivables ratio**. This ratio is similar to accounts receivable turnover in that it shows the expected days it will take to convert accounts receivable into cash. The reflected outcome is in number of days, rather than in number of times.

Companies often have outstanding debt that requires scheduled payments. If it takes longer for a company to collect on outstanding receivables, this means it may not be able to meet its current obligations. It helps to know the number of days it takes to go through the accounts receivable collection cycle so a company can plan its debt repayments; this receivables ratio also signals how efficient its collection procedures are. As with the accounts receivable turnover ratio, there are positive and negative elements with a smaller and larger amount of days; in general, the fewer number of collection days on accounts receivable, the better.

To illustrate the use of these ratios to make financial decisions, let's use Billie's Watercraft Warehouse (BWW) as the example. Included are the comparative income statement (Figure 9.4) and the comparative balance sheet (Figure 9.5) for BWW, followed by competitor ratio information, for the years 2016, 2017, and 2018 as shown in Table 9.1.

BILLIE'S WATERCRAFT WAREHOUSE Comparative Income Statement Year Ended December 31, 2016, 2017, and 2018			
	2018	**2017**	**2016**
Net Credit Sales	$450,000	$400,000	$375,000
Cost of Goods Sold	70,000	65,000	62,000
Gross Margin	380,000	335,000	313,000
Expenses	$100,000	$110,000	$ 95,000
Net Income (Loss)	$280,000	$225,000	$218,000

Figure 9.4 Comparative Income Statements for Billie's Watercraft Warehouse for the Years 2016, 2017, and 2018. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

BILLIE'S WATERCRAFT WAREHOUSE Comparative Balance Sheet December 31, 2016, 2017, and 2018			
	2018	**2017**	**2016**
Assets:			
Cash	$120,000	$100,000	$ 85,000
Accounts Receivable	85,000	90,000	70,000
Notes Receivable	20,500	15,200	18,450
Inventory	60,400	55,000	47,600
Equipment	31,000	35,000	28,000
Total Assets:	**$316,900**	**$295,200**	**$249,050**
Liabilities:			
Unearned Revenue	$ 5,000	$ 14,500	$ 4,200
Accounts Payable	10,000	15,600	9,500
Notes Payable	9,500	13,700	7,250
Equity:			
Common Stock	$ 12,400	$ 26,400	$ 10,100
Retained Earnings	280,000	225,000	218,000
Total Liabilities and Equity:	**$316,900**	**$295,200**	**$249,050**

Figure 9.5 Comparative Income Statements for Billie's Watercraft Warehouse for the Years 2016, 2017, and 2018. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

Comparison of Ratios: Industry Competitor to BWW

Year	Accounts Receivable Turnover Ratio	Number of Days' Sales in Receivables Ratio
2016	4.89 times	80 days
2017	4.92 times	79.23 days
2018	5.25 times	76.44 days

Table 9.1 Industry Competitor Ratios for the years 2016, 2017, and 2018.

YOUR TURN

The Investor

You are an investor looking to contribute financially to either Company A or Company B. The following select financial information follows.

	Company A	Company B
Beginning accounts receivable	$ 50,000	$ 60,000
Ending accounts receivable	80,000	90,000
Net credit sales	550,000	460,000

Based on the information provided:

- Compute the accounts receivable turnover ratio
- Compute the number of days' sales in receivables ratio for both Company A and Company B (round all answers to two decimal places)
- Interpret the outcomes, stating which company you would invest in and why

Solution

Company A: ART = 8.46 times, Days' Sales = 43.14 days, Company B: ART = 6.13 times, Days' Sales = 59.54 days. Upon initial review of this limited information, Company A seems to be the better choice, since their turnover ratio is higher and the collection time is lower with 43.14 days. One might want more information on trends for each company with these ratios and a comparison to others in the same industry. More information is needed before making an informed decision.

Accounts Receivable Turnover Ratio

The ratio to determine accounts receivable turnover is as follows.

$$\frac{\textbf{Net Credit Sales}}{\textbf{Average Accounts Receivable}}$$

$$\textbf{Average Accounts Receivable} = \frac{\textbf{(Beginning Accounts Receivable + Ending Accounts Receivable)}}{\textbf{2}}$$

Net credit sales are sales made on credit only; cash sales are not included because they do not produce receivables. However, many companies do not report credit sales separate from cash sales, so "net sales" may be substituted for "net credit sales" in this case. Beginning and ending accounts receivable refer to the beginning and ending balances in accounts receivable for the period. The beginning accounts receivable balance is the same figure as the ending accounts receivable balance from the prior period.

Use this formula to compute BWW's accounts receivable turnover for 2017 and 2018.

The accounts receivable turnover ratio for 2017 is 5 × ($400,000/$80,000). Net credit sales for 2017 are $400,000, so

$$\text{Average accounts receivable} = \frac{(\$70{,}000 + \$90{,}000)}{2} = \$80{,}000$$

The accounts receivable turnover ratio for 2018 is 5.14 times (rounded to two decimal places). Net credit sales for 2018 are $450,000, so

$$\text{Average accounts receivable} = \frac{(\$90{,}000 + \$85{,}000)}{2} = \$87{,}500$$

The outcome for 2017 means that the company turns over receivables (converts receivables into cash) 5 times during the year. The outcome for 2018 shows that BWW converts cash at a quicker rate of 5.14 times. There is a trend increase from 2017 to 2018. BWW sells various watercraft. These products tend to have a higher sales price, making a customer more likely to pay with credit. This can also increase the length of debt repayment. Comparing to another company in the industry, BWW's turnover rate is standard. To increase the turnover rate, BWW can consider extending credit to more customers who the company has determined will pay on a quicker basis or schedule, or BWW can more aggressively pursue the outstanding debt from current customers.

Number of Days' Sales in Receivables Ratio

The ratio to determine number of days' sales in receivables is as follows.

$$\frac{365}{\textbf{Accounts Receivable Turnover Ratio}}$$

The numerator is 365, the number of days in the year. Because the accounts receivable turnover ratio determines an average accounts receivable figure, the outcome for the days' sales in receivables is also an average number. Using this formula, compute BWW's number of days' sales in receivables ratio for 2017 and 2018.

The ratio for 2017 is 73 days (365/5), and for 2018 is 71.01 days (365/5.14), rounded. This means it takes 73 days in 2017 and 71.01 days in 2018 to complete the collection cycle, which is a decrease from 2017 to 2018. A downward trend is a positive for the company, and BWW outperforms the competition slightly. This is good because BWW can use the cash toward other business expenditures, or the downward trend could signal that the company needs to loosen credit terms or more aggressively collect outstanding accounts.

Looking at both ratios, BWW seems well positioned within the industry, and a potential investor or lender may be more apt to contribute financially to the organization with this continued positive trend.

LINK TO LEARNING

American Superconductor Corporation specializes in the production and service of energy-efficient wind turbine systems, as well as energy grid construction solutions. On the company's 2018–2019 financial statements, the accounts receivable turnover ratio is approximately 6.32 times, and the number of day's sales in receivables ratio is approximately 58 days. This site providing American Superconductor Corporation's current financial statements (https://openstax.org/l/50AMSCfinan2017) is available for

review.

9.4 Discuss the Role of Accounting for Receivables in Earnings Management

Assume that you are an accountant at a large public corporation and are on a team responsible for preparing financial statements. In one team discussion, a dilemma arises: What is the best way to report earnings to create the most favorable possible financial position for your company, while still complying in an ethical manner and also complying fully with generally accepted accounting procedures (GAAP)? Your company is required to follow GAAP rules, but is there a way to comply with these rules while showing the company in its best light? How does receivables accounting factor into this quandary?

Before examining potential ways to improve the company's financial image, let's consider some important conditions. To begin, if the company is publicly traded on a national or regional stock exchange, it is subject to the accounting and financial regulations set by the Securities and Exchange Commission (SEC). Included in these rules is the requirement that each publicly traded company must prepare and make public each year its annual report, including the results of an extensive audit procedure performed by a major public accounting firm.

In the process of auditing the company, the auditing firm will conduct tests to determine whether, in the auditor's opinion, the financial statements accurately reflect the financial position of the company. If the auditor feels that transactions, financial schedules, or other records do not accurately reflect the company's performance for the past year, then the auditor can issue a negative audit report, which could have major negative effects on the company's image in the financial community.

To sum up this issue, any attempts by companies to make their financial position look better must be based on assumptions by the company that can be verified by an outside, independent party, such as a major public accounting firm. As you learn about this topic, assume that any recommendations suggested must be legitimate changes in assumptions by the company and that the recommendations will pass public examination and scrutiny.

Earnings management works within GAAP constraints to improve stakeholders' views of the company's financial position. **Earnings manipulation** is noticeably different in that it typically ignores GAAP rules to alter earnings significantly. Carried to an extreme, manipulation can lead to fraudulent behavior by a company. The major problem in income manipulation is not in manipulating the numbers that constitute the financial reports. Instead, the bigger issue is the engineering of the short-term financial operating decisions. Some of the techniques used include applying universal standards, loose interpretations of revenue recognition, unofficial earnings measures, fair value accounting, and cooking the decision and not the books.[4]

A company may be enticed to manipulate earnings for several reasons. It may want to show a healthier income level, meet or exceed market expectations, and receive management bonuses. This can produce more investment interest from potential investors. An increase to receivables and inventory can help a business to secure more borrowed funds.

4 H. David Sherman and S. David Young. "Where Financial Reporting Still Falls Short." *Harvard Business Review*. July-August 2016. https://hbr.org/2016/07/where-financial-reporting-still-falls-short

ETHICAL CONSIDERATIONS

Improper Revenue Recognition Leads to New Accounting Laws and Regulations

The complete financial collapse of the Enron Corporation was a catalyst for major changes in the accounting profession. Fraudulent revenue recognition and financial statement manipulation at Enron—an energy, commodities, and services company—helped provide support for the implementation of the Sarbanes-Oxley Act of 2002 (SOX). A federal law, SOX included the creation of the Public Company Accounting Oversight Board (PCAOB), a regulatory agency to oversee auditors and ensure compliance with SOX requirements.

"The PCAOB is directed by the Sarbanes-Oxley Act of 2002 to establish auditing and related professional practice standards for registered public accounting firms to follow in the preparation and issuance of audit reports."[5] The PCAOB regulates how publicly traded companies are audited and provides requirements and ethical standards that direct professional accountants in their work with publicly traded companies. Visit their website at www.pcaobus.org to learn more.

Accounts receivable may also be manipulated to delay revenue recognition. These deferred earnings allow for a reduced tax obligation in the current year. A company involved in the sale or acquisition of a business may show a higher income level to increase the value of the business. Whatever the reason, a company often has the flexibility to manage their earnings slightly, given the amount of estimations and potential bad debt write-offs required to meet the revenue recognition and matching principles.

One area of estimation involves bad debt in relation to accounts receivable. As you've learned, the income statement method, balance sheet method, and the balance sheet aging method all require estimations of bad debt with receivables. The percentage uncollectible is supposed to be presented as an educated estimation based on past performance, industry standards, and other economic factors. However, this estimation is just that—an estimation—and it can be slightly manipulated or managed to overstate or understate bad debt, as well as accounts receivable. For example, a company does not usually benefit from bad debt write-off. It might legitimately—if past experience justifies the change—alter past-due dates to current accounts to avoid having to write off bad debt. This overstates accounts receivable and understates bad debt. The company could also change the percentage uncollectible to a lower or higher figure, if its financial information and the present economic environment justify the change. The company could change the percentage from 2% uncollectible to 1% uncollectible. This increases accounts receivable and potential earnings and reduces bad debt expenses in the current period.

LINK TO LEARNING

The Beneish M-Score is an earnings manipulation measurement system that incorporates eight financial ratios to identify potentially compromised companies. In 2000, a group of students from Cornell University used this measurement to sell all the "Cayuga Fund" stock holdings in Enron, one year before the total collapse of company. Read this article on the Cornell University Enron Case Study (https://openstax.org/l/50CornellEnron) to learn more.

5 Public Company Accounting Oversight Board (PCAOB). "Standards." n.d. https://pcaobus.org/Standards

Let's take Billie's Watercraft Warehouse (BWW), for example. BWW had the following net credit sales and accounts receivable from 2016–2018.

	2018	2017	2016
Net Credit Sales	$450,000	$400,000	$375,000
Accounts Receivable	85,000	90,000	70,000

It also used the following percentage calculations for doubtful accounts under each bad debt estimation method.

Income Statement Method	Balance Sheet Method	Balance Sheet Aging Method
5% of credit sales	15% of accounts receivable	0–30 days past due = 10% 31–90 days past due = 20% Over 90 days past due = 30%

Legitimate current economic conditions could allow BWW to alter its estimation percentages, aging categories, and method used. Altering estimation percentages could mean an increase or decrease in percentages. If BWW decreases its income statement method percentage from 5% of credit sales to 4% of credit sales, the bad debt estimation would go from $22,500 (5% × $450,000) in 2018 to $18,000 (4% × $450,000). The bad debt expense would decrease for the period, and net income would increase. If BWW decreases its balance sheet method percentage from 15% of accounts receivable to 12% of accounts receivable, the bad debt estimation would go from $12,750 (15% × $85,000) in 2018 to $10,200 (12% × $85,000). The bad debt expense would decrease for the period and net income would increase. Accounts receivable would also increase, and allowances for doubtful accounts would decrease. As mentioned, this increase to earnings and asset increase is attractive to investors and lenders.

Another earnings management opportunity may occur with the balance sheet aging method. Past-due categories could expand to encompass greater (or fewer) time periods, accounts receivable balances could be placed in different categories, or estimation percentages could change for each category. However, please remember that such changes would need to be considered acceptable by the company's outside auditors during the annual independent audit.

To demonstrate the recommendation, assume that BWW has three categories: 0–30 days past due, 31–90 days past due, and over 90 days past due. These categories could change to 0–60 days, 61–120 days, and over 120 days. This could move accounts that previously had a higher bad debt percentage assigned to them into a lower percentage category. This category shift could produce an increase to accounts receivable, and a decrease to bad debt expense; thus, increasing net income estimation percentages can change within each category. The following is the original uncollectible distribution for BWW in 2018.

	0–30 days past due	31–90 days past due	Over 90 days past due
Accounts receivable amount	$40,000	$20,000	$25,000
Percent uncollectible	10%	20%	30%
Total per category	$ 4,000	$ 4,000	$ 7,500
Total uncollectible $15,500			

The following is the uncollectible percentage distribution change.

	0–30 days past due	31–90 days past due	Over 90 days past due
Accounts receivable amount	$40,000	$20,000	$25,000
Percent uncollectible	8%	15%	25%
Total per category	$ 3,200	$ 3,000	$ 6,250
Total uncollectible $12,450			

Comparing the two outcomes, the original uncollectible figure was $15,500 and the changed uncollectible figure is $12,450. This reduction produces a higher accounts receivable balance, a lower bad debt expense, and a higher net income.

A company may also change the estimation method to produce a different net income outcome. For example, BWW may go from the income statement method to the balance sheet method. However, as mentioned, the change would have to be considered to reflect the company's actual bad debt experiences accurately, and not just made for the sake of manipulating the income and expenses reported on their financial statements. A change in the estimation method that provides a comparison of the 2018 income statement follows.

BILLIE'S WATERCRAFT WAREHOUSE
Income Statement (Method Comparison)
Year Ended December 31, 2018

	Income Statement Method	Balance Sheet Method
Net Credit Sales	$450,000	$450,000
Cost of Goods Sold	70,000	70,000
Gross Margin	$380,000	$380,000
Expenses:		
General and Administrative Expense	77,500	77,500
Bad Debt Expense	22,500	12,750
Total Expenses	$100,000	$ 90,250
Net Income (Loss)	$280,000	$289,750

In this example, net income appears higher under the balance sheet method than the income statement method: $280,000 compared to $289,750, respectively. BWW could change to the balance sheet method for estimating bad debt to give the appearance that income is greater. An investor or lender looking at BWW may consider providing funds given the earnings performance, unaware that the estimation method alone may result in an inflated income. So, what can an investor or lender do to recognize earnings management (or manipulation)?

An investor or lender can compare ratio analysis to others in the industry, and year-to-year trend analysis can be helpful. The number of days' sales in receivables ratio is a usually a good indicator of manipulation activity. A quicker collection period found in the first two years of operation can signal negative earnings behavior (as compared to industry standards). Earnings management can be a bit more difficult, given its acceptability under GAAP. As with uncovering earnings manipulation, due diligence with ratio and trend analysis is paramount. These topics will be covered in more depth in Appendix A: Financial Statement Analysis.

CONCEPTS IN PRACTICE

Competitor Acquisitions

As companies become large players in industry, they may consider acquiring competitors. When acquisition discussions occur, financial information, future growth channels, and business organizational structure play heavy roles in the decision process. A level of financial transparency is expected with an acquisition candidate, but during buying negotiations, each business will present the best financial position possible. The seller's goal is to yield a high sales price; the desire to present a rosy picture could lead to earnings manipulation. An acquirer needs to be mindful of this and review trend analysis and

ratio comparisons before making a purchase decision.

Consider General Electric Company (GE). GE's growth model in recent years was based on acquiring additional businesses within the industry. The company did not do its due diligence on several acquisitions, including Baker Hughes, and it was misled to believe the acquired businesses were in a stable financial earnings position. The acquisitions led to a declining financial position and reduced stock price. In order for GE to restructure and return to a positive growth model, it had to sell its interests in Baker Hughes and other acquisitions that were underperforming based on expectations.

9.5 Apply Revenue Recognition Principles to Long-Term Projects

While most receivable reporting is straightforward when recognizing revenue and matching expenses in the same period, a few unique situations require special revenue distribution for long-term projects. Long-term construction-company projects, real estate installment sales, multi-year magazine subscriptions, and a combined equipment sale with an accompanying service contract have special reporting requirements to meet revenue recognition and matching principles.

Long-term construction projects, such as construction of a major sports stadium, can take several years to complete. Typically, revenue is recognized when the earnings process is complete; however, if the construction project did not begin work immediately, this could delay recognition of revenue, and expenses accumulated during the period would be unmatched. These unmatched expenses can misstate financial statements (particularly the income statement) and mislead stakeholders. There are also tax implications, where a company may benefit from tax breaks with reduced earnings.

Two methods can be applied to long-term construction projects that are consistent with the revenue recognition criteria you've learned about. The methods commonly utilized by construction contractors are the percentage of completion and completed contract (see Figure 9.6). The **percentage of completion method** takes the percentage of work completed for the period and divides that by the total revenues from the contract. The percentage of work completed for the period distributes the estimated total project costs over the contract term based on the actual completion amount, up to that point. The percentage can be based on such factors as percentage of anticipated final costs incurred at a given point or an engineering report that estimates the percentage of completion of the project at a stage of production.

Figure 9.6 Long-Term Construction Project. Revenue recognition requires use of the percentage of completion or completion contract method. (credit: modification of "Construction of Millennium Stadium, Cardiff" by Seth Whales/Wikimedia Commons, CC BY 2.0)

The **completed contract method** delays reporting of both revenues and expenses until the entire contract is complete. This can create reporting issues and is typically used only where cost and earnings cannot be reasonably estimated throughout the contract term.

Unlike most residential home loan transactions (usually labeled as mortgage loans), which tend to require monthly payments, commercial real estate sales are often structured as an **installment sale** (see Figure 9.7) and usually involve periodic installment payments from buyers. These payments can be structured with annual payments, interest-only payments, or any other payment format to which the parties agree.

Figure 9.7 Real Estate Installment Sales. Revenue recognition requires use of the installment method to account for long-term risk. (credit: modification of "Boost-the-Market-Value-of-Your-Home_L" by Dan Moyle/Flickr, CC BY 2.0)

However, a seller/lender has no guarantee that the buyer will pay the debt in its entirety. In this event, the

property serves as security for the seller/lender if legal action is taken. The longer the debt remains outstanding, the higher the risk the buyer will not complete payment. With traditional accrual accounting, risk is not considered and revenue is reported immediately. The installment method accounts for risk and defers revenue using a gross profit percentage. As installment payments are made, this percentage is applied to the current period.

Multi-year magazine subscriptions are long-term service contracts with payment usually occurring in advance of any provided service. The company may not recognize this revenue until the subscription has been provided, but there is also no guarantee that the contract will be honored in its entirety at the conditions expected. Financial Accounting Standards Board, Topic 606, *Revenue from Contracts with Customers*, requires businesses to report revenue "in an amount that reflects the consideration to which the entity expects to be entitled in exchange for the goods or services."[6] Thus, once a change occurs to the expected revenue distribution, this new amount is recorded going forward.

A combined equipment purchase with an accompanying service contract requires separate reporting of the sale and service contract. An example of this is a cell phone purchase that has a service contract (warranty) for any damage to the unit. There is no guarantee that damage will occur or that service will be provided, but the customer has purchased this policy as insurance. Thus, the company must reasonably estimate this revenue each period and distribute this estimation over the life of the service contract. Or, the company may wait until the contract expires before reporting any revenue or expenses associated with the service contract.

CONCEPTS IN PRACTICE

U.S. Bank Stadium Construction

HKS, Inc. received a construction contract from the Minnesota Sports Facilities Authority to build the new U.S. Bank Stadium. The construction contract services began in 2012, but the stadium was not complete until 2016. The total construction cost was approximately $1.129 billion.

The portion of construction revenues earned by HKS, Inc. could not be reported upon initial receipt of funds but were instead distributed using the percentage of completion method. Much of the costs and completion associated with building the stadium occurred in the later years of the project (specifically 2015); thus, the company experienced a sharp increase in percentage of completion in the 2015 period. This showed a substantial increase to revenues during this period.

IFRS CONNECTION

Revenue and Receivables

When Financial Accounting Standards Board (FASB) and International Accounting Standards Board (IASB) began their joint work to create converged standards, a primary goal was to develop a single, comprehensive revenue recognition standard. At the time work began, International Financial Reporting Stands (IFRS) had one general standard that was applied to all companies with little guidance for various

6 Financial Accounting Standards Board (FASB). "Revenue from Contracts with Customers (Topic 606)." *FASB Accounting Standards Update, Financial Accounting Series*. April 2016. https://asc.fasb.org/imageRoot/32/79982032.pdf

industries or different revenue scenarios. On the other hand, U.S. generally accepted accounting principles (GAAP) had more than 100 standards that applied to revenue recognition. Because of the global nature of business, including investing and borrowing, it was important to increase the comparability of revenue measurement and reporting. After years of work, a new standard was agreed upon; both FASB and IASB released a revenue recognition standard that is essentially the same, with only a few differences. In the United States, the new revenue recognition standards became effective for reporting in 2018 for publicly traded companies.

A few differences remain in the reporting of revenue. In accounting for long-term projects, IFRS does not allow the completed contract method. If estimating the percentage of completion of the project is not possible, IFRS allows revenues equal to costs to be recognized. This results in no profit recognized in the current period, but rather all profit being deferred until the completion of the project.

Receivables represent amounts owed to the business from sales or service activities that have been charged or loans that have been made to customers or others. Proper reporting of receivables is important because it affects ratios used in the analysis of a company's solvency and liquidity, and also because reporting of receivables should reflect future cash receipts.

Under both U.S. GAAP and IFRS, receivables are reported as either current or noncurrent assets depending on when they are due. Also, receivables that do not have an interest component are carried at net realizable value or the amount the company expects to receive for the receivable. This requires estimation and reporting of an allowance for uncollectible accounts (sometimes referred to as "provisions" under IFRS). However, receivables that do have a significant financing component are reported at amortized cost adjusted for an estimate of uncollectible accounts.

GAAP and IFRS can differ in the financial statement presentation of receivables. GAAP requires a liquidity presentation on the balance sheet, meaning assets are listed in order of liquidity (those assets most easily converted into cash to those assets least easily converted to cash). Thus, receivables—particularly accounts receivable, which are highly liquid—are presented right after cash. However, IFRS allows reverse liquidity presentation. Therefore, receivables may appear as one of the last items in the asset section of the balance sheet under IFRS. This requires careful observance of the presentation being used when comparing a company reporting under U.S. GAAP to one using IFRS when assessing receivables.

In the case of notes receivable, the method for estimating uncollectible accounts differs between U.S. GAAP and IFRS. IFRS estimates uncollectible accounts on notes receivable in a three-level process, depending upon whether the note receivable has maintained its original credit risk, increased slightly in credit risk, or increased significantly in riskiness. For companies using U.S. GAAP, estimated uncollectible accounts are based on the overall lifetime riskiness.

9.6 Explain How Notes Receivable and Accounts Receivable Differ

So far, our discussion of receivables has focused solely on accounts receivable. Companies, however, can expand their business models to include more than one type of receivable. This receivable expansion allows a company to attract a more diverse clientele and increase asset potential to further grow the business.

As you've learned, accounts receivable is typically a more informal arrangement between a company and customer that is resolved within a year and does not include interest payments. In contrast, **notes receivable** (an asset) is a more formal legal contract between the buyer and the company, which requires a specific payment amount at a predetermined future date. The length of contract is typically over a year, or beyond one

operating cycle. There is also generally an interest requirement because the financial loan amount may be larger than accounts receivable, and the length of contract is possibly longer. A note can be requested or extended in exchange for products and services or in exchange for cash (usually in the case of a financial lender). Several characteristics of notes receivable further define the contract elements and scope of use.

Key Feature Comparison of Accounts Receivable and Notes Receivable

Accounts Receivable	Notes Receivable
• An informal agreement between customer and company • Receivable in less than one year or within a company's operating cycle • Does not include interest	• A legal contract with established payment terms • Receivable beyond one year and outside of a company's operating cycle • Includes interest

Table 9.2

THINK IT THROUGH

Dishonored Note

You are the owner of a retail health food store and have several large companies with whom you do business. Many competitors in your industry are vying for your customers' business. For each sale, you issue a notes receivable to the company, with an interest rate of 10% and a maturity date 18 months after the issue date. Each note has a minimum principal amount of $500,000.

Let's say one of these companies is unable to pay in the established timeframe and dishonors the note. What would you do? How does this dishonored note affect your company both financially and nonfinancially? If your customer wanted to renegotiate the terms of the agreement, would you agree? If so, what would be the terms?

Characteristics of Notes Receivable

Notes receivable have several defining characteristics that include principal, length of contract terms, and interest. The **principal** of a note is the initial loan amount, not including interest, requested by the customer. If a customer approaches a lender, requesting $2,000, this amount is the principal. The date on which the security agreement is initially established is the **issue date**. A note's **maturity date** is the date at which the principal and interest are expected to be repaid to the lender. The maturity date is established in the initial note contract. For example, when the previously mentioned customer requested the $2,000 loan on January 1, 2018, terms of repayment included a maturity date of 24 months. This means that the loan will mature in two years, and the principal and interest are due at that time. The following journal entries occur at the note's established start date. The first entry shows a note receivable in exchange for a product or service, and the second entry illustrates the note from the point of view that a $2,000 loan was issued by a financial institution to a customer (borrower).

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 1, 2018	Notes Receivable Sales Revenue *To record sale in exchange for notes receivable*	2,000	2,000

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 1, 2018	Notes Receivable Cash *To record notes receivable in exchange for a cash loan*	2,000	2,000

Before realization of the maturity date, the note is accumulating interest revenue for the lender. **Interest** is the lender's monetary incentive to justify risk associated with a note. An annual interest rate is established with the loan terms. The **interest rate** is the part of a loan charged to the borrower, expressed as an annual percentage of the outstanding loan amount. Interest is accrued daily, and this accumulation must be recorded periodically (each month for example). The Revenue Recognition Principle requires that the interest revenue accrued is recorded in the period when earned. Periodic interest accrued is recorded in Interest Revenue and Interest Receivable. To calculate interest, the company can use the following formulas. The following example uses months but the calculation could also be based on a 365-day year.

$$\textbf{Interest} = \textbf{Annual Interest Rate} \times \textbf{Loan Principle} \times \textbf{Part of Year}$$

where

$$\textbf{Part of Year} = \frac{\textbf{Number of Accrued Interest Months}}{\textbf{12 Months}}$$

Another common way to state the interest formula is Interest = Principal × Rate × Time. From the previous example, the company offered a $2,000 note with a maturity date of 24 months. The annual interest rate on the loan is 10%. Each period the company needs to record an entry for accumulated interest during the period. In this example, the first year's interest revenue accumulation is computed as 10% × $2,000 × (12/12) = $200. The $200 is recognized in Interest Revenue and Interest Receivable.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31, 2018	Interest Receivable Interest Revenue *To record interest accumulated after first 12 months*	200	200

When interest is due at the end of the note (24 months), the company may record the collection of the loan principal and the accumulated interest. These transactions can be recorded as one entry or two. The first set of entries show collection of principal, followed by collection of the interest.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31, 2019	Cash	2,000	
	Notes Receivable		2,000
	To record collection of note principal		
Dec. 31, 2019	Cash	400	
	Interest Receivable		200
	Interest Revenue		200
	To record interest collection after 24-month term		

Interest revenue from year one had already been recorded in 2018, but the interest revenue from 2019 is not recorded until the end of the note term. Thus, Interest Revenue is increasing (credit) by $200, the remaining revenue earned but not yet recognized. Interest Receivable decreasing (credit) reflects the 2018 interest owed from the customer that is paid to the company at the end of 2019. The second possibility is one entry recognizing principal and interest collection.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31, 2019	Cash	2,400	
	Notes Receivable		2,000
	Interest Receivable		200
	Interest Revenue		200
	To record collection of principal and accumulated interest		

If the note term does not exceed one accounting period, the entry showing note collection may not reflect interest receivable. For example, let's say the company's note maturity date was 12 months instead of 24 (payment in full occurs December 31, 2018). The entry to record collection of the principal and interest follows.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31, 2018	Cash	2,200	
	Notes Receivable		2,000
	Interest Revenue		200
	To record collection of principle and interest		

The examples provided account for collection of the note in full on the maturity date, which is considered an honored note. But what if the customer does not pay within the specified contract length? This situation is considered a dishonored note. A lender will still pursue collection of the note but will not maintain a long-term receivable on its books. Instead, the lender will convert the notes receivable and interest due into an account receivable. Sometimes a company will classify and label the uncollected account as a Dishonored Note Receivable. Using our example, if the company was unable to collect the $2,000 from the customer at the 12-month maturity date, the following entry would occur.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31, 2018	Accounts Receivable	2,200	
	Notes Receivable		2,000
	Interest Revenue		200
	To record conversion of note to Accounts Receivable		

If it is still unable to collect, the company may consider selling the receivable to a collection agency. When this occurs, the collection agency pays the company a fraction of the note's value, and the company would write off any difference as a factoring (third-party debt collection) expense. Let's say that our example company turned over the $2,200 accounts receivable to a collection agency on March 5, 2019 and received only $500 for its value. The difference between $2,200 and $500 of $1,700 is the factoring expense.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Mar. 5, 2019	Cash Factoring Expense Accounts Receivable *To record sale of Accounts Receivable to third-party factor*	500 1,700	 2,200

Notes receivable can convert to accounts receivable, as illustrated, but accounts receivable can also convert to notes receivable. The transition from accounts receivable to notes receivable can occur when a customer misses a payment on a short-term credit line for products or services. In this case, the company could extend the payment period and require interest.

For example, a company may have an outstanding account receivable in the amount of $1,000. The customer negotiates with the company on June 1 for a six-month note maturity date, 12% annual interest rate, and $250 cash up front. The company records the following entry at contract establishment.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jun. 1	Cash Notes Receivable Accounts Receivable *To record conversion of Accounts Receivable to Notes Receivable*	250 750	 1,000

This examines a note from the lender's perspective; see Current Liabilities for an in-depth discussion on the customer's liability with a note (payable).

Illustrated Examples of Notes Receivable

To illustrate notes receivable scenarios, let's return to Billie's Watercraft Warehouse (BWW) as the example. BWW has a customer, Waterways Corporation, that tends to have larger purchases that require an extended payment period. On January 1, 2018, Waterways purchased merchandise in the amount of $250,000. BWW agreed to lend the $250,000 purchase cost (sales price) to Waterways under the following conditions. First, BWW agrees to accept a note payable issued by Waterways. The conditions of the note are that the principal amount is $250,000, the maturity date on the note is 24 months, and the annual interest rate is 12%. On January 1, 2018, BWW records the following entry.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jan. 1, 2018	Notes Receivable: Waterways Sales Revenue *To record sale in exchange for notes receivable, 24-month maturity, 12% interest rate*	250,000	 250,000

Notes Receivable: Waterways increases (debit), and Sales Revenue increases (credit) for the principal amount

of $250,000. On December 31, 2018, BWW records interest accumulated on the note for 12 months.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31, 2018	Interest Receivable: Waterways Interest Revenue *To record interest accumulated after first 12 months*	30,000	 30,000

Interest Receivable: Waterways increases (debit) as does Interest Revenue (credit) for 12 months of interest computed as $250,000 × 12% × (12/12). On December 31, 2019, Waterways Corporation honors the note; BWW records this collection as a single entry.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31, 2019	Cash Notes Receivable: Waterways Interest Receivable: Waterways Interest Revenue *To record collection of principal and accumulated interest*	310,000	 250,000 30,000 30,000

Cash increases (debit) for the principal and interest total of $310,000, Notes Receivable: Waterways decreases (credit) for the principal amount of $250,000, Interest Receivable: Waterways decreases (credit) for the 2018 accumulated interest amount of $30,000, and Interest Revenue increases (credit) for the 2019 interest collection amount of $30,000.

BWW does business with Sea Ferries Inc. BWW issued Sea Ferries a note in the amount of $100,000 on January 1, 2018, with a maturity date of six months, at a 10% annual interest rate. On July 2, BWW determined that Sea Ferries dishonored its note and recorded the following entry to convert this debt into accounts receivable.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Jun. 2, 2018	Accounts Receivable: Sea Ferries Notes Receivable: Sea Ferries Interest Revenue *To record conversion of note to Accounts Receivable, dishonored note*	105,000	 100,000 5,000

Accounts Receivable: Sea Ferries increases (debit) for the principal note amount plus interest, Notes Receivable: Sea Ferries decreases (credit) for the principal amount due, and Interest Revenue increases (credit) for interest earned at maturity. Interest is computed as $100,000 × 10% × (6/12). On September 1, 2018, BWW determines that Sea Ferries's account will be uncollectible and sells the balance to a collection agency for a total of $35,000.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Sept. 1, 2018	Cash Factoring Expense Accounts Receivable: Sea Ferries *To record sale of Accounts Receivable to third-party factor*	35,000 70,000	 105,000

Cash increases (debit) for the agreed-upon discounted value of $35,000, Factoring Expense increases (debit)

for the outstanding amount and the discounted sales price, and Accounts Receivable: Sea Ferries decreases (credit) for the original amount owed.

Alliance Cruises is a customer of BWW with an outstanding accounts receivable balance of $50,000. Alliance is unable to pay in full on schedule, so it negotiates with BWW on March 1 to convert its accounts receivable into a notes receivable. BWW agrees to the following terms: six-month note maturity date, 18% annual interest rate, and $10,000 cash up front. BWW records the following entry at contract establishment.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Mar. 1	Cash Notes Receivable: Alliance Accounts Receivable: Alliance *To record conversion of Accounts Receivable to Notes Receivable*	10,000 40,000	 50,000

Cash increases (debit) for the up-front collection of $10,000, Notes Receivable: Alliance increases (debit) for the principal amount on the note of $40,000, and Accounts Receivable: Alliance decreases (credit) for the original amount Alliance owed of $50,000.

LINK TO LEARNING

Another opportunity for a company to issue a notes receivable is when one business tries to acquire another. As part of an acquisition sale between MMA Capital Management LLC and Hunt Companies Inc., MMA "provided financing for the purchase price in the form of a seven-year, note receivable from Hunt" with an interest rate of 5%, payable in quarterly installments. Read this article on the terms of sale and the role of the notes receivable in the MMA/Hunt Acquisition (https://openstax.org/l/50MMAHuntAcq) to learn more.

9.7 Appendix: Comprehensive Example of Bad Debt Estimation

The following comprehensive example will illustrate the bad debt estimation process from the sales transaction to adjusting entry reporting for all three bad debt estimation methods: income statement, balance sheet, and balance sheet aging of receivables.

Furniture Direct sells office furniture to large scale businesses. Because the purchases are typically large, Furniture Direct allows customers to pay on credit using an in-house account. At the end of the year, Furniture Direct must estimate bad debt using one of the three estimation methods. It is currently using the income statement method and estimates bad debt at 5% of credit sales. If it were to switch to the balance sheet method, it would estimate bad debt at 8% of accounts receivable. If it were to use the balance sheet aging of receivables method, it would split its receivables into three categories: 0–30 days past due at 5%, 31–90 days past due at 10%, and over 90 days past due at 20%. There is currently a zero balance, transferred from the prior year's Allowance for Doubtful Accounts. The following information is available from the year-end income statement and balance sheet.

2018 Year-end Totals for Furniture Direct	
Credit sales	$1,350,000
Accounts receivable	745,000

There is also additional information regarding the distribution of accounts receivable by age.

Past-Due Category	Accounts Receivable Total
0–30 days	$485,000
31–90 days	180,000
Over 90 days	80,000

If the company were to maintain the income statement method, the total bad debt estimation would be $67,500 ($1,350,000 × 5%), and the following adjusting entry would occur.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31	Bad Debt Expense Allowance for Doubtful Accounts *To record estimated bad debts, income statement method*	67,500	67,500

If the company were to use the balance sheet method, the total bad debt estimation would be $59,600 ($745,000 × 8%), and the following adjusting entry would occur.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31	Bad Debt Expense Allowance for Doubtful Accounts *To record estimated bad debts, balance sheet method*	59,600	59,600

If the company were to use the balance sheet aging of receivables method, the total bad debt estimation would be $58,250, calculated as shown:

Past Due Category	Accounts Receivable Total	Uncollectible Percentage	Total
0–30 days	$485,000	5%	$24,250
31–90 days	180,000	10%	18,000
Over 90 days	80,000	20%	16,000
		Total Estimated Uncollectible:	**$58,250**

The adjusting entry recorded using the aging method is as follows.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Dec. 31	Bad Debt Expense Allowance for Doubtful Accounts *To record estimated bad debts, balance sheet aging method*	58,250	58,250

As you can see, the methods provide different financial figures.

Bad Debt Estimation Method Comparison for Furniture Direct	
	Total Bad Debt Estimation
Income Statement Method	$67,500
Balance Sheet Method	59,600
Balance Sheet Aging of Receivables Method	58,250

While it is up to the company to determine which method best describes its financial position, as you see in Account for Uncollectible Accounts Using the Balance Sheet and Income Statement Approaches, a company may manage these methods and figures to present the best financial position possible.

CONTINUING APPLICATION AT WORK

The Kroger Co.

Every week, millions of shoppers visit grocery stores. Consider the various transactions that are occurring at any given time. Most of the items found within a grocery store are perishable and have a finite shelf life. The majority of purchases are paid with cash, check, or credit card. Therefore, you might assume that a grocery store would not have a balance in accounts receivable.

However, grocery stores have evolved to become a one-stop shop for many items. You can now purchase gas, seasonal decorations, cooking utensils, and even fill your prescriptions at many stores.

Key Terms

accounts receivable outstanding customer debt on a credit sale, receivable within the company's operating period (less than a year), and does not include interest

accounts receivable turnover ratio how many times accounts receivable is collected during an operating period and converted to cash

accrual accounting records transactions related to revenue earnings as they occur, not when cash is collected

allowance for doubtful accounts contra asset account that is specifically contrary to accounts receivable; it is used to estimate bad debt when the specific customer is unknown

allowance method estimates bad debt during a period based on certain computational approaches, and it matches this to sales

bad debts uncollectible amounts from customer accounts

balance sheet aging of receivables method allowance method approach that estimates bad debt expenses based on the balance in accounts receivable, but it also considers the uncollectible time period for each account

balance sheet method (also, percentage of accounts receivable method) allowance method approach that estimates bad debt expenses based on the balance in accounts receivable

completed contract method delays reporting of both revenues and expenses until the entire contract is complete

contra account account that is used to reduce or increase the balance in a financial statement account

direct write-off method delays recognition of bad debt until the specific customer accounts receivable is identified

earnings management works within GAAP constraints to improve stakeholders' views of the company's financial position

earnings manipulation ignores GAAP rules to alter earnings significantly to improve stakeholder's views of the company's financial position

income statement method allowance method approach that 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

installment sale periodic installment payments from buyers

interest lender's monetary incentive to justify risk associated with a note

interest rate part of a loan charged to the borrower, expressed as an annual percentage of the outstanding loan amount

issue date point at which the security agreement is initially established

matching principle (also, expense recognition principle) records expenses related to revenue generation in the period in which they are incurred

maturity date date at which the principal and interest are expected to be repaid to the lender

net realizable value amount of an account balance that is expected to be collected; for example, if a company has a balance of $10,000 in accounts receivable and a $300 balance in the allowance for doubtful accounts, the net realizable value is $9,700

note receivable formal legal contract between the buyer and the company, which requires a specific payment amount at a predetermined future date, usually includes interest, and is payable beyond a company's operating cycle

number of days' sales in receivables expected days it will take to convert accounts receivable into cash

percentage of completion method percentage of work completed for the period divided by the total revenues from the contract

principal initial borrowed amount, not including interest, requested by the customer

receivable outstanding amount owed from a customer

revenue recognition principle recognizes revenue when the earnings process is complete

Summary

9.1 Explain the Revenue Recognition Principle and How It Relates to Current and Future Sales and Purchase Transactions

- According to the revenue recognition principle, a company will recognize revenue when a product or service is provided to a client. The revenue must be reported in the period when the earnings process completes.
- According to the matching principle, expenses must be matched with revenues in the period in which they are incurred. A mismatch in revenues and expenses can lead to financial statement misreporting.
- When a customer pays for a product or service on a line of credit, the Accounts Receivable account is used. Accounts receivable must satisfy the following criteria: the customer owes money and has yet to pay, the amount is due in less than a company's operating cycle, and the account usually does not incur interest.
- When a customer purchases a product or service on credit, using an in-house account, Accounts Receivable increases and Sales Revenue increases. When the customer pays the amount due, Accounts Receivable decreases and Cash increases.
- When a customer purchases a product or service with a third-party credit card, such as Visa, Accounts Receivable increases, Credit Card Expense increases, and Sales Revenue increases. When the credit card company pays the amount due, Accounts Receivable decreases and Cash increases for the original sales price less the credit card usage fee.

9.2 Account for Uncollectible Accounts Using the Balance Sheet and Income Statement Approaches

- Bad debt is a result of unpaid and uncollectible customer accounts. Companies are required to record bad debt on financial statements as expenses.
- The direct write-off method records bad debt only when the due date has passed for a known amount. Bad Debt Expense increases (debit) and Accounts Receivable decreases (credit) for the amount uncollectible.
- The allowance method estimates uncollectible bad debt and matches the expense in the current period to revenues generated. There are three ways to calculate this estimation: the income statement method, balance sheet method/percentage of receivables, and balance sheet aging of receivables method.
- The income statement method estimates bad debt based on a percentage of credit sales. Bad Debt Expense increases (debit) and Allowance for Doubtful Accounts increases (credit) for the amount estimated as uncollectible.
- The balance sheet method estimates bad debt based on a percentage of outstanding accounts receivable. Bad Debt Expense increases (debit) and Allowance for Doubtful Accounts increases (credit) for the amount estimated as uncollectible.
- The balance sheet aging of receivables method estimates bad debt based on outstanding accounts receivable, but it considers the time period that an account is past due. Bad Debt Expense increases (debit) and Allowance for Doubtful Accounts increases (credit) for the amount estimated as uncollectible.

9.3 Determine the Efficiency of Receivables Management Using Financial Ratios

- Receivable ratios are best used to determine quick debt collection and lending practices. An investor, lender, or management may use these ratios—in conjunction with financial statement review, past performance, industry standards, and trends—to make an informed financial decision.
- The accounts receivable turnover ratio shows how many times receivables are collected during a period and converted to cash. The ratio is found by taking net credit sales and dividing by average accounts receivable for the period.
- The number of days' sales in receivables ratio shows the expected number of days it will take to convert accounts receivable into cash. The ratio is found by taking 365 days and dividing by the accounts receivable turnover ratio.

9.4 Discuss the Role of Accounting for Receivables in Earnings Management

- Companies may look to report earnings differently to improve stakeholder's views of financial position. Earnings management works within GAAP to accomplish this, while earnings manipulation ignores GAAP.
- Companies may choose to manage earnings to improve income level, increase borrowing opportunities, decrease tax liabilities, and improve company valuation for sales transactions. Accounts receivable is often prey to earnings manipulations.
- Earnings management can occur in several ways, including changes to bad debt estimation methods, percentage uncollectible figures, and category distribution within the balance sheet aging method.
- To understand company performance and unveil any management or manipulation to earnings, ratio analysis is paramount. Number of days' sales in receivables ratio, and trend analysis, are most commonly used.

9.5 Apply Revenue Recognition Principles to Long-Term Projects

- Long-term construction projects may recognize revenue under the percentage of completion method or the completed contract method. The percentage of completion method distributes cost and revenues based on the amount of estimated contract completion during the period.
- Real estate installment sales require periodic payment from buyers. The installment method takes into account risk and distributes revenue based on a percentage of gross profit realized each period.
- With multi-year magazine subscriptions, customers pay in advance for subscription services, and the amount reported for revenue each period is reasonably estimated, until any disruption to the contract occurs. At that time, a new estimation will be distributed over the life of the subscription.
- In a combined equipment purchase with accompanying service contract, the customer pays for the contract up front, but there is no guarantee that service will be provided. Thus, a company may distribute estimated service revenues over the life of the contract or defer recognition and associated expenses until the contract period is complete.

9.6 Explain How Notes Receivable and Accounts Receivable Differ

- Accounts receivable is an informal agreement between customer and company, with collection occurring in less than a year, and no interest requirement. In contrast, notes receivable is a legal contract, with collection occurring typically over a year, and interest requirements.
- The terms of a note contract establish the principal collection amount, maturity date, and annual interest rate.
- Interest is computed as the principal amount multiplied by the part of the year, multiplied by the annual interest rate. The entry to record accumulated interest increases interest receivable and interest revenue.
- An honored note means collection occurred on time and in full. Recording an honored note includes an increase to cash and interest revenue, and a decrease to interest receivable and notes receivable.
- A dishonored note means collection did not occur on time or in full. In this case, a note and the

accumulated interest would be converted to accounts receivable.

- When a company cannot collect on account, the company may consider selling the receivable to a collection agency. They will sell the receivable at a fraction of the value in order to apply resources elsewhere.
- If a customer cannot pay its accounts receivable on time, it may renegotiate terms that include a note and interest, thereby converting the accounts receivable to notes receivable. in this case, accounts receivable decreases, and notes receivable and cash increase.

Multiple Choice

1. LO 9.1 Which of the following is *not* a criterion to recognize revenue under GAAP?

A. The earnings process must be completed.
B. A product or service must be provided.
C. Cash must be collected.
D. GAAP requires that the accrual basis accounting principle be used in the revenue recognition process.

2. LO 9.1 Which of the following best represents the matching principle criteria?

A. Expenses are reported in the period in which they were incurred.
B. Expenses may be reported in a different period than the matching revenues.
C. Revenue and expenses are matched based on when expenses are paid.
D. Revenue is recognized when an order occurs and not when the actual sale is initiated.

3. LO 9.1 If a customer pays with a credit card and the service has been provided, which of the following accounts will be used to record the sales entry for this transaction?

A. Cost of Goods Sold, Merchandise Inventory, Sales Revenue
B. Sales Revenue, Credit Card Expense, Accounts Receivable
C. Accounts Receivable, Merchandise Inventory, Credit Card Expense
D. Cost of Goods Sold, Credit Card Expense, Sales Revenue

4. LO 9.1 A car dealership sells a car to a customer for $35,000. The customer makes a 10% down payment, and the dealership finances the remaining 90% in-house. How much will the car dealership record in Accounts Receivable for this customer?

A. $31,500
B. $19,250
C. $8,750
D. $7,000

5. LO 9.2 Tines Commerce computes bad debt based on the allowance method. They determine their current year's balance estimation to be a credit of $45,000. The previous period had a credit balance in Allowance for Doubtful Accounts of $12,000. What should be the reported figure in the adjusting entry for the current period?

A. $12,000
B. $45,000
C. $33,000
D. $57,000

6. LO 9.2 Doer Company reports year-end credit sales in the amount of $390,000 and accounts receivable of $85,500. Doer uses the income statement method to report bad debt estimation. The estimation percentage is 3.5%. What is the estimated balance uncollectible using the income statement method?

A. $13,650
B. $2,992.50
C. $136,500
D. $29,925

7. LO 9.2 Balloons Plus computes bad debt based on the allowance method. They determine their current year's balance estimation to be a credit of $84,000. The previous period had a credit balance in Allowance for Doubtful Accounts of $26,000. What should be the reported figure in the adjusting entry for the current period?

A. $84,000
B. $58,000
C. $26,000
D. $110,000

8. LO 9.2 Conner Pride reports year-end credit sales in the amount of $567,000 and accounts receivable of $134,000. Conner uses the balance sheet method to report bad debt estimation. The estimation percentage is 4.6%. What is the estimated balance uncollectible using the balance sheet method?

A. $26,082
B. $6,164
C. $260,820
D. $61,640

9. LO 9.2 Which method delays recognition of bad debt until the specific customer accounts receivable is identified?

A. income statement method
B. balance sheet method
C. direct write-off method
D. allowance method

10. LO 9.2 Which of the following estimation methods considers the amount of time past due when computing bad debt?

A. balance sheet method
B. direct write-off method
C. income statement method
D. balance sheet aging of receivables method

11. LO 9.3 Which of the following best represents a positive product of a lower number of days' sales in receivables ratio?

A. collection of receivables is quick, and cash can be used for other business expenditures
B. collection of receivables is slow, keeping cash secured to receivables
C. credit extension is lenient
D. the lender only lends to the top 10% of potential creditors

12. LO 9.3 South Rims has an accounts receivable balance at the end of 2018 of $357,470. The net credit sales for the year are $769,346. The balance at the end of 2017 was $325,300. What is the accounts receivable turnover rate for 2018 (rounded to two decimal places)?

A. 2.02 times
B. 2.25 times
C. 2.15 times
D. 1.13 times

13. LO 9.3 What information can best be elicited from a receivable ratio?

A. company performance with current debt collection
B. credit extension effect on cash sales
C. likelihood of future customer bankruptcy filings
D. an increase in future credit sales to current customers

14. LO 9.3 Ancient Grains Unlimited has an accounts receivable turnover ratio of 3.34 times. The net credit sales for the year are $567,920. What is the days' sales in receivables ratio for 2018 (rounded to the nearest whole number)?

A. 190 days
B. 109 days
C. 110 days
D. 101 days

15. LO 9.4 Which of the following is *not* a way to manage earnings?

A. Change the method for bad debt estimation.
B. Change the figure for the uncollectible percentage.
C. Under the balance sheet aging method, change the past-due categories.
D. Change the dates of common stock issuance.

16. LO 9.4 Which of the following is true about earnings management?

A. It works within the constraints of GAAP.
B. It works outside the constraints of GAAP.
C. It tries to improve stakeholder's views of the company's financial position.
D. Both B and C
E. Both A and C

17. LO 9.4 Which statement is most directly affected by a change to net income?

A. balance sheet
B. income statement
C. statement of retained earnings
D. statement of cash flows

18. LO 9.4 Michelle Company reports $345,000 in credit sales and $267,500 in accounts receivable at the end of 2019. Michelle currently uses the income statement method to record bad debt estimation at 4%. To manage earnings more efficiently, Michelle changes bed debt estimation to the balance sheet method at 4%. How much is the difference in net income between the income statement and balance sheet methods?

A. $3,100
B. $13,800
C. $10,700
D. $77,500

19. LO 9.6 Which of the following is true of a maturity date?

A. It must be calculated in days, not in months or years.
B. It is the date when principal and interest on a note are to be repaid to the lender.
C. It is the date of establishment of note terms between a lender and customer.
D. It is not a characteristic of a note receivable.

20. LO 9.6 Mark Industries issues a note in the amount of $45,000 on August 1, 2018 in exchange for the sale of merchandise. Which of the following is the correct journal entry for this sale?

A.

Cash	45,000	
Sales Revenue		45,000

B.

Cash	45,000	
Notes Receivable: Mark		45,000

C.

Accounts Receivable: Mark	45,000	
Sales Revenue		45,000

D.

Notes Receivable: Mark	45,000	
Sales Revenue		45,000

21. LO 9.6 A customer takes out a loan of $130,000 on January 1, with a maturity date of 36 months, and an annual interest rate of 11%. If 6 months have passed since note establishment, what would be the recorded interest figure at that time?

A. $7,150
B. $65,000
C. $14,300
D. $2,383

22. LO 9.6 A company collects an honored note with a maturity date of 24 months from establishment, a 10% interest rate, and an initial loan amount of $30,000. Which accounts are used to record collection of the honored note at maturity date?

A. Interest Revenue, Interest Expense, Cash
B. Interest Receivable, Cash, Notes Receivable
C. Interest Revenue, Interest Receivable, Cash, Notes Receivable
D. Notes Receivable, Interest Revenue, Cash, Interest Expense

23. LO 9.6 Orion Rentals is unable to collect on a note worth $25,000 and has accumulated interest of $250. It convert this note and interest to accounts receivable. After some time, Orion is still unable to collect the debt and it decides to sell the converted note to a collection agency. The collection agency will pay only 20% of the value of accounts receivable to Orion. What is the amount of cash paid to Orion from the collection agency?

A. $5,000
B. $5,050
C. $20,000
D. $19,950

Questions

1. LO 9.1 What is the matching principle?

2. LO 9.1 A beverage wholesale outlet sells beverages by the case. On April 13, a customer purchased 18 cases of wine at $42 per case, 20 cases of soda at $29 per case, and 45 cases of water at $17 per case. The customer pays with a Merill credit card. Merill charges a usage fee to the company of 5% of the total sale. What is the sales entry for this purchase?

3. LO 9.1 On January 1, a flower shop contracts with customers to provide flowers for their wedding on June 2. The total contract price is $3,000, payable in equal installments for the next six months on the first of each month (with the first payment due January 1). How much will be recorded as revenue during the month of April?

4. LO 9.1 American Signs allows customers to pay with their Jones credit card and cash. Jones charges American Signs a 3.5% service fee for each credit sale using its card. Credit sales for the month of June total $328,430, where 40% of those sales were made using the Jones credit card. Based on this information, what will be the total in Credit Card Expense at the end of June?

5. LO 9.2 Which account type is used to record bad debt estimation and is a contra account to Accounts Receivable?

6. LO 9.2 Earrings Depot records bad debt using the allowance, balance sheet method. They recorded $97,440 in accounts receivable for the year and $288,550 in credit sales. The uncollectible percentage is 5.5%. What is the bad debt estimation for the year using the balance sheet method?

7. LO 9.2 Racing Adventures records bad debt using the allowance, income statement method. They recorded $134,560 in accounts receivable for the year and $323,660 in credit sales. The uncollectible percentage is 6.8%. What is the bad debt estimation for the year using the income statement method?

8. LO 9.2 Aron Larson is a customer of Bank Enterprises. Mr. Larson took out a loan in the amount of $120,000 on August 1. On December 31, Bank Enterprises determines the loan to be uncollectible. Larson had not paid anything toward the balance due on account. What is the journal entry recording the bad debt write-off?

9. LO 9.2 The following accounts receivable information pertains to Growth Markets LLC.

Past-Due Category	Accounts Receivable Total	Percentage Uncollectible
0–30 days	$22,480	6%
31–90 days	36,540	17%
Over 90 days	15,330	25%

What is the total uncollectible estimated bad debt for Growth Markets LLC?

10. LO 9.2 What are bad debts?

11. LO 9.3 What are some possible negative signals when the product of the accounts receivable turnover ratio is lower (i.e., fewer times)?

12. LO 9.3 Berry Farms has an accounts receivable balance at the end of 2018 of $425,650. The net credit sales for the year are $924,123. The balance at the end of 2017 was $378,550. What is the number of days' sales in receivables ratio for 2018 (round all answers to two decimal places)?

13. LO 9.3 What are the two most common receivables ratios, and what do these ratios tell a stakeholder about the company?

14. LO 9.4 What is the difference between earnings management and earnings manipulation?

15. LO 9.4 What is an earnings management benefit from showing a reduced figure for bad debt expense?

16. LO 9.4 Angelo's Outlet used to report bad debt using the balance sheet method and is now switching to the income statement method. The percentage uncollectible will remain constant at 5%. Credit sales figures for 2019 were $866,000, and accounts receivable was $732,000. How much will Angelo's Outlet report for 2019 bad debt estimation under the income statement method?

17. LO 9.4 What is an earnings management benefit from showing an increased figure for bad debt expense?

18. LO 9.5 What are the two methods of revenue recognition for long-term construction projects?

19. LO 9.5 What is the installment method?

20. LO 9.5 What is a possible ramification of deferred revenue reporting?

21. LO 9.5 What is the completed contract method?

22. LO 9.5 What is the percentage of completion method?

23. LO 9.6 British Imports is unable to collect on a note worth $215,000 that has accumulated interest of $465. What is the journal entry to record the conversion of the note to accounts receivable?

24. LO 9.6 Chemical Enterprises issues a note in the amount of $156,000 to a customer on January 1, 2018. Terms of the note show a maturity date of 36 months, and an annual interest rate of 8%. What is the accumulated interest entry if 9 months have passed since note establishment?

25. LO 9.6 What is the principal of a note?

26. LO 9.6 A customer was unable to pay the accounts receivable on time in the amount of $34,000. The customer was able to negotiate with the company and transferred the accounts receivable into a note that includes interest, along with an up-front cash payment of $6,000. The note maturity date is 24 months with a 15% annual interest rate. What is the entry to recognize this transfer?

27. LO 9.6 What are three differences between accounts receivable and notes receivable?

Exercise Set A

EA1. LO 9.1 Prepare journal entries for the following transactions from Restaurant Depot.

Nov. 8	Customer Miles Shandy purchased 200 pans at $35 per pan, costing Restaurant Depot $21 per pan. Terms of the sale are 2/10, n/30, invoice dated November 8.
Nov. 17	Miles Shandy pays in full with cash for his purchase of November 8.

EA2. LO 9.1 Prepare journal entries for the following transactions from Cars Plus.

Oct. 18	Customer Angela Sosa purchased $132,980 worth of car parts with her Standard credit card. The cost to Cars Plus for the sale is $86,250. Standard credit card charges Cars Plus a fee of 4% of the sale.
Oct. 24	Standard remits payment to Cars Plus, less any fees.

EA3. LO 9.1 Consider the following transaction: On March 6, Fun Cards sells 540 card decks with a sales price of $7 per deck to Padma Singh. The cost to Fun Cards is $4 per deck. Prepare a journal entry under each of the following conditions. Assume MoneyPlus charges a 2% fee for each sales transaction using its card.

A. Payment is made using a credit, in-house account.
B. Payment is made using a MoneyPlus credit card.

EA4. LO 9.2 Window World extended credit to customer Nile Jenkins in the amount of $130,900 for his purchase of window treatments on April 2. Terms of the sale are 2/60, n/150. The cost of the purchase to Window World is $56,200. On September 4, Window World determined that Nile Jenkins's account was uncollectible and wrote off the debt. On December 3, Mr. Jenkins unexpectedly paid in full on his account. Record each Window World transaction with Nile Jenkins. In order to demonstrate the write-off and then subsequent collection of an account receivable, assume in this example that Window World rarely extends credit directly, so this transaction is permitted to use the direct write-off method. Remember, however, that in most cases the direct write-off method is not allowed.

EA5. LO 9.2 Millennium Associates records bad debt using the allowance, income statement method. They recorded $299,420 in accounts receivable for the year, and $773,270 in credit sales. The uncollectible percentage is 3.2%. On February 5, Millennium Associates identifies one uncollectible account from Molar Corp in the amount of $1,330. On April 15, Molar Corp unexpectedly pays its account in full. Record journal entries for the following.

A. Year-end adjusting entry for 2017 bad debt
B. February 5, 2018 identification entry
C. Entry for payment on April 15, 2018

EA6. LO 9.2 Millennium Associates records bad debt using the allowance, balance sheet method. They recorded $299,420 in accounts receivable for the year, and $773,270 in credit sales. The uncollectible percentage is 3.2%. On November 22, Millennium Associates identifies one uncollectible account from Angel's Hardware in the amount of $3,650. On December 18, Angel's Hardware unexpectedly pays its account in full. Record journal entries for the following.

A. Year-end adjusting entry for 2017 bad debt
B. November 22, 2018 identification entry
C. Entry for payment on December 18, 2018

EA7. LO 9.2 The following accounts receivable information pertains to Marshall Inc.

Past-Due Category	Accounts Receivable Total	Percentage Uncollectible
0–30 days	$84,550	8%
31–90 days	32,230	16%
Over 90 days	22,170	37%

Determine the estimated uncollectible bad debt from Marshall Inc. using the balance sheet aging of receivables method, and record the year-end adjusting journal entry for bad debt.

EA8. LO 9.3 Using the following select financial statement information from Black Water Industries, compute the accounts receivable turnover ratios for 2018 and 2019 (round answers to two decimal places). What do the outcomes tell a potential investor about Black Water Industries?

BLACK WATER INDUSTRIES		
Year	**Net Credit Sales**	**Ending Accounts Receivable**
2017	$685,430	$330,250
2018	700,290	360,450
2019	768,500	401,650

EA9. LO 9.3 Using the following select financial statement information from Black Water Industries, compute the number of days' sales in receivables ratios for 2018 and 2019 (round answers to two decimal places). What do the outcomes tell a potential investor about Black Water Industries?

BLACK WATER INDUSTRIES		
Year	**Net Credit Sales**	**Ending Accounts Receivable**
2017	$685,430	$330,250
2018	700,290	360,450
2019	768,500	401,650

EA10. LO 9.3 Millennial Manufacturing has net credit sales for 2018 in the amount of $1,433,630, beginning accounts receivable balance of $585,900, and an ending accounts receivable balance of $621,450. Compute the accounts receivable turnover ratio and the number of days' sales in receivables ratio for 2018 (round answers to two decimal places). What do the outcomes tell a potential investor about Millennial Manufacturing if industry average is 2.6 times and number of day's sales ratio is 180 days?

EA11. LO 9.4 Mirror Mart uses the balance sheet aging method to account for uncollectible debt on receivables. The following is the past-due category information for outstanding receivable debt for 2019.

	0–30 days past due	31–90 days past due	Over 90 days past due
Accounts receivable amount	$50,000	$30,000	$15,000
Percent uncollectible	8%	15%	30%
Total per category	?	?	?
Total uncollectible?			

To manage earnings more efficiently, Mirror Mart decided to change past-due categories as follows.

	0–60 days past due	61–120 days past due	Over 120 days past due
Accounts receivable amount	$80,000	$10,000	$5,000
Percent uncollectible	8%	15%	30%
Total per category?			
Total uncollectible?			

Complete the following.

A. Complete each table by filling in the blanks.
B. Determine the difference between total uncollectible.
C. Explain how the new total uncollectible amount affects net income and accounts receivable.

EA12. LO 9.4 Aerospace Electronics reports $567,000 in credit sales for 2018 and $632,500 in 2019. They have a $499,000 accounts receivable balance at the end of 2018, and $600,000 at the end of 2019. Aerospace uses the income statement method to record bad debt estimation at 5% during 2018. To manage earnings more favorably, Aerospace changes bad debt estimation to the balance sheet method at 7% during 2019.

A. Determine the bad debt estimation for 2018.
B. Determine the bad debt estimation for 2019.
C. Describe a benefit to Aerospace Electronics in 2019 as a result of its earnings management.

EA13. LO 9.4 Dortmund Stockyard reports $896,000 in credit sales for 2018 and $802,670 in 2019. It has a $675,000 accounts receivable balance at the end of 2018, and $682,000 at the end of 2019. Dortmund uses the balance sheet method to record bad debt estimation at 8% during 2018. To manage earnings more favorably, Dortmund changes bad debt estimation to the income statement method at 6% during 2019.

A. Determine the bad debt estimation for 2018.
B. Determine the bad debt estimation for 2019.
C. Describe a benefit to Dortmund Stockyard in 2019 as a result of its earnings management.

EA14. LO 9.6 Arvan Patel is a customer of Bank's Hardware Store. For Mr. Patel's latest purchase on January 1, 2018, Bank's Hardware issues a note with a principal amount of $480,000, 13% annual interest rate, and a 24-month maturity date on December 31, 2019. Record the journal entries for Bank's Hardware Store for the following transactions.

A. Note issuance
B. Subsequent interest entry on December 31, 2018
C. Honored note entry at maturity on December 31, 2019.

EA15. LO 9.6 Resin Milling issued a $390,500 note on January 1, 2018 to a customer in exchange for merchandise. The merchandise had a cost to Resin Milling of $170,000. The terms of the note are 24-month maturity date on December 31, 2019 at a 5% annual interest rate. The customer does not pay on its account and dishonors the note. Record the journal entries for Resin Milling for the following transactions.

A. Initial sale on January 1, 2018
B. Dishonored note entry on January 1, 2020, assuming interest has not been recognized before note maturity

EA16. LO 9.6 Mystic Magic issued a $120,250 note on January 1, 2018 to a customer, Amy Arnold, in exchange for merchandise. Terms of the note are 9-month maturity date on October 1, 2018 at a 9.6% annual interest rate. Amy Arnold does not pay on her account and dishonors the note. On November 10, 2018, Mystic Magic decides to sell the dishonored note to a collection agency for 25% of its value. Record the journal entries for Mystic Magic for the following transactions.

A. Initial sale on January 1, 2018
B. Dishonored note entry on October 1, 2018
C. Receivable sale on November 10, 2018

Exercise Set B

EB1. LO 9.1 Prepare journal entries for the following transactions from Movie Mart.

Sept. 10	Customer Ellie Monk purchased $43,820 worth of merchandise from Movie Mart, costing Movie Mart $28,745. Terms of the sale are 3/10, n/60, invoice dated September 10.
Sept. 22	Ellie Monk pays in full with cash for her purchase on September 22.

EB2. LO 9.1 Prepare journal entries for the following transactions from Angled Pictures.

June 21	Customer LeShaun Rogers purchased 167 picture frames at a sales price of $28 per frame with her American credit card. The cost to Angled Pictures for the sale is $19 per frame. American credit card charges Angled Pictures a fee of 3% of the sale.
June 30	American remits payment to Angled Pictures, less any fees.

EB3. LO 9.1 Consider the following transaction: On February 15, Darling Dolls sells 110 dolls with a sales price of $15 per doll to Rosemary Cummings The cost to Darling Dolls is $5 per doll. Prepare a journal entry under each of the following conditions. Assume Gentry charges a 3.5% fee for each sales transaction using its card.

A. Payment is made using a credit, in-house account.
B. Payment is made using a Gentry credit card.

EB4. LO 9.2 Laminate Express extended credit to customer Amal Sunderland in the amount of $244,650 for his January 4 purchase of flooring. Terms of the sale are 2/30, n/120. The cost of the purchase to Laminate Express is $88,440. On April 5, Laminate Express determined that Amal Sunderland's account was uncollectible and wrote off the debt. On June 22, Amal Sunderland unexpectedly paid 30% of the total amount due in cash on his account. Record each Laminate Express transaction with Amal Sunderland. In order to demonstrate the write-off and then subsequent collection of an account receivable, assume in this example that Laminate Express rarely extends credit directly, so this transaction is permitted to use the direct write-off method. Remember, though, that in most cases the direct write-off method is not allowed.

EB5. LO 9.2 Olena Mirrors records bad debt using the allowance, income statement method. They recorded $343,160 in accounts receivable for the year and $577,930 in credit sales. The uncollectible percentage is 4.4%. On May 10, Olena Mirrors identifies one uncollectible account from Elsa Sweeney in the amount of $2,870. On August 12, Elsa Sweeney unexpectedly pays $1,441 toward her account. Record journal entries for the following.

A. Year-end adjusting entry for 2017 bad debt
B. May 10, 2018 identification entry
C. Entry for payment on August 12, 2018

EB6. LO 9.2 Olena Mirrors records bad debt using the allowance, balance sheet method. They recorded $343,160 in accounts receivable for the year and $577,930 in credit sales. The uncollectible percentage is 4.4%. On June 11, Olena Mirrors identifies one uncollectible account from Nadia White in the amount of $4,265. On September 14, Nadia Chernoff unexpectedly pays $1,732 toward her account. Record journal entries for the following.

A. Year-end adjusting entry for 2017 bad debt
B. June 11, 2018 identification entry
C. Entry for payment on September 14, 2018

EB7. LO 9.2 The following accounts receivable information pertains to Envelope Experts.

Past-Due Category	Accounts Receivable Total	Percentage Uncollectible
0–30 days	$39,540	10%
31–90 days	23,280	26%
Over 90 days	14,630	42%

Determine the estimated uncollectible bad debt from Envelope Experts using the balance sheet aging of receivables method, and record the year-end adjusting journal entry for bad debt.

EB8. LO 9.3 Using the following select financial statement information from Mover Supply Depot, compute the accounts receivable turnover ratios for 2018 and 2019 (round answers to two decimal places). What do the outcomes tell a potential investor about Mover Supply Depot if the industry average is 4 times?

MOVER SUPPLY DEPOT		
Year	**Net Credit Sales**	**Ending Accounts Receivable**
2017	$1,230,680	$321,500
2018	1,477,440	345,700
2019	1,724,400	326,600

EB9. LO 9.3 Using the following select financial statement information from Mover Supply Depot, compute the number of days' sales in receivables ratios for 2018 and 2019 (round answers to two decimal places). What do the outcomes tell a potential investor about Mover Supply Depot if the competition collects in approximately 65 days?

MOVER SUPPLY DEPOT		
Year	**Net Credit Sales**	**Ending Accounts Receivable**
2017	$1,230,680	$321,500
2018	1,477,440	345,700
2019	1,724,400	326,600

EB10. LO 9.3 Starlight Enterprises has net credit sales for 2019 in the amount of $2,600,325, beginning accounts receivable balance of $844,260, and an ending accounts receivable balance of $604,930. Compute the accounts receivable turnover ratio and the number of days' sales in receivables ratio for 2019 (round answers to two decimal places). What do the outcomes tell a potential investor about Starlight Enterprises if the industry average is 1.5 times and the number of days' sales ratio is 175 days?

EB11. LO 9.4 Outpost Designs uses the balance sheet aging method to account for uncollectible debt on receivables. The following is the past-due category information for outstanding receivable debt for 2019.

	0–30 days past due	**31–90 days past due**	**Over 90 days past due**
Accounts receivable amount	$35,000	$40,000	$25,000
Percent uncollectible	10%	22%	35%
Total per category?			
Total uncollectible?			

To manage earnings more favorably, Outpost Designs decided to change past-due categories as follows.

	0–60 days past due	**61–120 days past due**	**Over 120 days past due**
Accounts receivable amount	$50,000	$35,000	$15,000
Percent uncollectible	10%	22%	35%
Total per category?			
Total uncollectible?			

Complete the following.

A. Complete each table by filling in the blanks.
B. Determine the difference between total uncollectible.
C. Explain how the new total uncollectible amount affects net income and accounts receivable.

EB12. LO 9.4 Clovis Enterprises reports $845,500 in credit sales for 2018 and $933,000 in 2019. It has a $758,000 accounts receivable balance at the end of 2018 and $841,000 at the end of 2019. Clovis uses the income statement method to record bad debt estimation at 4% during 2018. To manage earnings more favorably, Clovis changes bad debt estimation to the balance sheet method at 5% during 2019.

A. Determine the bad debt estimation for 2018.
B. Determine the bad debt estimation for 2019.
C. Describe a benefit to Clovis Enterprises in 2019 as a result of its earnings management.

EB13. LO 9.4 Fortune Accounting reports $1,455,000 in credit sales for 2018 and $1,678,430 in 2019. It has an $825,000 accounts receivable balance at the end of 2018 and $756,000 at the end of 2019. Fortune uses the balance sheet method to record bad debt estimation at 7.5% during 2018. To manage earnings more favorably, Fortune changes bad debt estimation to the income statement method at 5.5% during 2019.

A. Determine the bad debt estimation for 2018.
B. Determine the bad debt estimation for 2019.
C. Describe a benefit to Fortune in 2019 as a result of its earnings management.

EB14. LO 9.6 Anderson Air is a customer of Handler Cleaning Operations. For Anderson Air's latest purchase on January 1, 2018, Handler Cleaning Operations issues a note with a principal amount of $1,255,000, 6% annual interest rate, and a 24-month maturity date on December 31, 2019. Record the journal entries for Handler Cleaning Operations for the following transactions.

A. Entry for note issuance
B. Subsequent interest entry on December 31, 2018
C. Honored note entry at maturity on December 31, 2019

EB15. LO 9.6 Rain T-Shirts issued a $440,600 note on January 1, 2018 to a customer, Larry Potts, in exchange for merchandise. The merchandise had a cost to Rain T-Shirts of $220,300. The terms of the note are 24-month maturity date on December 31, 2019 at a 4.5% annual interest rate. Larry Potts does not pay on his account and dishonors the note. Record journal entries for Rain T-Shirts for the following transactions.

A. Initial sale on January 1, 2018
B. Dishonored note entry on January 1, 2020, assuming interest has not been recognized before note maturity

EB16. LO 9.6 Element Surfboards issued a $210,800 note on January 1, 2018 to a customer, Leona Marland, in exchange for merchandise. Terms of the note are 9-month maturity date on October 1, 2018 at a 10.2% annual interest rate. Leona Marland does not pay on her account and dishonors the note. On December 2, 2018, Element Surfboards decides to sell the dishonored note to a collection agency for 30% of its value. Record the journal entries for Element Surfboards for the following transactions.

A. Initial sale on January 1, 2018
B. Dishonored note entry on October 1, 2018
C. Receivable sale on December 2, 2018

Problem Set A

PA1. LO 9.1 Prepare journal entries for the following transactions from Barrels Warehouse.

Jul. 1	Sold 2,000 barrels with a sales price of $30 per barrel to customer Luck's Vineyards. Luck's Vineyards paid with cash. The cost for this sale is $18 per barrel.
Jul. 3	Sold 1,200 barrels with a sales price of $32 per barrel to customer Paramount Apparel. Paramount paid using its in-house credit account. Terms of the sale are 3/10, n/30. The cost for this sale is $17 per barrel.
Jul. 5	Sold 1,400 barrels with a sales price of $31 per barrel to customer Melody Sharehouse. Melody paid using her MoneyPlus credit card. The cost for this sale is $18 per barrel. MoneyPlus Credit Card Company charges Barrels Warehouse a 2% usage fee based on the total sale per transaction.
Jul. 8	MoneyPlus Credit Card Company made a cash payment in full to Barrels Warehouse for the transaction from July 5, less any usage fees.
Jul. 13	Paramount Apparel paid its account in full with a cash payment, less any discounts.

PA2. LO 9.1 Prepare journal entries for the following transactions of Dulce Delights.

Apr. 10	Sold 320 ice cream buckets with a sales price of $12 per bucket to customer Livia Diaz. Livia paid using her in-house credit account; terms 2/10, n/30. The cost for this sale to Dulce Delights is $4.50 per bucket.
Apr. 13	Sold 290 ice cream buckets with a sales price of $12.50 per bucket to customer Selene Arnold. Selene paid using her Max credit card. The cost for this sale to Dulce Delights is $4.50 per bucket. Max Credit Card Company charges Dulce Delights a 5% usage fee based on the total sale per transaction.
Apr. 20	Livia Diaz paid her account in full with a cash payment, less any discounts.
Apr. 25	Max Credit Card Company made a cash payment in full to Dulce Delights for the transaction from April 13, less any usage fees.

PA3. LO 9.1 Prepare journal entries for the following transactions from Forest Furniture:

Oct. 3	Sold 2 couches with a sales price of $2,450 per couch to customer Norman Guzman. Norman Guzman paid with his Draw Plus credit card. The Draw Plus credit card charges Forest Furniture a 3.5% usage fee based on the total sale per transaction. The cost for this sale is $1,700 per couch.
Oct. 6	Sold 4 end chairs for a total sales price of $1,250 to April Orozco. April paid in full with cash. The cost of the sale is $800.
Oct. 9	Sold 18 can lights with a sales price of $50 per light to customer James Montgomery. James Montgomery paid using his Fund Max credit card. Fund Max charges Forest Furniture a 2.4% usage fee based on the total sale per transaction. The cost for this sale is $29 per light.
Oct. 12	Draw Plus made a cash payment in full to Forest Furniture for the transaction from Oct 3, less any usage fees.
Oct. 15	Fund Max made a cash payment of 25% of the total due to Forest Furniture for the transaction from October 9th, less any usage fees.
Oct. 25	Fund Max made a cash payment of the remainder due to Forest Furniture for the transaction from October 9, less any usage fees.

PA4. LO 9.2 Jars Plus recorded $861,430 in credit sales for the year and $488,000 in accounts receivable. The uncollectible percentage is 2.3% for the income statement method, and 3.6% for the balance sheet method.

A. Record the year-end adjusting entry for 2018 bad debt using the income statement method.
B. Record the year-end adjusting entry for 2018 bad debt using the balance sheet method.
C. Assume there was a previous debit balance in Allowance for Doubtful Accounts of $10,220, record the year-end entry for bad debt using the income statement method, and then the entry using the balance sheet method.
D. Assume there was a previous credit balance in Allowance for Doubtful Accounts of $5,470, record the year-end entry for bad debt using the income statement method, and then the entry using the balance sheet method.

PA5. LO 9.2 The following accounts receivable information pertains to Luxury Cruises.

Past-Due Category	Accounts Receivable Total	Percentage Uncollectible
0–30 days	$1,166,350	15%
31–90 days	577,870	33%
Over 90 days	324,450	48%

A. Determine the estimated uncollectible bad debt for Luxury Cruises in 2018 using the balance sheet aging of receivables method.
B. Record the year-end 2018 adjusting journal entry for bad debt.
C. Assume there was a previous debit balance in Allowance for Doubtful Accounts of $187,450; record the year-end entry for bad debt, taking this into consideration.
D. Assume there was a previous credit balance in Allowance for Doubtful Accounts of $206,770; record the year-end entry for bad debt, taking this into consideration.
E. On January 24, 2019, Luxury Cruises identifies Landon Walker's account as uncollectible in the amount of $4,650. Record the entry for identification.

PA6. LO 9.2 Funnel Direct recorded $1,345,780 in credit sales for the year and $695,455 in accounts receivable. The uncollectible percentage is 4.4% for the income statement method and 4% for the balance sheet method.

A. Record the year-end adjusting entry for 2018 bad debt using the income statement method.
B. Record the year-end adjusting entry for 2018 bad debt using the balance sheet method.
C. Assume there was a previous credit balance in Allowance for Doubtful Accounts of $13,888; record the year-end entry for bad debt using the income statement method, and then the entry using the balance sheet method.

PA7. LO 9.3 Review the select information for Bean Superstore and Legumes Plus (industry competitors), and then complete the following.

A. Compute the accounts receivable turnover ratios for each company for 2018 and 2019.
B. Compute the number of days' sales in receivables ratios for each company for 2018 and 2019.
C. Determine which company is the better investment and why. Round answers to two decimal places.

BEAN SUPERSTORE Comparative Balance Sheet December 31, 2017, 2018, and 2019				LEGUMES PLUS Comparative Balance Sheet December 31, 2017, 2018, and 2019		
	2019	2018	2017	2019	2018	2017
Assets						
Cash	$345,600	$330,460	$300,000	$407,000	$386,450	$356,367
Accounts Receivable	67,000	62,000	59,000	85,430	82,670	79,230
Inventory	145,830	178,011	155,205	128,080	40,036	52,142
Equipment	100,465	101,202	103,085	182,006	23,400	111,701
Total Assets	**$658,895**	**$671,673**	**$617,290**	**$802,516**	**$532,556**	**$599,440**
Liabilities						
Salaries Payable	$ 90,200	$ 88,563	$ 84,209	$ 95,100	$ 91,455	$ 89,467
Accounts Payable	70,000	71,670	69,331	62,430	86,331	87,197
Notes Payable	41,000	50,650	58,250	63,222	67,880	68,312
Equity						
Common Stock	$ 22,695	$ 20,990	$ 19,100	$ 25,464	$ 22,090	$ 22,188
Retained Earnings	435,000	439,800	386,400	556,300	264,800	332,276
Total Liabilities and Equity	**$658,895**	**$671,673**	**$617,290**	**$802,516**	**$532,556**	**$599,440**

BEAN SUPERSTORE Comparative Income Statement Year Ended December 31, 2017, 2018, and 2019				LEGUMES PLUS Comparative Income Statement Year Ended December 31, 2017, 2018, and 2019		
	2019	2018	2017	2019	2018	2017
Net Credit Sales	$1,000,000	$984,400	$875,350	$1,256,300	$1,020,570	$967,478
Cost of Goods Sold	450,000	419,600	388,950	500,000	580,320	465,780
Gross Margin	550,000	564,800	486,400	756,300	440,250	501,698
Expenses	115,000	125,000	100,000	200,000	175,450	169,422
Net Income (Loss)	435,000	439,800	386,400	556,300	264,800	332,276

PA8. LO 9.3 The following select financial statement information from Candid Photography:

CANDID PHOTOGRAPHY		
Year	**Net Credit Sales**	**Ending Accounts Receivable**
2017	$2,988,000	$1,290,450
2018	3,750,860	1,345,600
2019	4,000,350	1,546,550

Compute the accounts receivable turnover ratios and the number of days' sales in receivables ratios for 2018 and 2019 (round answers to two decimal places). What do the outcomes tell a potential investor about Candid Photography if industry average for accounts receivable turnover ratio is 3 times and days' sales in receivables ratio is 150 days?

PA9. LO 9.4 Noren Company uses the balance sheet aging method to account for uncollectible debt on receivables. The following is the past-due category information for outstanding receivable debt for 2019.

	0–30 Days Past Due	**31–90 Days Past Due**	**Over 90 Days Past Due**
Accounts receivable amount	$120,000	$80,000	$65,500
Percent uncollectible	7%	20%	40%
Total per category?			
Total uncollectible?			

To manage earnings more favorably, Noren Company considers changing the past-due categories as follows.

	0–60 Days Past Due	**61–120 Days Past Due**	**Over 120 Days Past Due**
Accounts receivable amount	$160,000	$50,500	$55,000
Percent uncollectible	7%	20%	40%
Total per category	?	?	?
Total uncollectible?			

A. Complete each table by filling in the blanks.
B. Determine the difference between totals uncollectible.
C. Complete the following 2019 comparative income statements for 2019, showing net income changes as a result of the changes to the balance sheet aging method categories.
D. Describe the categories change effect on net income and accounts receivable.

NOREN COMPANY Comparative Income Statements Year Ended December 31, 2019		
	Original Categories	**Categories Change**
Net Credit Sales	$1,240,000	$1,240,000
Cost of Goods Sold	60,000	60,000
Gross Margin	1,180,000	1,180,000
Expenses:		
General and Administrative Expense	300,500	300,500
Bad Debt Expense	?	?
Total Expenses	?	?
Net Income (Loss)	?	?

PA10. LO 9.4 Elegant Universal uses the balance sheet aging method to account for uncollectible debt on receivables. The following is the past-due category information for outstanding receivable debt for 2019.

	0–30 Days Past Due	31–90 Days Past Due	Over 90 Days Past Due
Accounts receivable amount	$1,330,000	$321,000	$200,650
Percent uncollectible	8%	24%	35%
Total per category	?	?	?
Total uncollectible?			

To manage earnings more favorably, Elegant Universal considers changing the past-due categories as follows.

	0–60 Days Past Due	61–120 Days Past Due	Over 120 Days Past Due
Accounts receivable amount	$1,532,000	$289,550	$30,100
Percent uncollectible	8%	24%	35%
Total per category	?	?	?
Total uncollectible?			

A. Complete each table by filling in the blanks.
B. Determine the difference between totals uncollectible.
C. Describe the categories change effect on net income and accounts receivable.

PA11. LO 9.6 Record journal entries for the following transactions of Telesco Enterprises.

Jan. 1, 2018	Issued a $330,700 note to customer Abe Willis as terms of a merchandise sale. The merchandise's cost to Telesco is $120,900. Note contract terms included a 36-month maturity date, and a 4% annual interest rate.
Dec. 31, 2018	Telesco records interest accumulated for 2018.
Dec. 31, 2019	Telesco records interest accumulated for 2019.
Dec. 31, 2020	Abe Willis honors the note and pays in full with cash.

PA12. LO 9.6 Record journal entries for the following transactions of Wind Solutions.

Jan. 1, 2018	Issued a $2,350,100 note to customer Solar Plex as terms of a merchandise sale. The merchandise's cost to Wind Solutions is $1,002,650. Note contract terms included a 24-month maturity date, and a 2.1% annual interest rate.
Dec. 31, 2018	Wind Solutions records interest accumulated for 2018.
Dec. 31, 2019	Wind Solutions converts Solar Plex's dishonored note into account receivable. This includes accumulated interest for the 24-month period.
Mar. 8, 2020	Wind Solutions sells the outstanding debt from Solar Plex to a collection agency at 25% of the accounts receivable value.

PA13. LO 9.6 Record journal entries for the following transactions of Commissary Productions.

Jan. 1, 2018	Issued a $425,530 note to customer June Solkowski as terms of a merchandise sale. The merchandise's cost to Commissary is $231,700. Note contract terms included a 36-month maturity date, and a 5% annual interest rate.
Dec. 31, 2018	Commissary records interest accumulated for 2018.
Dec. 31, 2019	Commissary records interest accumulated for 2019.
Dec. 31, 2020	June Stevens honors the note and pays in full with cash.

PA14. LO 9.6 Record journal entries for the following transactions of Piano Wholesalers.

Jan. 1, 2018	Issued a $1,235,650 note to customer Arrowstar as terms of a merchandise sale. The merchandise's cost to Piano Wholesalers is $602,000. Note contract terms included a 24-month maturity date and a 3.4% annual interest rate.
Dec. 31, 2018	Piano Wholesalers records interest accumulated for 2018.
Dec. 31, 2019	Piano Wholesalers converts Arrowstar's dishonored note into account receivable. This includes accumulated interest for the 24-month period.
Apr. 12, 2020	Piano Wholesalers sells the outstanding debt from Arrowstar to a collection agency at 32% of the accounts receivable value.

PA15. LO 9.7 Organics Plus is considering which bad debt estimation method works best for its company. It is deciding between the income statement method, balance sheet method of receivables, and balance sheet aging of receivables method. If it uses the income statement method, bad debt would be estimated at 4% of credit sales. If it were to use the balance sheet method, it would estimate bad debt at 12% of accounts receivable. If it were to use the balance sheet aging of receivables method, it would split its receivables into three categories: 0–30 days past due at 6%, 31–90 days past due at 19%, and over 90 days past due at 26%. There is currently a zero balance, transferred from the prior year's Allowance for Doubtful Accounts. The following information is available from the year-end income statement and balance sheet.

2018 Year-End Totals for Organics Plus	
Credit sales	$1,850,000
Accounts receivable	600,000

There is also additional information regarding the distribution of accounts receivable by age.

Past-Due Category	Accounts Receivable Total
0–30 days	$350,000
31–90 days	100,000
Over 90 days	150,000

Prepare the year-end adjusting entry for bad debt, using

A. Income statement method
B. Balance sheet method of receivables
C. Balance sheet aging of receivables method.
D. Which method should the company choose, and why?

Problem Set B

PB1. LO 9.1 Prepare journal entries for the following transactions from Lumber Wholesale.

Aug. 9	Sold 48,320 pounds of lumber with a sales price of $5.50 per pound to customer Homes Unlimited. Homes Unlimited paid with cash. The cost for this sale is $1.35 per pound.
Aug. 10	Sold 34,700 pounds of lumber with a sales price of $6.75 per pound to customer Barry Njegren. Njegren paid using his in-house credit account. Terms of the sale are 4/15, n/35. The cost for this sale is $1.20 per pound.
Aug. 11	Sold 50,330 pounds of lumber with a sales price of $4.60 per pound to customer Goodson Houses. Goodson paid using its American credit card. The cost for this sale is $1.40 per pound. American Credit Card Company charged Lumber Wholesale a 2.5% usage fee based on the total sale per transaction.
Aug. 14	American Credit Card Company made a cash payment in full to Lumber Wholesale for the transaction from August 11, less any usage fees.
Aug. 25	Barry Njegren paid his account in full with a cash payment, less any discounts.

PB2. LO 9.1 Prepare journal entries for the following transactions of Maritime Memories.

May 2	Sold $864,920 worth of maritime products to customer Jordan Scott. Jordan paid using his in-house credit account; terms 3/15, n/60. The cost to Maritime Memories for this sale is $532,187.
May 6	Sold $567,120 worth of maritime products to customer Joe Hsu. Joe paid using his Longstand credit card. The cost to Maritime Memories is $321,864. Longstand Credit Card Company charged Maritime Memories a 1.5% usage fee based on the total sale per transaction.
May 16	Jordan Scott paid his account in full with a cash payment, less any discounts.
May 23	Longstand Credit Card Company made a cash payment in full to Maritime Memories for the transaction from May 6, less any usage fees.

PB3. LO 9.1 Prepare journal entries for the following transactions from School Mart.

Mar. 6	Sold 1,000 pencil packages with a sales price of $5.72 per package to customer Sonia Norris. Sonia Norris paid with her American credit card. The American credit card charges School Mart a 4.6% usage fee based on the total sale per transaction. The cost for this sale is $1.27 per package.
Mar. 8	Sold 76 dry erase boards for a total sales price of $6,535 to Henry Malta. Henry paid in full with cash. The cost of the sale is $4,308.
Mar. 11	Sold 55 reams of paper with a sales price of $3.25 per ream to customer Alex Forsun. Alex Forsun paid using his Union credit card. Union charges School Mart a 2% usage fee based on the total sale per transaction. The cost for this sale is $1.99 per ream.
Mar. 14	American made a cash payment in full to School Mart for the transaction from March 6, less any usage fees.
Mar. 21	Union made a cash payment of 40% of the total due to School Mart for the transaction from March 11, less any usage fees.
Mar. 29	Union made a cash payment of the remainder due to School Mart for the transaction from March 11, less any usage fees.

PB4. LO 9.2 Bristax Corporation recorded $1,385,660 in credit sales for the year, and $732,410 in accounts receivable. The uncollectible percentage is 3.1% for the income statement method and 4.5% for the balance sheet method.

A. Record the year-end adjusting entry for 2018 bad debt using the income statement method.
B. Record the year-end adjusting entry for 2018 bad debt using the balance sheet method.
C. Assume there was a previous debit balance in Allowance for Doubtful Accounts of $20,550; record the year-end entry for bad debt using the income statement method, and then the entry using the balance sheet method.
D. Assume there was a previous credit balance in Allowance for Doubtful Accounts of $17,430; record the year-end entry for bad debt using the income statement method, and then the entry using the balance sheet method.

PB5. LO 9.2 The following accounts receivable information pertains to Select Distributors:

Past-Due Category	Accounts Receivable Total	Percentage Uncollectible
0–30 days	$945,620	19%
31–90 days	499,110	35%
Over 90 days	211,960	52%

A. Determine the estimated uncollectible bad debt for Select Distributors in 2018 using the balance sheet aging of receivables method.
B. Record the year-end 2018 adjusting journal entry for bad debt.
C. Assume there was a previous debit balance in Allowance for Doubtful Accounts of $233,180; record the year-end entry for bad debt, taking this into consideration.
D. Assume there was a previous credit balance in Allowance for Doubtful Accounts of $199,440; record the year-end entry for bad debt, taking this into consideration.
E. On March 21, 2019, Select Distributors identifies Aida Norman's account as uncollectible in the amount of $10,890. Record the entry for identification.

PB6. LO 9.2 Ink Records recorded $2,333,898 in credit sales for the year and $1,466,990 in accounts receivable. The uncollectible percentage is 3% for the income statement method and 5% for the balance sheet method.

A. Record the year-end adjusting entry for 2018 bad debt using the income statement method.
B. Record the year-end adjusting entry for 2018 bad debt using the balance sheet method.
C. Assume there was a previous credit balance in Allowance for Doubtful Accounts of $20,254; record the year-end entry for bad debt using the income statement method, and then the entry using the balance sheet method.

PB7. LO 9.3 Review the select information for Liquor Plaza and Beer Buddies (industry competitors) and complete the following.

A. Compute the accounts receivable turnover ratios for each company for 2018 and 2019.
B. Compute the number of day's sales in receivables ratios for each company for 2018 and 2019.
C. Determine which company is the better investment and why. Round answers to two decimal places.

LIQUOR PLAZA Comparative Balance Sheet December 31, 2017, 2018, and 2019				BEER BUDDIES Comparative Balance Sheet December 31, 2017, 2018, and 2019		
	2019	2018	2017	2019	2018	2017
Assets:						
Cash	$ 552,932	$ 544,307	$520,000	$384,140	$322,620	$ 300,466
Accounts Receivable	300,050	298,450	287,650	365,500	356,000	324,400
Inventory	190,704	209,726	60,301	96,440	72,555	284,428
Equipment	201,101	230,334	84,281	106,412	55,891	302,780
Total Assets:	**$1,244,787**	**$1,282,817**	**$952,232**	**$952,492**	**$807,066**	**$1,212,074**
Liabilities:						
Salaries Payable	$ 200,801	$ 188,632	$184,210	$232,100	$212,120	$ 202,655
Accounts Payable	107,657	113,828	115,222	99,464	101,360	111,111
Notes Payable	95,464	98,272	100,460	88,521	92,208	94,885
Equity:						
Common Stock	$ 67,435	$ 64,955	$ 62,800	$ 50,000	$ 50,000	$ 50,000
Retained Earnings	773,430	817,130	489,540	482,407	351,378	753,423
Total Liabilities and Equity:	**$1,244,787**	**$1,282,817**	**$952,232**	**$952,492**	**$807,066**	**$1,212,074**

LIQUOR PLAZA Comparative Income Statement Year Ended December 31, 2017, 2018, and 2019				BEER BUDDIES Comparative Income Statement Year Ended December 31, 2017, 2018, and 2019		
	2019	2018	2017	2019	2018	2017
Net Credit Sales	$2,675,430	$2,310,000	$1,967,820	$2,200,770	$2,020,570	$2,154,480
Cost of Goods Sold	1,400,000	999,870	989,950	1,268,000	1,243,530	1,000,650
Gross Margin	1,275,430	1,310,130	977,870	932,770	777,040	1,153,830
Expenses	502,000	493,000	488,330	450,363	425,662	400,407
Net Income (Loss)	**773,430**	**817,130**	**489,540**	**482,407**	**351,378**	**753,423**

PB8. LO 9.3 The following select financial statement information from Vortex Computing.

VORTEX COMPUTING		
Year	**Net Credit Sales**	**Ending Accounts Receivable**
2017	$1,557,200	$398,000
2018	1,755,310	444,400
2019	1,965,170	500,780

Compute the accounts receivable turnover ratios and the number of days' sales in receivables ratios for 2018 and 2019 (round answers to two decimal places). What do the outcomes tell a potential investor about Vortex Computing if industry average for accounts receivable turnover ratio is 4 times and days' sales in receivables ratio is 85 days?

PB9. LO 9.4 Elegant Linens uses the balance sheet aging method to account for uncollectible debt on receivables. The following is the past-due category information for outstanding receivable debt for 2019.

	0–30 Days Past Due	31–90 Days Past Due	Over 90 Days Past Due
Accounts receivable amount	$232,000	$129,000	$100,400
Percent uncollectible	8%	17%	31%
Total per category	?	?	?
Total uncollectible?			

To manage earnings more favorably, Elegant Linens considers changing the past-due categories as follows.

	0–60 Days Past Due	61–120 Days Past Due	Over 120 Days Past Due
Accounts receivable amount	$263,000	$134,200	$64,200
Percent uncollectible	8%	17%	31%
Total per category	?	?	?
Total uncollectible?			

A. Complete each table by filling in the blanks.
B. Determine the difference between total uncollectible.
C. Complete the following 2019 comparative income statements for 2019, showing net income changes as a result of the changes to the balance sheet aging method categories.
D. Describe the categories change effect on net income and accounts receivable.

ELEGANT LINENS Comparative Income Statements Year Ended December 31, 2019		
	Original Categories	**Categories Change**
Net Credit Sales	$1,454,500	$1,454,500
Cost of goods sold	85,250	85,250
Gross Margin	1,369,250	1,369,250
Expenses:		
General and Administrative Expense	425,000	425,000
Bad Debt Expense	?	?
Total Expenses	?	?
Net Income (Loss)	?	?

PB10. LO 9.4 Goods for Less uses the balance sheet aging method to account for uncollectible debt on receivables. The following is the past-due category information for outstanding receivable debt for 2019.

	0–30 Days Past Due	31–90 Days Past Due	Over 90 Days Past Due
Accounts receivable amount	$1,000,000	$422,000	$210,800
Percent uncollectible	9%	31%	52%
Total per category	?	?	?
Total uncollectible?			

To manage earnings more favorably, Goods for Less considers changing the past-due categories as follows.

	0–60 Days Past Due	61–120 Days Past Due	Over 120 Days Past Due
Accounts receivable amount	$1,245,400	$200,500	$186,900
Percent uncollectible	9%	31%	52%
Total per category	?	?	?
Total uncollectible?			

A. Complete each table by filling in the blanks.
B. Determine the difference between totals uncollectible.
C. Describe the categories change effect on net income and accounts receivable.

PB11. LO 9.6 Record journal entries for the following transactions of Noreen Turbines.

Jan. 1, 2018	Issued a $1,800,500 note to customer Axel Premium Metal as terms of a merchandise sale. The merchandise's cost to Noreen is $760,430. Note contract terms included a 36-month maturity date, and a 3.8% annual interest rate.
Dec. 31, 2018	Noreen Turbines records interest accumulated for 2018.
Dec. 31, 2019	Noreen Turbines records interest accumulated for 2019.
Dec. 31, 2020	Axel Premium Metal honors the note and pays in full with cash.

PB12. LO 9.6 Record journal entries for the following transactions of Mesa Construction.

Jan. 1, 2018	Issued a $1,460,200 note to customer Miramar Industries as terms of a merchandise sale. The merchandise's cost to Mesa Construction is $812,110. Note contract terms included a 24-month maturity date, and a 3.3% annual interest rate.
Dec. 31, 2018	Mesa Construction records interest accumulated for 2018.
Dec. 31, 2019	Mesa Construction converts Miramar Industries' dishonored note into account receivable. This includes accumulated interest for the 24-month period.
Apr. 4, 2020	Mesa Construction sells the outstanding debt from Miramar Industries to a collection agency at 40% of the accounts receivable value.

PB13. LO 9.6 Record journal entries for the following transactions of Graphics & Signs.

Jan. 1, 2018	Issued a $248,400 note to customer Elliott Thompson as terms of a merchandise sale. The merchandise's cost to Graphics & Signs is $99,500. Note contract terms included a 36-month maturity date, and a 4.3% annual interest rate.
Dec. 31, 2018	Graphics & Signs records interest accumulated for 2018.
Dec. 31, 2019	Graphics & Signs records interest accumulated for 2019.
Dec. 31, 2020	Elliott Thompson honors the note and pays in full with cash.

PB14. LO 9.6 Record journal entries for the following transactions of Trout Masters.

Jan. 1, 2018	Issued a $390,820 note to customer Fishing Warehouse as terms of a merchandise sale. The merchandise's cost to Trout Masters is $155,770. Note contract terms included a 24-month maturity date, and a 3% annual interest rate.
Dec. 31, 2018	Trout Masters records interest accumulated for 2018.
Dec. 31, 2019	Trout Masters converts Fishing Warehouse's dishonored note into account receivable. This includes accumulated interest for the 24-month period.
May 6, 2020	Trout Masters sells the outstanding debt from Fishing Warehouse to a collection agency at 40% of the accounts receivable value.

PB15. LO 9.7 Shimmer Products is considering which bad debt estimation method works best for its company. It is deciding between the income statement method, balance sheet method of receivables, and balance sheet aging of receivables method. If it uses the income statement method, bad debt would be estimated at 5.6% of credit sales. If it were to use the balance sheet method, it would estimate bad debt at 13.7% percent of accounts receivable. If it were to use the balance sheet aging of receivables method, it would split its receivables into three categories: 0–30 days past due at 5%, 31–90 days past due at 21%, and over 90 days past due at 30%. There is currently a zero balance, transferred from the prior year's Allowance for Doubtful Accounts. The following information is available from the year-end income statement and balance sheet.

2018 Year-End Totals for Shimmer Products	
Credit sales	$2,410,000
Accounts receivable	950,000

There is also additional information regarding the distribution of accounts receivable by age.

Past-Due Category	Accounts Receivable Total
0–30 days	$475,000
31–90 days	240,000
Over 90 days	235,000

Prepare the year-end adjusting entry for bad debt, using

A. Income statement method
B. Balance sheet method of receivables
C. Balance sheet aging of receivables method
D. Which method should the company choose, and why?

Thought Provokers

TP1. LO 9.1 Review the new revenue recognition guidance issued by the Financial Accounting Standards Board http://www.fasb.org/jsp/FASB/Page/ImageBridgePage&cid=1176169257359 and answer the following questions.

- What is the new standard as of ASC 606? What does that mean to you?
- What are the recommended steps companies should follow to achieve the core principle?
- How does this change current GAAP standards?
- Who is required to adhere to this new standard?

TP2. LO 9.2 You run an office supplies chain. You must determine the most appropriate bad debt estimation method to use for financial statement reporting. Your choices are the income statement, balance sheet, and balance sheet aging of receivables methods.

- Research a real competitor in your industry and determine which method the competitor selected. Give a detailed description of the method used and any supporting calculations.
- Create a hypothetical credit sale, an accounts receivable figure for your business, and compute the bad debt estimation using the competitor's method.
- Create the journal entry to record bad debt.
- Compute bad debt using the other two methods and show the journal entry for each.
- What are the benefits and challenges for all of these methods?
- Which method would you choose for your business? Explain why.

TP3. LO 9.3 You are considering a $100,000 investment in one of two publicly traded companies in the same industry. Review the last three annual financial statements (same fiscal year) for two publicly traded companies in the same industry. Based on the information obtained, complete the following.

A. Compute the accounts receivable turnover ratio (round all answers to two decimal places).
B. Compute the number of days' sales in receivables ratio for both companies for the two most current years (round all answers to two decimal places).
C. Describe and interpret the outcomes, stating which company you would invest in and why.
D. What information is missing that could help you make a more informed decision?

TP4. LO 9.4 You are considering two possible companies for investment purposes. The following data is available for each company.

	Company A	Company B
Net credit sales, Dec. 31, 2019	$540,000	$620,000
Net accounts receivable, Dec. 31, 2018	$120,000	$145,000
Net accounts receivable, Dec. 31, 2019	$180,000	$175,000
Number of days' sales in receivables ratio, 2018	103 days	110 days
Net income, Dec. 31, 2018	$250,000	$350,000

Additional Information: Company A: Bad debt estimation percentage using the income statement method is 6%, and the balance sheet method is 10%. The $230,000 in Other Expenses includes all company expenses except Bad Debt Expense. Company B: Bad debt estimation percentage using the income statement method is 6.5%, and the balance sheet method is 8%. The $140,000 in Other Expenses includes all company expenses except Bad Debt Expense.

A. Compute the number of days' sales in receivables ratio for each company for 2019 and interpret the results (round answers to nearest whole number).
B. If Company A changed from the income statement method to the balance sheet method for recognizing bad debt estimation, how would that change net income in 2019? Explain (show calculations).
C. If Company B changed from the balance sheet method to the income statement method for recognizing bad debt estimation, how would that change net income in 2019? Explain (show calculations).
D. What benefits do each company gain by changing their method of bad debt estimation?
E. Which company would you invest in and why? Provide supporting details.

TP5. LO 9.5 You own a construction company and have recently received a contract with the local school district to refurbish one of its elementary schools. You are given an up-front payment from the school district in the amount of $5 million. The contract terms extend from years 2018 to 2020.

- When would you recognize revenue for this payment?
- What method of accounting would you use for this construction project and why?
- What would be the benefits and challenges with your method selection?
- Give an example of your distribution selection and associated costs of the project (you may estimate based on other industry competitors).
- What might be some benefits and challenges associated with the other method of construction revenue recognition?

TP6. LO 9.6 When a customer is delinquent on paying a notes receivable, your company has the option to continue to attempt collection or sell the debt to a collection agency. Research the benefits and challenges with each of these options and in a short essay, answer the following questions.

A. What are the benefits and challenges of continuing to attempt collection yourself?
B. What are the benefits and challenges of selling debt to a collection agency?
C. If you had a dishonored notes receivable, which option would you select and why?
D. Would you weight certain benefits or challenges differently when making your selection? How?

10 Inventory

Figure 10.1 Inventory. (credit: modification of “warehouse pallet food” by “jaymethunt”/Pixabay, CC0)

Chapter Outline

Why It Matters

Did you ever decide to start a healthy eating plan and meticulously planned your shopping list, including foods for meals, drinks, and snacks? Maybe you stocked your cabinets and fridge with the best healthy foods you could find, including lots of luscious-looking fruit and vegetables, to make sure that you could make tasty and healthy smoothies when you got hungry. Then, at the end of the week, if everything didn’t go as you had planned, you may have discovered that a lot of your produce was still uneaten but not very fresh anymore. Stocking up on goods, so that you will have them when you need them, is only a good idea if the goods are used before they become worthless.

Just like with someone whose preparation for healthy eating can backfire in wasted produce, businesses have to balance a fine line between being prepared for any volume of inventory demand that customers request and being careful not to overstock those goods so the company will not be left holding excess inventory they cannot sell. Not having the goods that a customer wants available is bad, of course, but extra inventory is wasteful. That is one reason why inventory accounting is important.

10.1 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 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 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 Sales Revenue	XXX	 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 Cash (or Accounts Payable)	XXX	 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 Sales Revenue	XXX	 XXX
	Cost of Goods Sold Merchandise Inventory	XXX	 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 Cash (or Accounts Payable)	XXX	 XXX

CONTINUING APPLICATION AT WORK

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 **FIFO method** 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 **LIFO method** 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 (see Figure 10.4) 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 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

1 "Inventory Fraud: Knowledge Is Your First Line of Defense." Weaver. Mar. 27, 2015. https://weaver.com/blog/inventory-fraud-knowledge-your-first-line-defense
2 Wells, Joseph T. "Ghost Goods: How to Spot Phantom Inventory." *Journal of Accountancy*. June 1, 2001. https://www.journalofaccountancy.com/issues/2001/jun/ghostgoodshowtospotphantominventory.html
3 *Consideration of Fraud in a Financial Statement Audit* (AU Section 316). AICPA. https://www.aicpa.org/Research/Standards/AuditAttest/DownloadableDocuments/AU-00316.pdf
4 *Consideration of Fraud in a Financial Statement Audit* (AU Section 316). AICPA. https://www.aicpa.org/Research/Standards/AuditAttest/DownloadableDocuments/AU-00316.pdf

$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** 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 (https://openstax.org/l/50inventory) 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.

10.2 Calculate the Cost of Goods Sold and Ending Inventory Using the Periodic Method

As you've learned, the periodic inventory system is updated at the end of the period to adjust inventory numbers to match the physical count and provide accurate merchandise inventory values for the balance sheet. The adjustment ensures that only the inventory costs that remain on hand are recorded, and the remainder of the goods available for sale are expensed on the income statement as cost of goods sold. Here we will demonstrate the mechanics used to calculate the ending inventory values using the four cost allocation methods and the periodic inventory system.

Information Relating to All Cost Allocation Methods, but Specific to Periodic Inventory Updating

Let's return to the example of The Spy Who Loves You Corporation to demonstrate the four cost allocation

methods, assuming inventory is updated at the end of the period using the periodic 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	285		

Specific Identification

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 the 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 actually 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. So for The Spy Who Loves You, considering the entire period together, note that

- 140 of the 150 units that were purchased for $21 were sold, leaving 10 of $21 units remaining
- 160 of the 225 units that were purchased for $27 were sold, leaving 65 of the $27 units remaining
- none of the 210 units that were purchased for $33 were sold, leaving all 210 of the $33 units remaining

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 ending inventory value of $8,895. Subtracting this ending inventory from the $16,155 total of goods available for sale leaves $7,260 in cost of goods sold this period.

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 10.5 were determined from the previously-stated data, particular to specific identification costing.

Cost of Goods Sold	
Beginning Inventory	$ 3,150
+ Purchases	13,005
= Goods Available	16,155
– Ending Inventory	8,895
Cost of Goods Sold	7,260

Cost Value	
10 units at $21	$ 210
65 units at $27	1,755
210 units at $33	6,930
Total	8,895

Note: Purchases = (225 × $27) + (210 × $33)

Figure 10.5 Specific Identification Costing Assumption Cost of Goods Sold and Cost Value. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

The gross margin, resulting from the specific identification periodic cost allocations of $7,260, is shown in Figure 10.6.

Gross Margin	
Sales	$11,340
– Cost of Goods Sold	7,260
= Gross Margin	4,080

(120 × $36) + (180 × 39)

Figure 10.6 Specific Identification Periodic Cost Allocations Gross Margin. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

Calculation for the Ending Inventory Adjustment under Periodic/Specific Identification Methods

Merchandise inventory, before adjustment, had a balance of $3,150, which was the beginning inventory. Journal entries are not shown, but the following calculations provide the information that would be used in recording the necessary journal entries. The inventory at the end of the period should be $8,895, requiring an entry to increase merchandise inventory by $5,745. Cost of goods sold was calculated to be $7,260, which should be recorded as an expense. The credit entry to balance the adjustment is $13,005, which is the total amount that was recorded as purchases for the period. This entry distributes the balance in the purchases account between the inventory that was sold (cost of goods sold) and the amount of inventory that remains at period end (merchandise inventory).

First-in, First-out (FIFO)

FIFO cost allocation assumes that the earliest units purchased are also the first units sold. For The Spy Who Loves You, considering the entire period, 300 of the 585 units available for the period were sold, and if the earliest acquisitions are considered sold first, then the units that remain under FIFO are those that were purchased last. Following that logic, ending inventory included 210 units purchased at $33 and 75 units purchased at $27 each, for a total FIFO periodic ending inventory value of $8,955. Subtracting this ending inventory from the $16,155 total of goods available for sale leaves $7,200 in cost of goods sold this period.

FIFO Periodic Ending Inventory Value	
Units Sold (180 +120) = 300 units	
150 units x $21	$3,150
150 units x $27	4,050
Total Sold equals 300 units	
Cost of Goods Sold	$7,200
Ending Inventory	
210 units x $33	6,930
75 units x $27	2,025
Ending Inventory Value	$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 segments or 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 10.7 were determined from the previously-stated data, particular to FIFO costing.

Cost of Goods Sold	
Beginning Inventory	$ 3,150
+ Purchases	13,005
= Goods Available	16,155
– Ending Inventory	8,955
Cost of Goods Sold	7,200

Cost Value	
75 units at $27	$2,025
210 units at $33	6,930
Total	8,955

Note: Purchases = (225 × $27) + (210 × $33)

Figure 10.7 FIFO Costing Assumption Cost of Goods Sold and Cost Value. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

The gross margin, resulting from the FIFO periodic cost allocations of $7,200, is shown in Figure 10.8.

Gross Margin	
Sales	$11,340
– Cost of Goods Sold	7,200
= Gross Margin	4,140

Figure 10.8 FIFO Periodic Cost Allocations Gross Margin. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

Calculations for Inventory Adjustment, Periodic/First-in, First-out (FIFO)

Beginning merchandise inventory had a balance of $3,150 before adjustment. The inventory at period end should be $8,955, requiring an entry to increase merchandise inventory by $5,895. Journal entries are not shown, but the following calculations provide the information that would be used in recording the necessary journal entries. Cost of goods sold was calculated to be $7,200, which should be recorded as an expense. The credit entry to balance the adjustment is for $13,005, which is the total amount that was recorded as purchases for the period. This entry distributes the balance in the purchases account between the inventory that was sold (cost of goods sold) and the amount of inventory that remains at period end (merchandise inventory).

Last-in, First-out (LIFO)

LIFO cost allocation assumes that the last units purchased are the first units sold. For The Spy Who Loves You, considering the entire period together, 300 of the 585 units available for the period were sold, and if the latest acquisitions are considered sold first, then the units that remain under LIFO are those that were purchased first. Following that logic, ending inventory included 150 units purchased at $21 and 135 units purchased at $27 each, for a total LIFO periodic ending inventory value of $6,795. Subtracting this ending inventory from the $16,155 total of goods available for sale leaves $9,360 in cost of goods sold this period.

LIFO Periodic Ending Inventory Value	
Units Sold (210 + 90) = 300 Units	
210 units x $33	$6,930
90 units x $27	2,430
Total Sold equals 300 units	
Cost of Goods Sold	9,360
Ending Inventory	
150 units x $21	3,150
135 units x $27	3,645
Ending Inventory Value	$6,795

It is important to note that these answers can differ when calculated using the perpetual method. When perpetual methodology is utilized, the cost of goods sold and ending inventory are calculated at the time of each sale rather than at the end of the month. For example, in this case, when the first sale of 150 units is made, inventory will be removed and cost computed as of that date from the beginning inventory. The differences in timing as to when cost of goods sold is calculated can alter the order that costs are sequenced.

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 LIFO costing.

Cost of Goods Sold	
Beginning Inventory	$ 3,150
+ Purchases	13,005
= Goods Available	16,155
– Ending Inventory	6,795
Cost of Goods Sold	9,360

Cost Value	
150 units at $21	$3,150
135 units at $27	3,645
Total	6,795

Note: Purchases = (225 × $27) + (210 × $33)

Figure 10.9 LIFO Costing Assumption Cost of Goods Sold and Cost Value. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

The gross margin, resulting from the LIFO periodic cost allocations of $9,360, is shown in Figure 10.10.

Gross Margin	
Sales	$11,340
– Cost of Goods Sold	9,360
= Gross Margin	1,980

Figure 10.10 LIFO Periodic Cost Allocations Gross Margin. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

Calculations for Inventory Adjustment, Periodic/Last-in, First-out (LIFO)

Beginning merchandise inventory had a balance before adjustment of $3,150. The inventory at period end should be $6,795, requiring an entry to increase merchandise inventory by $3,645. Journal entries are not shown, but the following calculations provide the information that would be used in recording the necessary journal entries. Cost of goods sold was calculated to be $9,360, which should be recorded as an expense. The credit entry to balance the adjustment is for $13,005, which is the total amount that was recorded as purchases for the period. This entry distributes the balance in the purchases account between the inventory that was sold (cost of goods sold) and the amount of inventory that remains at period end (merchandise inventory).

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 The Spy Who Loves You, considering the entire period, the weighted-average cost is computed by dividing total cost of goods available for sale ($16,155) by the total number of available units (585) to get the average cost of $27.62. Note that 285 of the 585 units available for sale during the period remained in inventory at period end. Following that logic, ending inventory included 285 units at an average cost of $27.62 for a total AVG periodic ending inventory value of $7,872. Subtracting this ending inventory from the $16,155 total of goods available for sale leaves $8,283 in cost of goods sold this period. It is important to note that final numbers can often differ by one or two cents due to rounding of the calculations. In this case, the cost comes to $27.6154 but rounds up to the stated cost of $27.62.

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 tracked but averages the cost of all units on hand every time an addition is made to inventory so that, when they are sold, the most recently averaged cost items are used to offset the revenue from the sale. The cost of goods sold, inventory, and gross margin shown in Figure 10.11 were determined from the previously-stated data, particular to AVG costing.

Cost of Goods Sold	
Beginning Inventory	$ 3,150
+ Purchases	13,005
= Goods Available	16,155
– Ending Inventory	7,872
Cost of Goods Sold	8,283

Cost Value	
285 units at $27.62	$7,872
Total	7,872

Note: Purchases = (225 × $27) + (210 × $33)

Figure 10.11 AVG Costing Assumption Cost of Goods Sold and Cost Value. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

Figure 10.12 shows the gross margin resulting from the weighted-average periodic cost allocations of $8283.

Gross Margin	
Sales	$11,340
– Cost of Goods Sold	8,283
= Gross Margin	3,057

Figure 10.12 Weighted AVG Periodic Cost Allocations Gross Margin. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

Journal Entries for Inventory Adjustment, Periodic/Weighted Average

Beginning merchandise inventory had a balance before adjustment of $3,150. The inventory at period end should be $7,872, requiring an entry to increase merchandise inventory by $4,722. Journal entries are not shown, but the following calculations provide the information that would be used in recording the necessary journal entries. Cost of goods sold was calculated to be $8,283, which should be recorded as an expense. The credit entry to balance the adjustment is for $13,005, which is the total amount that was recorded as purchases for the period. This entry distributes the balance in the purchases account between the inventory that was sold (cost of goods sold) and the amount of inventory that remains at period end (merchandise inventory).

10.3 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

5 "SEC Charges Former Executives with Accounting Fraud and Other Accounting Failures." U.S. Securities and Exchange Commission (SEC). 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/litreleases/2017/lr23874.htm

7 George B. Parizek and Madeleine V. Findley. *Charting a Course: Revenue Recognition Practices for Today's Business Environment*. 2008. https://www.sidley.com/-/media/files/publications/2008/10/charting-a-course-revenue-recognition-practices-__/files/view-article/fileattachment/chartingacourse.pdf

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 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 × $36) + (180 × $39)

Figure 10.14 Specific Identification Perpetual Cost Allocations Gross Margin. (attribution: Copyright Rice University, OpenStax, under CC BY 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)

FIFO 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 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 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)

LIFO 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 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 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 (https://openstax.org/l/50Amazon) 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.

8 Note that there is a $1 rounding difference due to the rounding of cents inherent in the cost determination chain process.

	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 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 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 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.

10.4 Explain and Demonstrate the Impact of Inventory Valuation Errors on the Income Statement and Balance Sheet

Because of the dynamic relationship between cost of goods sold and merchandise inventory, errors in inventory counts have a direct and significant impact on the financial statements of the company. Errors in inventory valuation cause mistaken values to be reported for merchandise inventory and cost of goods sold due to the toggle effect that changes in either one of the two accounts have on the other. As explained, the company has a finite amount of inventory that they can work with during a given period of business operations, such as a year. This limited quantity of goods is known as goods available for sale and is sourced from

1. beginning inventory (unsold goods left over from the previous period's operations); and
2. purchases of additional inventory during the current period.

These available inventory items (goods available for sale) will be handled in one of two ways:

1. be sold to customers (normally) or be lost due to shrinkage, spoilage, or theft (occasionally), and reported as cost of goods sold on the income statement; OR
2. be unsold and held in ending inventory, to be passed into the next period, and reported as merchandise inventory on the balance sheet.

Fundamentals of the Impact of Inventory Valuation Errors on the Income Statement and Balance Sheet

Understanding this interaction between inventory assets (merchandise inventory balances) and inventory expense (cost of goods sold) highlights the impact of errors. Errors in the valuation of ending merchandise inventory, which is on the balance sheet, produce an equivalent corresponding error in the company's cost of

goods sold for the period, which is on the income statement. When cost of goods sold is overstated, inventory and net income are understated. When cost of goods sold is understated, inventory and net income are overstated. Further, an error in ending inventory carries into the next period, since ending inventory of one period becomes the beginning inventory of the next period, causing both the balance sheet and the income statement values to be wrong in year two as well as in the year of the error. Over a two-year period, misstatements of ending inventory will balance themselves out. For example, an overstatement to ending inventory overstates net income, but next year, since ending inventory becomes beginning inventory, it understates net income. So over a two-year period, this corrects itself. However, financial statements are prepared for one period, so all this means is that two years of cost of goods sold are misstated (the first year is overstated/understated, and the second year is understated/overstated.)

In periodic inventory systems, inventory errors commonly arise from careless oversight of physical counts. Another common cause of periodic inventory errors results from management neglecting to take the physical count. Both perpetual and periodic updating inventory systems also face potential errors relating to ownership transfers during transportation (relating to FOB shipping point and FOB destination terms); losses in value due to shrinkage, theft, or obsolescence; and consignment inventory, the goods for which should never be included in the retailer's inventory but should be recorded as an asset of the consignor, who remains the legal owner of the goods until they are sold.

Calculated Income Statement and Balance Sheet Effects for Two Years

Let's return to The Spy Who Loves You Company dataset to demonstrate the effects of an inventory error on the company's balance sheet and income statement. Example 1 (shown in Figure 10.22) depicts the balance sheet and income statement toggle when no inventory error is present. Example 2 (see Figure 10.23) shows the balance sheet and income statement inventory toggle, in a case when a $1,500 understatement error occurred at the end of year 1.

	Balance Sheet Year 1	Income Statement Year 1	Balance Sheet Year 2	Income Statement Year 2
Sales		$11,340		$12,474
Beginning Inventory	$ 3,150		$ 8,955	
+ Purchases	13,005		8,816	
= Goods Available for Sale	16,155		17,771	
– Ending Inventory	8,955		9,851	
= Cost of Goods Sold		7,200		7,920
Gross Margin		4,140		4,554
All other expenses		3,000		3,000
Net Income		1,140		1,554

Note: Year 2 correctly stated values for Sales, Goods Available, and Ending Inventory were estimated, based on 110% of Year 1's amounts.

Figure 10.22 Example 1. Assume these values to be correct (no inventory error). This chart shows excerpted values from The Spy Who Loves You Company's financial statements without inventory errors. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

	Balance Sheet Year 1	Income Statement Year 1	Balance Sheet Year 2	Income Statement Year 2
Sales		$11,340		$12,474
Beginning Inventory	$ 3,150		$ 7,455	
+ Purchases	13,005		8,816	
= Goods Available for Sale	16,155		16,271	
– Ending Inventory (understated by $1,500)	7,455		8,201	
= Cost of Goods Sold		8,700		6,420
Gross Margin		2,640		6,054
All other expenses		3,000		3,000
Net Income		(360)		3,054

Note: Year 2 correctly stated values for Sales, Goods Available, and Ending Inventory were estimated, based on 110% of Year 1's amounts.

Figure 10.23 Example 2. Assume these values to be incorrect (with inventory error). This chart shows excerpted values from The Spy Who Loves You Company's financial statements with inventory errors. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

Comparing the two examples with and without the inventory error highlights the significant effect the error had on the net results reported on the balance sheet and income statements for the two years. Users of financial statements make important business and personal decisions based on the data they receive from the statements and errors of this sort provide those users with faulty information that could negatively affect the quality of their decisions. In these examples, the combined net income was identical for the two years and the error worked itself out at the end of the second year, yet year 1 and year 2 were incorrect and not representative of the true activity of the business for those periods of time. Extreme care should be taken to value inventories accurately.

10.5 Examine the Efficiency of Inventory Management Using Financial Ratios

Inventory is a large investment for many companies so it is important that this asset be managed wisely. Too little inventory means lost sales opportunities, whereas too much inventory means unproductive investment of resources as well as extra costs related to storage, care, and protection of the inventory. Ratio analysis is used to measure how well management is doing at maintaining just the right amount of inventory for the needs of their particular business.

Once calculated, these ratios should be compared to previous years' ratios for the company, direct competitors' ratios, industry ratios, and other industries' ratios. The insights gained from the ratio analysis should be used to augment analysis of the general strength and stability of the company, with the full data available in the annual report, including financial statements and notes to the financial statement.

Fundamentals of Inventory Ratios

Inventory ratio analysis relates to how well the inventory is being managed. Two ratios can be used to assess

how efficiently management is handling inventory. The first ratio, inventory turnover, measures the number of times an average quantity of inventory was bought and sold during the period. The second ratio, number of days' sales in inventory, measures how many days it takes to complete the cycle between buying and selling inventory.

Calculating and Interpreting the Inventory Turnover Ratio

Inventory turnover ratio is computed by dividing cost of goods sold by average inventory. The ratio measures the number of times inventory rotated through the sales cycle for the period. Let's review how this works for The Spy Who Loves You dataset. This example scenario relates to the FIFO periodic cost allocation, using those previously calculated values for year 1 cost of goods sold, beginning inventory, and ending inventory, and assuming a 10% increase in inventory activity for year 2, as shown in Figure 10.24.

	Balance Sheet Year 1	Income Statement Year 1	Balance Sheet Year 2	Income Statement Year 2
Beginning Inventory	$ 3,150		$ 8,955	
+ Purchases	13,005		8,816	
= Goods Available for Sale	16,155		17,771	
– Ending Inventory	8,955		9,851	
= Cost of Goods Sold		7,200		7,920
Note: Year 2 values for Sales, Goods Available, and Ending Inventory were estimated, based on 110% of Year 1's amounts.				

Figure 10.24 Excerpts from Financial Statements of The Spy Who Loves You Company. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

The inventory turnover ratio is calculated by dividing cost of goods sold by average inventory. The result for the Spy Who Loves You Company indicates that the inventory cycled through the sales cycle 1.19 times in year 1, and 0.84 times in year 2.

Inventory Turnover Ratio	Year 1	Year 2
Cost of Goods Sold	$7,200	$7,920
/ Average Inventory*	6,053	9,403
= Inventory Turnover	1.19	0.84
** Average Inventory Year 1 = (3,150 + 8,955) / 2; Average Inventory Year 2 = (8,955 + 9,851) / 2*		

The fact that the year 2 inventory turnover ratio is lower than the year 1 ratio is not a positive trend. This result would alert management that the inventory balance might be too high to be practical for this volume of sales. Comparison should also be made to competitor and industry ratios, while consideration should also be given to other factors affecting the company's financial health as well as the strength of the overall market economy.

Calculating and Interpreting the Days' Sales in Inventory Ratio

Number of days' sales in inventory ratio is computed by dividing average merchandise inventory by the

average daily cost of goods sold. The ratio measures the number of days it would take to clear the remaining inventory. Let's review this using The Spy Who Loves You dataset. The example scenario relates to the FIFO periodic cost allocation, using those previously calculated values for year 1 cost of goods sold, beginning inventory, and ending inventory, and assuming a 10% increase in inventory activity for year 2, as in Figure 10.25.

	Balance Sheet Year 1	Income Statement Year 1	Balance Sheet Year 2	Income Statement Year 2
Beginning Inventory	$ 3,150		$ 8,955	
+ Purchases	13,005		8,816	
= Goods Available for Sale	16,155		17,771	
– Ending Inventory	8,955		9,851	
= Cost of Goods Sold		$7,200		$7,920

Note: Year 2 values for Sales, Goods Available, and Ending Inventory were estimated, based on 110% of Year 1's amounts.

Figure 10.25 Excerpts from Financial Statements of The Spy Who Loves You Company. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

The number of days' sales in inventory ratio is calculated by dividing average inventory by average daily cost of goods sold. The result for the Spy Who Loves You indicates that it would take about 307 days to clear the average inventory held in year 1 and about 433 days to clear the average inventory held in year 2.

Number of Days' Sales in Inventory Ratio	Year 1	Year 2
Average Inventory*	$ 6,053	$ 9,403
/ Average Daily Cost of Goods Sold**	19.73	21.70
= Days' Sales in Inventory	306.79	433.32

** Average Inventory Year 1 = (3,150 + 8,955) / 2; Average Inventory Year 2 = (8,955 + 9,851) / 2*
*** Average Daily COGS Year 1 = (7,200 / 365): Average Daily COGS Year 2 = (7,920 / 365)*

Year 2's number of days' sales in inventory ratio increased over year 1's ratio results, indicating an unfavorable change. This result would alert management that it is taking much too long to sell the inventory, so reduction in the inventory balance might be appropriate, or as an alternative, increased sales efforts could turn the ratio toward a more positive trend. This ratio is useful to identify cases of obsolescence, which is especially prevalent in an evolving market, such as the technology sector of the economy. As with any ratio, comparison should also be made to competitor and industry ratios, while consideration should also be given to other factors affecting the company's financial health, as well as to the strength of the overall market economy.

LINK TO LEARNING

Check out Investopedia for help with calculation and analysis of ratios and their discussion about the inventory turnover ratio (https://openstax.org/l/50TurnoverRatio) to learn more.

Key Terms

conservatism concept underlying precept of caution that precludes accountants from overstating net assets and/or net income

consignment arrangement whereby goods are available to sell by one party, but owned by another party, without transfer of ownership

consistency principle accounting methods applied in a like manner, across multiple periods, allow for contrast and comparison between periods

first-in, first-out method (FIFO) inventory cost allocation method that assumes the earliest acquired inventory items are the first to be sold

FOB destination point transportation terms whereby the seller transfers ownership and financial responsibility at the time of delivery

FOB shipping point transportation terms whereby the seller transfers ownership and financial responsibility at the time of shipment

goods available for sale total of all inventory (beginning inventory plus purchased inventory); will either be sold this period or held in period-end inventory

gross profit net profit from sale of goods; sales revenue minus cost of goods sold

gross profit method inventory estimation tool that uses a company's usual gross profit percentage, related to total sales revenue, to estimate the cost of the ending inventory

inventory turnover ratio computed by dividing cost of goods sold by average inventory; measures number of times inventory rotated through the sales cycle for the period

last-in, first-out method (LIFO) inventory cost allocation method that assumes the latest acquired inventory items are the first to sell

lower-of-cost-or-market (LCM) conservatism-based concept that mandates inventory be reported at the lower of the value of inventory reflected in the general ledger or replacement value

merchandise inventory goods held for sale at a given point in the period

number of days' sales in inventory ratio computed by dividing average merchandise inventory by average daily cost of goods sold; measures number of days it would take to clear remaining inventory

periodic inventory inventory system that is updated at the end of the period, to match the physical count of goods on hand

perpetual inventory inventory system that is continuously updated to reflect account balances that generally agree with current inventory status

purchases new acquisitions of merchandise inventory during the period

retail inventory method inventory estimation tool that uses a company's usual gross profit percentage, related to total sales revenue, to estimate the retail value of the ending inventory, which can then be reduced to an estimated cost figure

specific identification method inventory cost allocation method that traces actual cost of each specific item, whether sold or held in inventory; usually used for customized or differentiated products

weighted-average method inventory cost allocation method that calculates the average value inventory items by weighting each purchase lot's goods available for sale, before dividing by the total number of units of that item

Summary

10.1 Describe and Demonstrate the Basic Inventory Valuation Methods and Their Cost Flow Assumptions

- The total cost of goods available for sale is a combination of the beginning inventory plus new inventory purchases. These costs relating to goods available for sale are included in the ending inventory, reported on the balance sheet, or become part of the cost of goods sold reported on the income statement.
- Merchandise inventory is maintained using either the periodic or the perpetual updating system. Periodic updating is performed at the end of the period only, whereas perpetual updating is an ongoing activity that maintains inventory records that are approximately equal to the actual inventory on hand at any time.
- There are four basic inventory cost flow allocation methods, which are alternative ways to estimate the cost of the units that are sold and the value of the ending inventory. The costing methods are not indicative of the flow of the goods, which often moves in a different order than the flow of the costs.
- Utilizing different cost allocation options results in marked differences in reported cost of goods sold, net income, and inventory balances.

10.2 Calculate the Cost of Goods Sold and Ending Inventory Using the Periodic Method

- The periodic inventory system updates inventory at the end of a fixed accounting period. During the accounting period, inventory records are not changed, and at the end of the period, inventory records are adjusted for what was sold and added during the period.
- Companies using the periodic and perpetual method for inventory updating choose between the basic four cost flow assumption methods, which are first-in, first-out (FIFO); last-in, first-out (LIFO); specific identification (SI); and weighted average (AVG).
- Periodic inventory systems are still used in practice, but the prevalence of their use has greatly diminished, with advances in technology and as prices for inventory management software have significantly decreased.

10.3 Calculate the Cost of Goods Sold and Ending Inventory Using the Perpetual Method

- Perpetual inventory systems maintain inventory balance in the company records in a real-time or slightly delayed, continuously updated state. No significant adjustments are needed at the end of the period, before issuing the financial statements.
- Companies using the perpetual method for inventory updating choose between the basic four cost flow assumption methods, which are first-in, first-out (FIFO); last-in, first-out (LIFO); specific identification (SI); and weighted average (AVG).
- Most modern inventory systems utilize the perpetual inventory system, due to the benefits it offers for efficiency, ease of operation, availability of real-time updating, and accuracy.

10.4 Explain and Demonstrate the Impact of Inventory Valuation Errors on the Income Statement and Balance Sheet

- The value for cost of the goods available for sale is dependent on accurate beginning and ending inventory numbers. Because of the interrelationship between inventory values and cost of goods sold, when the inventory values are incorrect, the associated income statement and balance sheet accounts are also incorrect.
- Inventory errors at the beginning of a reporting period affect only the income statement. Overstatements of beginning inventory result in overstated cost of goods sold and understated net income. Conversely, understatements of beginning inventory result in understated cost of goods sold and overstated net income.
- Inventory errors at the end of a reporting period affect both the income statement and the balance sheet. Overstatements of ending inventory result in understated cost of goods sold, overstated net income, overstated assets, and overstated equity. Conversely, understatements of ending inventory result in overstated cost of goods sold, understated net income, understated assets, and understated equity.

10.5 Examine the Efficiency of Inventory Management Using Financial Ratios

- Inventory ratio analysis tools help management to identify inefficient management practices and pinpoint troublesome scenarios within their inventory operations processes.
- The inventory turnover ratio measures how fast the inventory sells, which can be useful for inter-period comparison as well as comparisons with competitor firms.
- The number of days' sales in inventory ratio indicates how long it takes for inventory to be sold, on average, which can help the firm identify instances of too much or too little inventory, indicating such cases as product obsolescence or excess stocking, or the reverse scenario: insufficient inventory, which could result in customer dissatisfaction and lost sales.

Multiple Choice

1. LO 10.1 If a company has four lots of products for sale, purchase 1 (earliest) for $17, purchase 2 (middle) for $15, purchase 3 (middle) for $12, and purchase 4 (latest) for $14, which cost would be assumed to be sold first using LIFO costing?

A. $17
B. $15
C. $12
D. $14

2. LO 10.1 If a company has three lots of products for sale, purchase 1 (earliest) for $17, purchase 2 (middle) for $15, purchase 3 (latest) for $12, which of the following statements is true?

A. This is an inflationary cost pattern.
B. This is a deflationary cost pattern.
C. The next purchase will cost less than $12.
D. None of these statements can be verified.

3. LO 10.1 When inventory items are highly specialized, the best inventory costing method is _____.

A. specific identification
B. first-in, first-out
C. last-in, first-out
D. weighted average

4. LO 10.1 If goods are shipped FOB destination, which of the following is true?

A. Title to the goods will transfer as soon as the goods are shipped.
B. FOB indicates that a price reduction has been applied to the order.
C. The seller must pay the shipping.
D. The seller and the buyer will each pay 50% of the cost.

5. LO 10.1 On which financial statement would the merchandise inventory account appear?

A. balance sheet
B. income statement
C. both balance sheet and income statement
D. neither balance sheet nor income statement

6. LO 10.1 When would using the FIFO inventory costing method produce higher inventory account balances than the LIFO method would?

A. inflationary times
B. deflationary times
C. always
D. never

7. LO 10.1 Which accounting rule serves as the primary basis for the lower-of-cost-or-market methodology for inventory valuation?

A. conservatism
B. consistency
C. optimism
D. pessimism

8. LO 10.1 Which type or types of inventory timing system (periodic or perpetual) requires the user to record two journal entries every time a sale is made.

A. periodic
B. perpetual
C. both periodic and perpetual
D. neither periodic nor perpetual

9. LO 10.2 Which of these statements is false?

A. If cost of goods sold is incorrect, ending inventory is usually incorrect too.
B. beginning inventory + purchases = cost of goods sold
C. ending inventory + cost of goods sold = goods available for sale
D. goods available for sale – beginning inventory = purchases

10. LO 10.3 Which inventory costing method is almost always done on a perpetual basis?

A. specific identification
B. first-in, first-out
C. last-in, first-out
D. weighted average

11. LO 10.3 Which of the following describes features of a perpetual inventory system?

A. Technology is normally used to record inventory changes.
B. Merchandise bought is recorded as purchases.
C. An adjusting journal entry is required at year end, to match physical counts to the asset account.
D. Inventory is updated at the end of the period.

12. LO 10.4 Which of the following financial statements would be impacted by a current-year ending inventory error, when using a periodic inventory updating system?

A. balance sheet
B. income statement
C. neither statement
D. both statements

13. LO 10.4 Which of the following would cause periodic ending inventory to be overstated?

A. Goods held on consignment are omitted from the physical count.
B. Goods purchased and delivered, but not yet paid for, are included in the physical count.
C. Purchased goods shipped FOB destination and not yet delivered are included in the physical count.
D. None of the above

14. LO 10.5 Which of the following indicates a positive trend for inventory management?

A. increasing number of days' sales in inventory ratio
B. increasing inventory turnover ratio
C. increasing cost of goods sold
D. increasing sales revenue

Questions

1. LO 10.1 What is meant by the term *gross margin*?

2. LO 10.1 Can a business change from one inventory costing method to another any time they wish? Explain.

3. LO 10.1 Why do consignment arrangements present a challenge in inventory management? Explain.

4. LO 10.1 Explain the difference between the terms *FOB destination* and *FOB shipping point*.

5. LO 10.1 When would a company use the specific identification method of inventory cost allocation?

6. LO 10.1 Explain why a company might want to utilize the gross profit method or the retail inventory method for inventory valuation.

7. LO 10.1 Describe the goal of the lower-of-cost-or-market concept.

8. LO 10.1 Describe two separate and distinct ways to calculate goods available for sale.

9. LO 10.3 Describe costing inventory using first-in, first-out. Address the different treatment, if any, that must be given for periodic and perpetual inventory updating.

10. LO 10.3 Describe costing inventory using last-in, first-out. Address the different treatment, if any, that must be given for periodic and perpetual inventory updating.

11. LO 10.3 Describe costing inventory using weighted average. Address the different treatment, if any, that must be given for periodic and perpetual inventory updating.

12. LO 10.4 How long does it take an inventory error affecting ending inventory to correct itself in the financial statements? Explain.

13. LO 10.4 What type of issues would arise that might cause inventory errors?

14. LO 10.5 Explain the difference between the flow of cost and the flow of goods as it relates to inventory.

15. LO 10.5 What insights can be gained from inventory ratio analysis, such as inventory turnover ratio and number of days' sales in inventory ratio?

Exercise Set A

EA1. LO 10.1 Calculate the goods available for sale for Atlantis Company, in units and in dollar amounts, given the following facts about their inventory for the period:

	Number of Units	Cost per Unit
Beginning inventory	140	$75
Purchased goods during the period	240	77
Sold goods during the period	80	125
Purchased goods during the period	220	80

EA2. LO 10.1 E Company accepts goods on consignment from R Company and also purchases goods from S Company during the current month. E Company plans to sell the merchandise to customers during the following month. In each of these independent situations, who owns the merchandise at the end of the current month and should therefore include it in their company's ending inventory? Choose E, R, or S.

A. Goods ordered from R, delivered and displayed on E's showroom floor at the end of the current month.
B. Goods ordered from S, in transit, with shipping terms FOB destination.
C. Goods ordered from R, in transit, with no stated shipping terms.
D. Goods ordered from S, delivered and displayed on E's showroom floor at the end of the current month, with shipping terms FOB destination.
E. Goods ordered from S, in transit, with shipping terms FOB shipping point.

EA3. LO 10.1 The following information is taken from a company's records. Applying the lower-of-cost-or-market approach, what is the correct value that should be reported on the balance sheet for the inventory?

	Cost per Unit	Market Value per Unit
Inventory item 1 (10 units)	$36	$35
Inventory item 2 (25 units)	20	20
Inventory item 3 (12 units)	6	8

EA4. LO 10.2 Complete the missing piece of information involving the changes in inventory, and their relationship to goods available for sale, for the two years shown:

	2021	2022
Beginning inventory	$10,000	$7,000
Purchases	25,000	3,000
Goods available for sale	35,000	
Ending inventory	7,000	
Cost of goods sold		8,500

EA5. LO 10.2 Akira Company had the following transactions for the month.

	Number of Units	Cost per Unit
Beginning inventory	150	$10
Purchased Mar. 31	160	12
Purchased Oct. 15	130	15
Ending inventory	50	?

Calculate the ending inventory dollar value for the period for each of the following cost allocation methods, using periodic inventory updating. Provide your calculations.

A. first-in, first-out (FIFO)
B. last-in, first-out (LIFO)
C. weighted average (AVG)

EA6. LO 10.2 Akira Company had the following transactions for the month.

	Number of Units	Cost per Unit
Beginning inventory	150	$1,500
Purchased Mar. 31	160	1,920
Purchased Oct. 15	130	1,950
Total goods available for sale	440	5,370
Ending inventory	50	?

Calculate the gross margin for the period for each of the following cost allocation methods, using periodic inventory updating. Assume that all units were sold for $25 each. Provide your calculations.

A. first-in, first-out (FIFO)
B. last-in, first-out (LIFO)
C. weighted average (AVG)

EA7. LO 10.2 Prepare journal entries to record the following transactions, assuming periodic inventory updating and first-in, first-out (FIFO) cost allocation.

	Number of Units	Cost per Unit
Jan. 2, purchased merchandise for resale	300	$21
Jan. 12, purchased merchandise for resale	200	24
Jan. 16, sold merchandise for $40 per unit	220	

EA8. LO 10.3 Calculate the cost of goods sold dollar value for A65 Company for the month, considering the following transactions under three different cost allocation methods and using perpetual inventory updating. Provide calculations for first-in, first-out (FIFO).

	Number of Units	Unit Cost	Sales
Beginning inventory	800	$50	
Purchased	600	52	
Sold	400		$80
Sold	350		90
Ending inventory	650		

EA9. LO 10.3 Calculate the cost of goods sold dollar value for A66 Company for the month, considering the following transactions under three different cost allocation methods and using perpetual inventory updating. Provide calculations for last-in, first-out (LIFO).

	Number of Units	Unit Cost	Sales
Beginning inventory	800	$50	
Purchased	600	52	
Sold	400		$80
Sold	350		90
Ending inventory	650		

EA10. LO 10.3 Calculate the cost of goods sold dollar value for A67 Company for the month, considering the following transactions under three different cost allocation methods and using perpetual inventory updating. Provide calculations for weighted average (AVG).

	Number of Units	Unit Cost	Sales
Beginning inventory	800	$50	
Purchased	600	52	
Sold	400		$80
Sold	350		90
Ending inventory	650		

EA11. LO 10.3 Prepare journal entries to record the following transactions, assuming perpetual inventory updating and first-in, first-out (FIFO) cost allocation. Assume no beginning inventory.

	Number of Units	Unit Cost
Jan. 2, purchased merchandise for resale	300	$21
Jan. 12, purchased merchandise for resale	200	24
Jan. 16, sold merchandise for $40 per unit	220	

EA12. LO 10.3 Prepare Journal entries to record the following transactions, assuming perpetual inventory updating, and last-in, first-out (LIFO) cost allocation. Assume no beginning inventory.

	Number of Units	Unit Cost
Mar. 12, purchased merchandise for resale	5,000	$ 90
Mar. 15, purchased merchandise for resale	3,500	100
Mar. 16, sold merchandise for $200 per unit	2,000	

EA13. LO 10.4 If a group of inventory items costing $15,000 had been omitted from the year-end inventory count, what impact would the error have on the following inventory calculations? Indicate the effect (and amount) as either (a) none, (b) understated $_____, or (c) overstated $_____.

Inventory Item	None or amount?	Understated or overstated?
Beginning Inventory		
Purchases		
Goods Available for Sale		
Ending Inventory		
Cost of Goods Sold		

Table 10.1

EA14. LO 10.4 If Wakowski Company's ending inventory was actually $86,000 but was adjusted at year end to a balance of $68,000 in error, what would be the impact on the presentation of the balance sheet and income statement for the year that the error occurred, if any?

EA15. LO 10.4 Shetland Company reported net income on the year-end financial statements of $125,000. However, errors in inventory were discovered after the reports were issued. If inventory was understated by $15,000, how much net income did the company actually earn?

EA16. LO 10.5 Compute Altoona Company's (a) inventory turnover ratio and (b) number of days' sales in inventory ratio, using the following information.

Cost of goods sold	$722,000
Beginning inventory	53,000
Ending inventory	67,000

EA17. LO 10.5 Complete the missing pieces of McCarthy Company's inventory calculations and ratios.

Beginning inventory	?
Purchases	$ 92,000
Goods available for sale	100,500
Ending inventory	9,400
Cost of goods sold	91,100
Turnover ratio	?
Days' sales in inventory	?

Exercise Set B

EB1. LO 10.1 Calculate the goods available for sale for Soros Company, in units and in $ (dollar amounts), given the following facts about their inventory for the period.

	Number of Units	Cost per Unit
Beginning inventory	1,100	$20
Purchased goods during the period	800	20
Sold goods during the period	700	37
Purchased goods during the period	650	21

EB2. LO 10.1 X Company accepts goods on consignment from C Company, and also purchases goods from P Company during the current month. X Company plans to sell the merchandise to customers during the following month. In each of these independent situations, who owns the merchandise at the end of the current month, and should therefore include it in their company's ending inventory? Choose X, C, or P.

A. Goods ordered from P, in transit, with shipping terms FOB destination.
B. Goods ordered from P, in transit, with shipping terms FOB shipping point.
C. Goods ordered from P, inventory in stock, held in storage until floor space is available.
D. Goods ordered from C, inventory in stock, set aside for customer pickup and payments to finalize sale.

EB3. LO 10.1 Considering the following information, and applying the lower-of-cost-or-market approach, what is the correct value that should be reported on the balance sheet for the inventory?

	Cost per unit	Market Value per Unit
Inventory item 1 (20 units)	$100	$95
Inventory item 2 (30 units)	75	70
Inventory item 3 (45 units)	50	55

EB4. LO 10.2 Complete the missing piece of information involving the changes in inventory, and their relationship to goods available for sale, for the two years shown.

	2021	2022
Beginning inventory		$200,000
Purchases	$700,000	
Goods available for sale	875,000	388,500
Ending inventory		75,000
Cost of goods sold	675,000	313,500

EB5. LO 10.2 Bleistine Company had the following transactions for the month.

	Number of Units	Cost per Unit
Beginning inventory	880	$35
Purchased Jun. 1	750	40
Purchased Nov. 1	800	43
Ending inventory	110	?

Calculate the ending inventory dollar value for each of the following cost allocation methods, using periodic inventory updating. Provide your calculations.

A. first-in, first-out (FIFO)
B. last-in, first-out (LIFO)
C. weighted average (AVG)

EB6. LO 10.2 Bleistine Company had the following transactions for the month.

	Number of Units	Cost per Unit
Beginning inventory	880	$30,800
Purchased Jun. 1	750	30,000
Purchased Nov. 1	800	34,400
Total goods available for sale	2,430	95,200
Ending inventory	110	?

Calculate the gross margin for the period for each of the following cost allocation methods, using periodic inventory updating. Assume that all units were sold for $50 each. Provide your calculations.

A. first-in, first-out (FIFO)
B. last-in, first-out (LIFO)
C. weighted average (AVG)

EB7. LO 10.2 Prepare journal entries to record the following transactions, assuming periodic inventory updating and first-in, first-out (FIFO) cost allocation.

	Number of Units	Cost per Unit
Nov. 19, purchased merchandise for resale	1,200	$6
Nov. 22, purchased merchandise for resale	980	5
Nov. 30, sold merchandise for $10 per unit	850	

EB8. LO 10.3 Calculate the cost of goods sold dollar value for B65 Company for the month, considering the following transactions under three different cost allocation methods and using perpetual inventory updating. Provide calculations for first-in, first-out (FIFO).

	Number of Units	Unit Cost	Sales
Beginning inventory	100	$66	
Purchased	80	75	
Sold	50		$120
Sold	25		125
Ending inventory	105		

EB9. LO 10.3 Calculate the cost of goods sold dollar value for B66 Company for the month, considering the following transactions under three different cost allocation methods and using perpetual inventory updating. Provide calculations for last-in, first-out (LIFO).

	Number of Units	Unit Cost	Sales
Beginning inventory	100	$66	
Purchased	80	75	
Sold	50		$120
Sold	25		125
Ending inventory	105		

EB10. LO 10.3 Calculate the cost of goods sold dollar value for B67 Company for the month, considering the following transactions under three different cost allocation methods and using perpetual inventory updating. Provide calculations for weighted average (AVG).

	Number of Units	Unit Cost	Sales
Beginning inventory	100	$66	
Purchased	80	75	
Sold	50		$120
Sold	25		125
Ending inventory	105		

EB11. LO 10.3 Prepare journal entries to record the following transactions, assuming perpetual inventory updating and first-in, first-out (FIFO) cost allocation. Assume no beginning inventory.

	Number of Units	Unit Cost
Nov. 19, purchased merchandise for resale	1,200	$6
Nov. 22, purchased merchandise for resale	980	5
Nov. 30, sold merchandise for $10 per unit	850	

EB12. LO 10.3 Prepare journal entries to record the following transactions, assuming perpetual inventory updating and last-in, first-out (LIFO) cost allocation. Assume no beginning inventory.

	Number of Units	Unit Cost
Mar. 12, purchased merchandise for resale	120	$52
Mar. 15, purchased merchandise for resale	180	56
Mar. 16, sold merchandise for $95 per unit	90	

EB13. LO 10.4 If a group of inventory items costing $3,200 had been double counted during the year-end inventory count, what impact would the error have on the following inventory calculations? Indicate the effect (and amount) as either (a) none, (b) understated $_____, or (c) overstated $_____.

Inventory Item	None or amount?	Understated or overstated?
Beginning Inventory		
Purchases		
Goods Available for Sale		
Ending Inventory		
Cost of Goods Sold		

Table 10.2

EB14. LO 10.4 If Barcelona Company's ending inventory was actually $122,000, but the cost of consigned goods, with a cost value of $20,000 were accidentally included with the company assets, when making the year-end inventory adjustment, what would be the impact on the presentation of the balance sheet and income statement for the year that the error occurred, if any?

EB15. LO 10.4 Tanke Company reported net income on the year-end financial statements of $850,200. However, errors in inventory were discovered after the reports were issued. If inventory was overstated by $21,000, how much net income did the company actually earn?

EB16. LO 10.5 Compute Westtown Company's (A) inventory turnover ratio and (B) number of days' sales in inventory ratio, using the following information.

Cost of goods sold	$156,000
Beginning inventory	14,500
Ending inventory	17,500

EB17. LO 10.5 Complete the missing pieces of Delgado Company's inventory calculations and ratios.

Beginning inventory	$ 25,000
Purchases	132,000
Goods available for sale	157,000
Ending inventory	27,000
Cost of goods sold	?
Turnover ratio	5.0
Days' sales in inventory	?

Problem Set A

PA1. LO 10.1 When prices are rising (inflation), which costing method would produce the *highest* value for gross margin? Choose between first-in, first-out (FIFO); last-in, first-out (LIFO); and weighted average (AVG).

Evansville Company had the following transactions for the month.

	Number of Units	Cost per Unit
Purchase	2	$6,000
Purchase	3	7,000
Purchase	4	7,500

Calculate the gross margin for each of the following cost allocation methods, assuming A62 sold just one unit of these goods for $10,000. Provide your calculations.

A. first-in, first-out (FIFO)
B. last-in, first-out (LIFO)
C. weighted average (AVG)

PA2. LO 10.2 Trini Company had the following transactions for the month.

	Number of Units	Cost per Unit	Total
Beginning inventory	1,050	$22	$ 23,100
Purchased May 31	1,020	23	23,460
Purchased Jul. 15	1,300	26	33,800
Purchased Nov. 1	1,200	27	32,400
Totals (goods available)	4,570		112,760
Ending inventory	900	?	

Calculate the ending inventory dollar value for each of the following cost allocation methods, using periodic inventory updating. Provide your calculations.

A. first-in, first-out (FIFO)
B. last-in, first-out (LIFO)
C. weighted average (AVG)

PA3. LO 10.2 Trini Company had the following transactions for the month.

	Number of Units	Cost per Unit	Total
Beginning inventory	1,050	$22	$ 23,100
Purchased May 31	1,020	23	23,460
Purchased Jul. 15	1,300	26	33,800
Purchased Nov. 1	1,200	27	32,400
Totals (goods available for sale)	4,570		112,760
Ending inventory	900	?	

Calculate the cost of goods sold dollar value for the period for each of the following cost allocation methods, using periodic inventory updating. Provide your calculations.

A. first-in, first-out (FIFO)
B. last-in, first-out (LIFO)
C. weighted average (AVG)

PA4. LO 10.3 Calculate the cost of goods sold dollar value for A74 Company for the sale on March 11, considering the following transactions under three different cost allocation methods and using perpetual inventory updating. Provide calculations for (a) first-in, first-out (FIFO); (b) last-in, first-out (LIFO); and (c) weighted average (AVG).

	Number of Units	Unit Cost
Beginning inventory Mar. 1	110	$87
Purchased Mar. 8	140	89
Sold Mar. 11 for $120 per unit	95	

PA5. LO 10.3 Use the first-in, first-out (FIFO) cost allocation method, with perpetual inventory updating, to calculate (a) sales revenue, (b) cost of goods sold, and c) gross margin for A75 Company, considering the following transactions.

	Number of Units	Unit Cost
Beginning inventory	105	$40
Purchased Mar. 2	150	42
Sold Mar. 31 for $75 per unit	88	

PA6. LO 10.3 Use the last-in, first-out (LIFO) cost allocation method, with perpetual inventory updating, to calculate (a) sales revenue, (b) cost of goods sold, and c) gross margin for A75 Company, considering the following transactions.

	Number of Units	Unit Cost
Beginning inventory	105	$40
Purchased Mar. 2	150	42
Sold Mar. 31 for $75 per unit	88	

PA7. LO 10.3 Use the weighted-average (AVG) cost allocation method, with perpetual inventory updating, to calculate (a) sales revenue, (b) cost of goods sold, and c) gross margin for A75 Company, considering the following transactions.

	Number of Units	Unit Cost
Beginning inventory	105	$40
Purchased Mar. 2	150	42
Sold Mar. 31 for $75 per unit	88	

PA8. LO 10.3 Prepare journal entries to record the following transactions, assuming perpetual inventory updating and first-in, first-out (FIFO) cost allocation. Assume no beginning inventory.

	Number of Units	Unit Cost	Sales
Purchased	165	$21	
Sold	120		$36
Purchased	225	27	
Sold	180		39
Purchased	210	33	

PA9. LO 10.3 Calculate a) cost of goods sold, b) ending inventory, and c) gross margin for A76 Company, considering the following transactions under three different cost allocation methods and using perpetual inventory updating. Provide calculations for first-in, first-out (FIFO).

	Number of Units	Unit Cost	Sales
Beginning inventory	240	$100	
Sold	160		$140
Purchased	520	103	
Sold	400		142
Purchased	400	110	
Sold	370		144
Ending inventory	230		

PA10. LO 10.3 Calculate a) cost of goods sold, b) ending inventory, and c) gross margin for A76 Company, considering the following transactions under three different cost allocation methods and using perpetual inventory updating. Provide calculations for last-in, first-out (LIFO).

	Number of Units	Unit Cost	Sales
Beginning inventory	240	$100	
Sold	160		$140
Purchased	520	103	
Sold	400		142
Purchased	400	110	
Sold	370		144
Ending inventory	230		

PA11. LO 10.3 Calculate a) cost of goods sold, b) ending inventory, and c) gross margin for A76 Company, considering the following transactions under three different cost allocation methods and using perpetual inventory updating. Provide calculations for weighted average (AVG).

	Number of Units	Unit Cost	Sales
Beginning inventory	240	$100	
Sold	160		$140
Purchased	520	103	
Sold	400		142
Purchased	400	110	
Sold	370		144
Ending inventory	230		

PA12. LO 10.3 Compare the calculations for gross margin for A76 Company, based on the results of the perpetual inventory calculations using FIFO, LIFO, and AVG.

PA13. LO 10.4 Company Elmira reported the following cost of goods sold but later realized that an error had been made in ending inventory for year 2021. The correct inventory amount for 2021 was 32,000. Once the error is corrected, (a) how much is the restated cost of goods sold for 2021? and (b) how much is the restated cost of goods sold for 2022?

	2021	2022
Beginning inventory	$ 31,000	$ 27,000
Purchases	185,000	188,000
Goods available for sale	216,000	215,000
Ending inventory	27,000	30,000
Cost of goods sold	189,000	185,000

PA14. LO 10.4 Assuming a company's year-end inventory were overstated by $5,000, indicate the effect (overstated/understated/no effect) of the error on the following balance sheet and income statement accounts.

A. Income Statement: Cost of Goods Sold
B. Income Statement: Net Income
C. Balance Sheet: Assets
D. Balance Sheet: Liabilities
E. Balance Sheet: Equity

PA15. LO 10.5 Use the following information relating to Shana Company to calculate the inventory turnover ratio and the number of days' sales in inventory ratio.

	Sales	Cost of Goods Sold	Average Inventory
Year 2021	$22,000	$16,500	$2,400
Year 2022	28,000	21,000	3,000
Year 2023	33,000	24,750	3,500
Year 2024	35,000	26,250	4,000

PA16. LO 10.5 Use the following information relating to Clover Company to calculate the inventory turnover ratio, gross margin, and the number of days' sales in inventory ratio, for years 2022 and 2023.

	Sales	Cost of Goods Sold	Average Inventory
Year 2021	$250,000	$187,500	$24,000
Year 2022	295,000	221,250	30,000
Year 2023	323,000	242,250	35,000

Problem Set B

PB1. LO 10.1 When prices are falling (deflation), which costing method would produce the *highest* gross margin for the following? Choose first-in, first-out (FIFO); last-in, first-out (LIFO); or weighted average, assuming that B62 Company had the following transactions for the month.

	Number of Units	Cost per Unit
Purchase	10	$200
Purchase	20	205
Purchase	10	230
	40	

Calculate the gross margin for each of the following cost allocation methods, assuming B62 sold just one unit of these goods for $400. Provide your calculations.

A. first-in, first-out (FIFO)
B. last-in, first-out (LIFO)
C. weighted average (AVG)

PB2. LO 10.2 DeForest Company had the following transactions for the month.

	Number of Units	Cost per Unit	Total
Beginning inventory	500	$40	$20,000
Purchased Apr. 30	600	45	27,000
Purchased Aug. 15	650	40	26,000
Purchased Dec. 10	700	35	24,500
Totals (goods available)	2,450		97,500
Ending inventory	550	?	

Calculate the ending inventory dollar value for the period for each of the following cost allocation methods, using periodic inventory updating. Provide your calculations.

A. first-in, first-out (FIFO)
B. last-in, first-out (LIFO)
C. weighted average (AVG)

PB3. LO 10.2 DeForest Company had the following transactions for the month.

	Number of Units	Cost per Unit	Total
Beginning inventory	500	$40	$20,000
Purchased Apr. 30	600	45	27,000
Purchased Aug. 15	650	40	26,000
Purchased Dec. 10	700	35	24,500
Totals (goods available for sale)	2,450		97,500
Ending inventory	550	?	

Calculate the ending inventory dollar value for the period for each of the following cost allocation methods, using periodic inventory updating. Provide your calculations.

A. first-in, first-out (FIFO)
B. last-in, first-out (LIFO)
C. weighted average (AVG)

PB4. LO 10.3 Calculate the cost of goods sold dollar value for B74 Company for the sale on November 20, considering the following transactions under three different cost allocation methods and using perpetual inventory updating. Provide calculations for (a) first-in, first-out (FIFO); (b) last-in, first-out (LIFO); and (c) weighted average (AVG).

	Number of Units	Unit Cost
Beginning inventory Nov. 1	650	$55
Purchased Nov. 15	500	52
Sold Nov. 20 for $80 per unit	400	

PB5. LO 10.3 Use the **first-in, first-out (FIFO)** cost allocation method, with perpetual inventory updating, to calculate (a) sales revenue, (b) cost of goods sold, and c) gross margin for B75 Company, considering the following transactions.

	Number of Units	Unit Cost
Beginning inventory	7,500	$60
Purchased Sept. 18	8,000	55
Sold Sept. 28 for $100 per unit	500	

PB6. LO 10.3 Use the **last-in, first-out (LIFO)** cost allocation method, with perpetual inventory updating, to calculate (a) sales revenue, (b) cost of goods sold, and c) gross margin for B75 Company, considering the following transactions.

	Number of Units	Unit Cost
Beginning inventory	7,500	$60
Purchased Sept. 18	8,000	55
Sold Sept. 28 for $100 per unit	500	

PB7. LO 10.3 Use the **weighted-average (AVG)** cost allocation method, with perpetual inventory updating, to calculate (a) sales revenue, (b) cost of goods sold, and c) gross margin for B75 Company, considering the following transactions.

	Number of Units	Unit Cost
Beginning inventory	7,500	$60
Purchased Sept. 18	8,000	55
Sold Sept. 28 for $100 per unit	500	

PB8. LO 10.3 Prepare journal entries to record the following transactions, assuming perpetual inventory updating, and last-in, first-out (LIFO) cost allocation. Assume no beginning inventory.

	Number of Units	Unit Cost	Sales
Purchased	165	$21	
Sold	120		$36
Purchased	225	27	
Sold	180		39
Purchased	210	33	

PB9. LO 10.3 Calculate a) cost of goods sold, b) ending inventory, and c) gross margin for B76 Company, considering the following transactions under three different cost allocation methods and using perpetual inventory updating. Provide calculations for first-in, first-out (FIFO).

	Number of Units	Unit Cost	Sales
Beginning inventory	420	$200	
Sold	150		$401
Purchased	250	205	
Sold	275		421
Purchased	200	215	
Sold	260		441
Ending inventory	185		

PB10. LO 10.3 Calculate a) cost of goods sold, b) ending inventory, and c) gross margin for B76 Company, considering the following transactions under three different cost allocation methods and using perpetual inventory updating. Provide calculations for last-in, first-out (LIFO).

	Number of Units	Unit Cost	Sales
Beginning inventory	420	$200	
Sold	150		$401
Purchased	250	205	
Sold	275		421
Purchased	200	215	
Sold	260		441
Ending inventory	185		

PB11. LO 10.3 Calculate a) cost of goods sold, b) ending inventory, and c) gross margin for B76 Company, considering the following transactions under three different cost allocation methods and using perpetual inventory updating. Provide calculations for weighted average (AVG).

	Number of Units	Unit Cost	Sales
Beginning inventory	420	$200	
Sold	150		$401
Purchased	250	205	
Sold	275		421
Purchased	200	215	
Sold	260		441
Ending inventory	185		

PB12. LO 10.3 Compare the calculations for gross margin for B76 Company, based on the results of the perpetual inventory calculations using FIFO, LIFO, and AVG.

PB13. LO 10.4 Company Edgar reported the following cost of goods sold but later realized that an error had been made in ending inventory for year 2021. The correct inventory amount for 2021 was 12,000. Once the error is corrected, (a) how much is the restated cost of goods sold for 2021? and (b) how much is the restated cost of goods sold for 2022?

	2021	2022
Beginning inventory	$ 11,000	$ 16,000
Purchases	135,000	140,000
Goods available for sale	146,000	156,000
Ending inventory	16,000	14,000
Cost of goods sold	130,000	142,000

PB14. LO 10.4 Assuming a company's year-end inventory were understated by $16,000, indicate the effect (overstated/understated/no effect) of the error on the following balance sheet and income statement accounts.

A. Income Statement: Cost of Goods Sold
B. Income Statement: Net Income
C. Balance Sheet: Assets
D. Balance Sheet: Liabilities
E. Balance Sheet: Equity

PB15. LO 10.5 Use the following information relating to Singh Company to calculate the inventory turnover ratio and the number of days' sales in inventory ratio.

	Sales	Cost of Goods Sold	Average Inventory
Year 2021	$12,500	$ 8,750	$1,750
Year 2022	14,000	9,800	2,200
Year 2023	19,500	13,650	2,800
Year 2024	20,500	14,350	3,000

PB16. LO 10.5 Use the following information relating to Medinas Company to calculate the inventory turnover ratio, gross margin, and the number of days' sales in inventory ratio, for years 2022 and 2023.

	Sales	Cost of Goods Sold	Average Inventory
Year 2021	$ 75,000	$52,500	$ 8,000
Year 2022	90,000	63,000	9,500
Year 2023	100,000	70,000	11,000

Thought Provokers

TP1. LO 10.1 Search the SEC website (https://www.sec.gov/edgar/searchedgar/companysearch.html) and locate the latest Form 10-K for a company you would like to analyze. When you are choosing, make sure the company sells a product (has inventory on the balance sheet and cost of goods sold on the income statement). Submit a short memo that states the following:

a. The name and ticker symbol of the company you have chosen.
b. Answer the following questions from the company's statement of Form 10-K financial statements:
    - What amount of merchandise inventory does the company report on their balance sheet?
    - What amount of cost of goods sold does the company report on their income statement?

Provide the weblink to the company's Form 10-K, to allow accurate verification of your answers.

TP2. LO 10.2 Assume your company uses the periodic inventory costing method, and the inventory count left out an entire warehouse of goods that were in stock at the end of the year, with a cost value of $222,000. How will this affect your net income in the current year? How will it affect next year's net income?

TP3. LO 10.3 Search the internet for recent news items (within the past year) relating to inventory issues. Submit a short memo describing what you found and explaining why it is important to the future of inventory accounting or management. For example, this can be related to technology, bar code, RFID, shipping, supply chain, logistics, or other inventory-related topics that are currently trending. Provide the weblink to the source of your information.

TP4. LO 10.3 Search the internet for information about the technological breakthrough relating to inventory issues, referred to as the Internet of Things (IoT). How do you think the development of such technology will change the way accountants manage inventory in the future? Provide the weblink to the source or sources of your information.

TP5. LO 10.4 Consider the dilemma you might someday face if you are the CFO of a company that is struggling to satisfy investors, creditors, stockholders, and internal company managers. All of these financial statement users are clamoring for higher profits and more net assets (also known as equity). If at some point, you suddenly found yourself not meeting the internal and external earnings and equity targets that these parties expect, you would probably search for some way to make the financial statements look better. What if your boss, the CEO, suggested that maybe you should make just one simple journal entry to record all the goods that your company is holding on consignment, as if that significant amount of goods were owned by your company? She might say that this action on your part would fix a lot of problems at once, since adding the consigned goods to merchandise inventory would simultaneously increase net assets on the balance sheet *and* increase net income on the income statement (since it would decrease cost of goods sold). How would you respond to this request?

Write a memo, detailing your willingness or not to embrace this suggestion, giving reasons behind your decision. Remember to exercise diplomacy, even if you must dissent from the opinion of a supervisor. Note that the challenge of the assignment is to keep your integrity intact while also keeping your job, if possible.

TP6. LO 10.5 Use a spreadsheet and the following excerpts from Hileah Company's financial information to build a template that automatically calculates (A) inventory turnover and (B) number of days' sales in inventory, for the year 2018.

	12/31/18	**12/31/17**
Cash	$10,000	$14,000
Accounts receivable	22,000	17,000
Merchandise inventory	15,900	14,200
Total assets	47,900	45,200
Accounts payable	4,500	5,500
Common stock	10,000	10,000
Retained earnings	33,400	29,700
Total liabilities and equity	47,900	45,200
Additional information		
Cost of goods sold	177,000	

TP7. LO 10.5 Search the SEC website (https://www.sec.gov/edgar/searchedgar/companysearch.html) and locate the latest Form 10-K for a company you would like to analyze. Submit a short memo that states the following:

a. The name and ticker symbol of the company you have chosen.
b. Describe two items relating to inventory from the company's notes to financial statements:
    - one familiar item that you expected to be in the notes to the financial statement, based on this chapter's coverage; and
    - one unfamiliar item that you did not expect to be in the notes to the financial statements.
c. Provide the weblink to the company's Form 10-K, to allow accurate verification of your answers.

12 Current Liabilities

Figure 12.1 Summer Eatery. Proper management of short-term obligations can lead to long-term business success. (credit: modification of "iy5858.JPG" by Mark Goebel/Flickr, CC BY 2.0)

Chapter Outline

Why It Matters

Willow knew from a young age that she had a future in food. She has just transformed her passion into a thriving business venture as the owner of a small restaurant called Summer Eatery.

To grow her business, Willow has decided to provide both restaurant dining and catering services. When Summer Eatery accepts catering orders, it requires a client deposit equal to 50% of the total order. Since Summer Eatery has not yet provided the catering services at the time of deposit, the deposit amount is recognized as unearned revenue. Once the catering services have been provided, this liability to the client is reclassified as revenue for the restaurant.

The catering service is a success, and Summer Eatery's income increases twofold. The increase in business has allowed Willow to form a strong relationship with her vendors (suppliers). Because of this relationship, some suppliers will deliver the food and equipment she needs and allow the restaurant to defer payment until a later date. This helps Summer Eatery because it does not yet have enough cash on hand to pay for the food and equipment. Rather than incur more debt, or have to delay ordering, this arrangement allows Willow to

grow and still meet her current obligations.

It takes more than an idea to make a business grow, and Willow will continue to experience the ebb and flow of running a restaurant and catering service. Her management of short-term obligations will be one of the keys to Summer Eatery's future success.

12.1 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 Liabilities emphasizes long-term liabilities.

Fundamentals of Current Liabilities

Current liabilities are debts and obligations 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

Table 12.1 A delineator between current and noncurrent liabilities is one year or the company's operating period, whichever is longer.

Current vs. Noncurrent Liabilities

Current Liabilities	Noncurrent Liabilities
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

Table 12.1 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

SI 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 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 payment made in advance of receiving a product or service from 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). 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

Notes 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:

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		

In our example this would be

$$\$20{,}000 \times 9\% \times \frac{1}{12} = \$150$$

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

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/amazon-unearned-revenue-growth-shows-why-it-spent-more-on-shipping-last-quarter-2016-4

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 Explain the pricing of long-term liabilities that are not operating in nature 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.

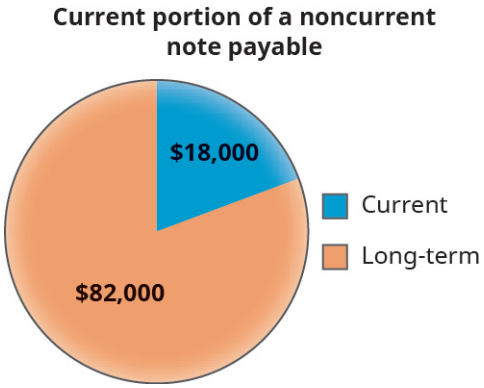


Figure 12.4 Current Portion of a Noncurrent Note Payable. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

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.

$$\textbf{Interest Payable} = \textbf{Annual Interest Rate} \times \textbf{Loan Principal} \times \textbf{Part of Year}$$

$$\textbf{Part of Year} = \frac{\textbf{Number of Months of Accrued Interest}}{\textbf{12 Months}}$$

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

$$\$100{,}000 \times 7\% \times \frac{6}{12} = \$3{,}500$$

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.

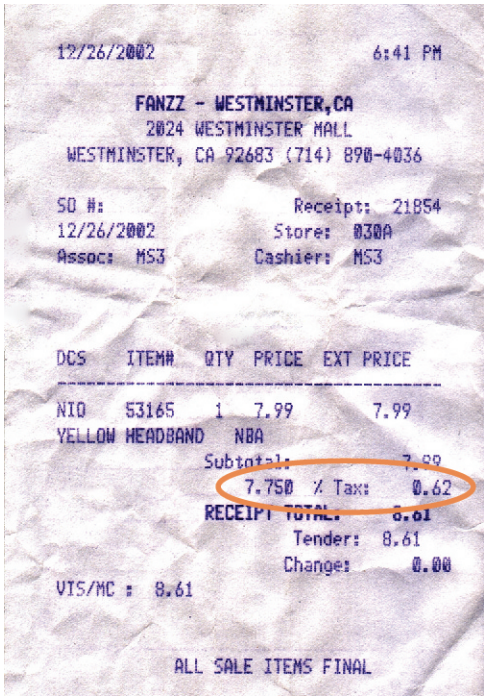


Figure 12.5 Sales Tax. Many businesses are required to charge a sales tax on products or services sold.

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 (https://openstax.org/l/50IRSTaxCalc) to determine their estimated sales tax obligation owed to the state and local government authority.

12.2 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.

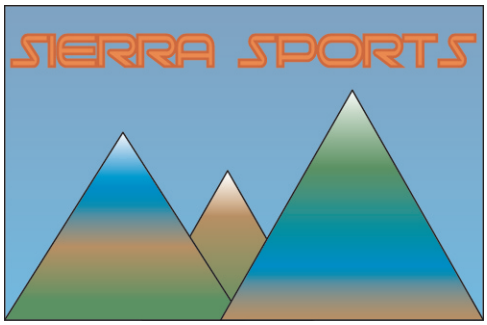


Figure 12.6 Sierra Sports Logo. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

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 Accounts Payable *To recognize the purchase of equipment on credit, terms 2/10, n/30, invoice date Aug. 1*	12,000	 12,000

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 Inventory Cash *To recognize payment of the amount due, less discount*	12,000	 240 11,760

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 Inventory *To recognize return of inventory purchased*	1,000	 1,000

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 Inventory Cash *To recognize payment of remaining accounts payable balance after qualifying for the discount*	11,000	 220 10,780

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 Cash *To recognize payment of the amount due, no discount applied*	12,000	 12,000

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	600	
	Unearned Revenue: Uniforms		600
	To recognize advanced payment on credit for 20 uniforms (5/10, n/30)		

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 options are about to vest, companies are more likely to present financial statements meeting or just slightly beating the earnings forecasts of analysts[2] : "Where there's revenue-recognition deviation, there could be fraud. 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 Notes Payable *To recognize long-term loan, interest rate 9%*	360,000	360,000

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.

2 Jena McGregor. "How Stock Options Lead CEOs to Put Their Own Interests First." *Washington Post*. February 11, 2014. https://www.washingtonpost.com/news/on-leadership/wp/2014/02/11/how-stock-options-lead-ceos-to-put-their-own-interests-first/?utm_term=.24d99a4fb1a5

3 Douglas R. Carmichael. "Hocus-Pocus Accounting." *Journal of Accountancy*. October 1, 1999. https://www.journalofaccountancy.com/issues/1999/oct/carmichl.html

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Mar. 31	Interest Expense Interest Payable *To recognize interest accumulated after three months*	8,100	8,100

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 Cash *To recognize interest payment for 2017*	32,400	32,400

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 Cash *To recognize current principal payment for 2017*	18,000	18,000

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 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		

12.3 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.

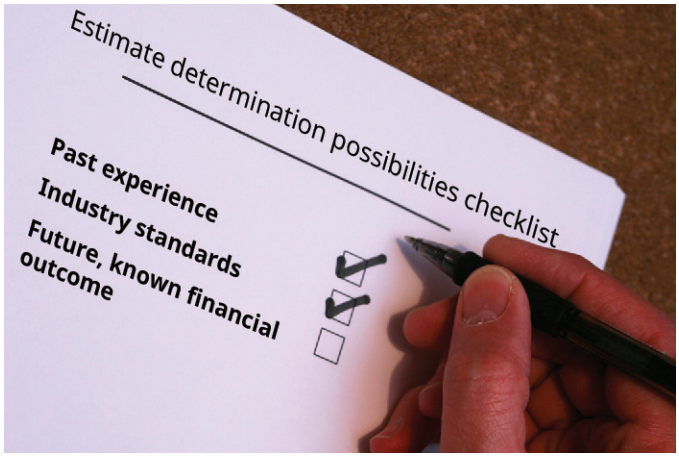


Figure 12.9 Contingent Liabilities Estimation Checklist. These are possible ways to determine a contingent liability financial estimate. (credit: modification of "Checklist" by Alan Cleaver/Flickr, CC BY 2.0)

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 Allowance for Warranty Expense *Anticipated future warranty expense allowance*	5,000	5,000

Next, here is the journal entry to record the repairs in 2020.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
2020	Allowance for Warranty Expense Repair Parts Inventory *To reflect the repair of goals under warranty*	2,800	2,800

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

Table 12.2 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 (https://openstax.org/l/50Alphabet2017) 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 Warranty Liability *To recognize estimated warranty liability for soccer goals*	420	420

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 Warranty Liability *To recognize estimated warranty liabilities for soccer goals as a percentage of sales*	120	120

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 Parts: Screws *To record an honored warranty for soccer goals*	420	420

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 Parts: Screws *To recognize an honored warranty for soccer goals at 10% of sales*	120	120

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 12.10 and 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 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 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.

12.4 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 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.

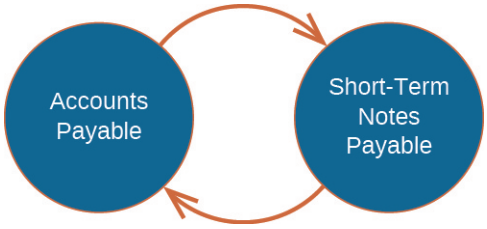


Figure 12.13 Accounts Payable Conversion. Accounts Payable may be converted into a short-term notes payable, if there is a default on payment. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

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 Short-Term Notes Payable *To record conversion of Accounts Payable to short-term note, terms two-month repayment, 10% interest*	12,000	12,000

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 Interest Expense Cash *To record payment for short-term note, with interest*	12,000 200	12,200

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: modification of "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 Short-Term Notes Payable *To record short-term loan, 12% interest, payable in three months*	150,000	150,000

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 Interest Expense Cash *To record short-term loan, 12% interest, payable in three months*	150,000 4,500	154,500

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 (https://openstax.org/l/50LoanCalc) to provide more information.

12.5 Record Transactions Incurred in Preparing Payroll

Have you ever looked at your paycheck and wondered where all the money went? Well, it did not disappear; the money was used to contribute required and optional financial payments to various entities.

Payroll can be one of the largest expenses and potential liabilities for a business. Payroll liabilities include employee salaries and wages, and deductions for taxes, benefits, and employer contributions. In this section, we explain these elements of payroll and the required journal entries.

Employee Compensation and Deductions

As an employee working in a business, you receive compensation for your work. This pay could be a monthly salary or hourly wages paid periodically. The amount earned by the employee before any reductions in pay occur is considered **gross income (pay)**. These reductions include involuntary and voluntary deductions. The remaining balance after deductions is considered **net income (pay)**, or "take-home-pay." The take-home-pay is what employees receive and deposit in their bank accounts.

Involuntary Deductions

Involuntary deductions are withholdings that neither the employer nor the employee have control over and are required by law.

Federal, state, and local income taxes are considered involuntary deductions. Income taxes imposed are different for every employee and are based on their W-4 Form, the Employee's Withholding Allowance Certificate. An employee will fill in his or her marital status, number of allowances requested, and any additional reduction amounts. The employer will use this information to determine the **federal income tax withholding** amount from each paycheck. **State income tax withholding** may also use W-4 information or the state's withholdings certificate. The federal income tax withholding and state income tax withholding amounts can be established with tax tables published annually by the Internal Revenue Service (IRS) (see Figure 12.15) and state government offices, respectively. Some states though do not require an income tax withholding, since they do not impose a state income tax. Federal and state income liabilities are held in payable accounts until disbursement to the governmental bodies that administer the tax compliance process

for their particular governmental entity.

Wage Bracket Method Tables for Income Tax Withholding

SINGLE Persons—**MONTHLY** Payroll Period

(For Wages Paid through December 31, 2018)

And the wages are–		And the number of withholding allowances claimed is—										
At least	But less than	0	1	2	3	4	5	6	7	8	9	10
		The amount of income tax to be withheld is—										
$ 0	**$305**	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
305	**325**	1	0	0	0	0	0	0	0	0	0	0
325	**345**	3	0	0	0	0	0	0	0	0	0	0
345	**365**	5	0	0	0	0	0	0	0	0	0	0
365	**385**	7	0	0	0	0	0	0	0	0	0	0
385	**405**	9	0	0	0	0	0	0	0	0	0	0
405	**425**	11	0	0	0	0	0	0	0	0	0	0
425	**445**	13	0	0	0	0	0	0	0	0	0	0
445	**465**	15	0	0	0	0	0	0	0	0	0	0
465	**485**	17	0	0	0	0	0	0	0	0	0	0
485	**505**	19	0	0	0	0	0	0	0	0	0	0
505	**525**	21	0	0	0	0	0	0	0	0	0	0
525	**545**	23	0	0	0	0	0	0	0	0	0	0
545	**565**	25	0	0	0	0	0	0	0	0	0	0
565	**585**	27	0	0	0	0	0	0	0	0	0	0
585	**605**	29	0	0	0	0	0	0	0	0	0	0
605	**645**	32	0	0	0	0	0	0	0	0	0	0
645	**685**	36	1	0	0	0	0	0	0	0	0	0
685	**725**	40	5	0	0	0	0	0	0	0	0	0
725	**765**	44	9	0	0	0	0	0	0	0	0	0
765	**805**	48	13	0	0	0	0	0	0	0	0	0
805	**845**	52	17	0	0	0	0	0	0	0	0	0
845	**885**	56	21	0	0	0	0	0	0	0	0	0
885	**925**	60	25	0	0	0	0	0	0	0	0	0
925	**965**	64	29	0	0	0	0	0	0	0	0	0
965	**1,005**	68	33	0	0	0	0	0	0	0	0	0
1,005	**1,045**	72	37	3	0	0	0	0	0	0	0	0
1,045	**1,085**	76	41	7	0	0	0	0	0	0	0	0
1,085	**1,125**	80	45	11	0	0	0	0	0	0	0	0
1,125	**1,165**	85	49	15	0	0	0	0	0	0	0	0
1,165	**1,205**	89	53	19	0	0	0	0	0	0	0	0
1,205	**1,245**	94	57	23	0	0	0	0	0	0	0	0
1,245	**1,285**	99	61	27	0	0	0	0	0	0	0	0
1,285	**1,325**	104	65	31	0	0	0	0	0	0	0	0
1,325	**1,365**	109	69	35	0	0	0	0	0	0	0	0
1,365	**1,405**	113	73	39	4	0	0	0	0	0	0	0
1,405	**1,445**	118	77	43	8	0	0	0	0	0	0	0
1,445	**1,485**	123	81	47	12	0	0	0	0	0	0	0
1,485	**1,525**	128	86	51	16	0	0	0	0	0	0	0
1,525	**1,565**	133	91	55	20	0	0	0	0	0	0	0
1,565	**1,605**	137	96	59	24	0	0	0	0	0	0	0
1,605	**1,645**	142	101	63	28	0	0	0	0	0	0	0
1,645	**1,685**	147	105	67	32	0	0	0	0	0	0	0
1,685	**1,725**	152	110	71	36	1	0	0	0	0	0	0
1,725	**1,765**	157	115	75	40	5	0	0	0	0	0	0
1,765	**1,805**	161	120	79	44	9	0	0	0	0	0	0
1,805	**1,845**	166	125	83	48	13	0	0	0	0	0	0
1,845	**1,885**	171	129	88	52	17	0	0	0	0	0	0
1,885	**1,925**	176	134	93	56	21	0	0	0	0	0	0
1,925	**1,965**	181	139	98	60	25	0	0	0	0	0	0
1,965	**2,005**	185	144	102	64	29	0	0	0	0	0	0
2,005	**2,045**	190	149	107	68	33	0	0	0	0	0	0
2,045	**2,085**	195	153	112	72	37	3	0	0	0	0	0
2,085	**2,125**	200	158	117	76	41	7	0	0	0	0	0
2,125	**2,165**	205	163	122	80	45	11	0	0	0	0	0
2,165	**2,205**	209	168	126	85	49	15	0	0	0	0	0
2,205	**2,245**	214	173	131	90	53	19	0	0	0	0	0
2,245	**2,285**	219	177	136	94	57	23	0	0	0	0	0
2,285	**2,325**	224	182	141	99	61	27	0	0	0	0	0
2,325	**2,365**	229	187	146	104	65	31	0	0	0	0	0
2,365	**2,405**	233	192	150	109	69	35	0	0	0	0	0
2,405	**2,445**	238	197	155	114	73	39	4	0	0	0	0
2,445	**2,485**	243	201	160	118	77	43	8	0	0	0	0
2,485	**2,525**	248	206	165	123	82	47	12	0	0	0	0
2,525	**2,565**	253	211	170	128	87	51	16	0	0	0	0
2,565	**2,605**	257	216	174	133	91	55	20	0	0	0	0
2,605	**2,645**	262	221	179	138	96	59	24	0	0	0	0
2,645	**2,685**	267	225	184	142	101	63	28	0	0	0	0
2,685	**2,725**	272	230	189	147	106	67	32	0	0	0	0
2,725	**2,765**	277	235	194	152	111	71	36	2	0	0	0

Page 60 **Publication 15 (2018)**

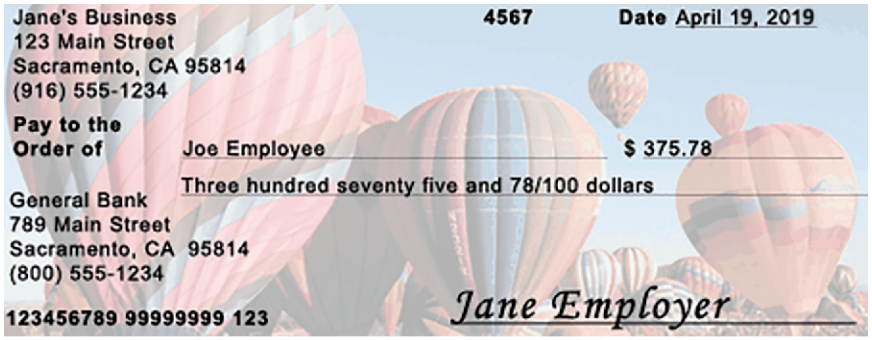
Figure 12.15 Wage Bracket Tax Withholding Table: Single Persons (2017). These are the monthly tax withholding amounts recommended by the IRS for wages earned by single persons in 2017. (credit:

modification of “Employer's Tax Guide” by Department of the Treasury Internal Revenue Service, Public Domain)

While not a common occurrence, **local income tax withholding** is applied to those living or working within a jurisdiction to cover schooling, social services, park maintenance, and law enforcement. If local income taxes are withheld, these remain current liabilities until paid.

Other involuntary deductions involve **Federal Insurance Contribution Act (FICA) taxes** for Social Security and Medicare. FICA mandates employers to withhold taxes from employee wages “to provide benefits for retirees, the disabled, and children.” The **Social Security tax rate** is 6.2% of employee gross wages. As of 2017, there is a maximum taxable earnings amount of $127,200. Meaning, only the first $127,200 of each employee’s gross wages has the Social Security tax applied. In 2018, the maximum taxable earnings amount increased to $128,400. The **Medicare tax rate** is 1.45% of employee gross income. There is no taxable earnings cap for Medicare tax. The two taxes combined equal 7.65% (6.2% + 1.45%). Both the employer and the employee pay the two taxes on behalf of the employee.

More recent health-care legislation, the Affordable Care Act (ACA), requires an **Additional Medicare Tax** withholding from employee pay of 0.9% for individuals who exceed an income threshold based on their filing status (married, single, or head of household, for example). This Additional Medicare Tax withholding is only applied to employee payroll.



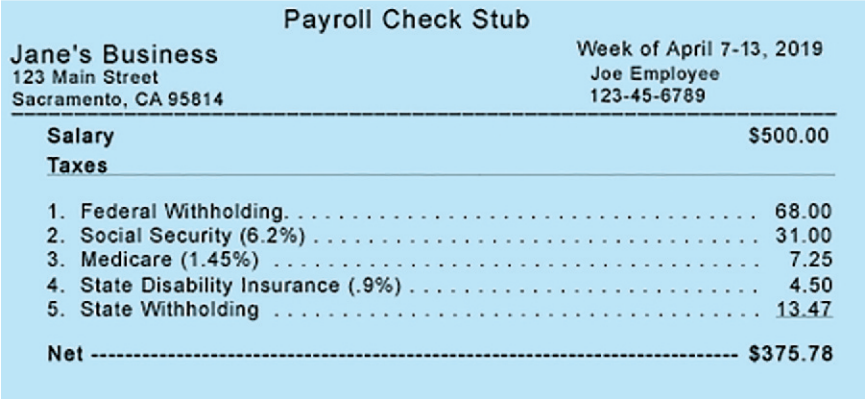


Figure 12.16 FICA Social Security and FICA Medicare Taxes. Deductions to payroll include FICA Social Security and FICA Medicare taxes. (credit: modification of work by California Tax Service Center, State of California/CA.gov, Public Domain)

Last, involuntary deductions may also include child support payments, IRS federal tax levies, court-ordered wage garnishments, and bankruptcy judgments. All involuntary deductions are an employer's liability until they are paid.

Voluntary Deductions

In addition to involuntary deductions, employers may withhold certain **voluntary deductions** from employee wages. Voluntary deductions are not required to be removed from employee pay unless the employee designates reduction of these amounts. Voluntary deductions may include, but are not limited to, health-care coverage, life insurance, retirement contributions, charitable contributions, pension funds, and union dues. Employees can cover the full cost of these benefits or they may cost-share with the employer.

Health-care coverage is a requirement for many businesses to provide as a result of the ACA. Employers may provide partial benefit coverage and request the employee to pay the remainder. For example, the employer would cover 30% of health-care cost, and 70% would be the employee's responsibility.

Retirement contributions may include those made to an employer-sponsored plan, such as a **defined contribution plan**, which "shelters" the income in a 401(k) or a 403(b). In simple terms, a defined contribution plan allows an employee to voluntarily contribute a specified amount or percentage of his or her pretax wages to a special account in order to defer the tax on those earnings. Usually, a portion of the employee's contribution is matched by his or her employer; employers often use this as an incentive to attract and keep highly skilled and valuable employees. Only when the employee eventually withdraws funds from the plan will he or she be required to pay the tax on those earnings. Because the amount contributed to the plan is not immediately taxed by the IRS, it enables the employee to accumulate funds for his or her retirement. This deferred income may be excluded from the employee's current federal taxable income but not FICA taxes. All voluntary deductions are considered employer liabilities until remitted. For more in-depth information on retirement planning, and using a 401(k) or a 403(b), refer to Appendix C.

Figure 12.17 Retirement Savings. Defined contribution plans can help you save for retirement. (credit: modification of "Money Coin Investment" by "nattanan23"/Pixabay, CC0)

As with involuntary deductions, voluntary deductions are held as a current liability until paid. When payroll is disbursed, journal entries are required.

CONCEPTS IN PRACTICE

Should You Start Saving for Retirement?

Should you save for retirement now or wait? As a student, you may be inclined to put off saving for retirement for many reasons. You may not be in a financial position to do so, you believe Social Security will be enough to cover your needs, or you may not have even thought about it up to this point.

According to a 2012 survey from the Bureau of Labor Statistics, of those who had access to a defined contribution plan, only 68% of employees contributed to their retirement plan. Many employees wait until their mid-thirties or forties to begin saving, and this can delay retirement, or may leave the retiree unable to cover his or her annual expenses. Some pitfalls contributing to this lack of saving are short-term negative spending practices such as high-interest loan debt, credit card purchases, and discretionary spending (optional expenses such as eating out or entertainment). To avoid these hazards, you should

1. Analyze your spending habits and make changes where possible.
2. Develop a financial plan with the help of a finance specialist.
3. Join a defined contribution plan and stick with the plan (do not withdraw funds early).
4. Try to contribute at least as much as your employer is willing to match.
5. Consider other short-term savings options like bonds, or high-interest bank accounts.
6. Have a specific savings goal for your retirement account. For example, many financial advisors recommend saving at least 15% of your monthly income for retirement. However, they usually include both the employee's contribution and the employer's. For example, assume that the company matches each dollar invested by the employee with a $0.50 contribution from the employer, up to 8% for the employee. In this case, if the employee contributes 8% and the company provides 4%, that takes the employee to 80% of the recommended goal (12% of the recommended 15%).

Remember, the longer you wait to begin investing, the more you will have to save later on to have enough for retirement.

Journal Entries to Report Employee Compensation and Deductions

We continue to use Sierra Sports as our example company to prepare journal entries.

Sierra Sports employs several people, but our focus is on one specific employee for this example. Billie Sanders works for Sierra Sports and earns a salary each month of $2,000. She claims two withholdings allowances (see Figure 12.15). This amount is paid on the first of the following month. Withholdings for federal and state income taxes are assessed in the amount of $102 and $25, respectively. FICA Social Security is taxed at the 6.2% rate, and FICA Medicare is taxed at the 1.45% rate. Billie has voluntary deductions for health insurance and a 401(k) retirement contribution. She is responsible for 40% of her $500 health-care insurance premium;

Sierra Sports pays the remaining 60% (as explained in employer payroll). The 401(k) contributions total $150. The first entry records the salaries liability during the month of August.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Aug. 31	Salaries Expense	2,000	
	FICA Social Security Tax Payable		124
	FICA Medicare Tax Payable		29
	Federal Income Tax Payable		102
	State Income Tax Payable		25
	Health Insurance Payable		200
	401(k) Retirement Plan Payable		150
	Salaries Payable		1,370
	To recognize employee payroll for August		

Salaries Expense is an equity account used to recognize the accumulated (accrued) expense to the business during August (increase on the debit side). Salaries Expense represents the employee's gross income (pay) before any deductions. Each deduction liability is listed in its own account; this will help for ease of payment to the different entities. Note that Health Insurance Payable is in the amount of $200, which is 40% of the employee's responsibility for the premium ($500 × 0.40 = $200). Salaries Payable represents net income (pay) or the "take-home pay" for Billie. Salaries Payable is $1,370, which is found by taking gross income and subtracting the sum of the liabilities ($2,000 – $630 = $1,370). Since salaries are not paid until the first of the following month, this liability will remain during the month of August. All liabilities (payables) increase due to the company's outstanding debt (increase on the credit side).

The second entry records cash payment of accumulated salaries on September 1.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Aug. 31	Salaries Payable	1,370	
	Cash		1,370
	To record payment of accrued salaries		

Payment to Billie Sanders occurs on September 1. The payment is for salaries accumulated from the month of August. The payment decreases Salaries Payable (debit side) since the liability was paid and decreases Cash (credit side), because cash is the asset used for payment.

LINK TO LEARNING

The IRS has developed a simulation database with twenty different taxpayer simulations (https://openstax.org/l/50TaxSim) to help taxpayers understand their tax returns and withholdings.

Employer Compensation and Deductions

At this point you might be asking yourself, "why am I having to pay all of this money and my employer isn't?" Your employer also has a fiscal and legal responsibility to contribute and match funds to certain payroll liability accounts.

Involuntary Payroll Taxes

Employers must match employee contributions to FICA Social Security (6.2% rate) on the first $127,200 of employee wages for 2017, and FICA Medicare (1.45% rate) on all employee earnings. Withholdings for these taxes are forwarded to the same place as employee contributions; thus, the same accounts are used when recording journal entries.

Employers are required by law to pay into an unemployment insurance system that covers employees in case of job disruption due to factors outside of their control (job elimination from company bankruptcy, for example). The tax recognizing this required payment is the **Federal Unemployment Tax Act (FUTA)**. FUTA is at a rate of 6%. This tax applies to the initial $7,000 of each employee's wages earned during the year. This rate may be reduced by as much as 5.4% as a credit for paying into state unemployment on time, producing a lower rate of 0.6%. The **State Unemployment Tax Act (SUTA)** is similar to the FUTA process, but tax rates and minimum taxable earnings vary by state.

Figure 12.18 Unemployment Support. Two common employer payroll deductions are federal and state unemployment taxes. (credit: "Laptop" by Unknown/pxhere, CC0)

Voluntary Benefits Provided by the Employer

Employers offer competitive advantages (benefits) to employees in an effort to improve job satisfaction and increase employee morale. There is no statute mandating the employer cover these benefits financially. Some possible benefits are health-care coverage, life insurance, contributions to retirement plans, paid sick leave, paid maternity/paternity leave, and **vacation compensation**.

Paid sick leave, paid maternity/paternity leave, and vacation compensation help employees take time off when needed or required by providing a stipend while the employee is away. This compensation is often comparable to the wages or salary for the covered period. Some companies have policies that require vacation and paid sick leave to be used within the year or the employee risks losing that benefit in the current period. These benefits are considered estimated liabilities since it is not clear when, if, or how much the employee will use them. Let's now see the process for journalizing employer compensation and deductions.

Figure 12.19 Employer-Provided Benefit. Providing employees with vacation benefits can increase job satisfaction. (credit: "Ellie relaxes by the palm tree" Darren Foreman/Flickr, CC BY 2.0)

Journal Entries to Report Employer Compensation and Deductions

In addition to the employee payroll entries for Billie Sanders, Sierra Sports has an obligation to contribute taxes to federal unemployment, state unemployment, FICA Social Security, and FICA Medicare. They are also responsible for 60% of Billie's health insurance premium payment. Assume Sierra Sports receives the FUTA credit and is only taxed at the rate of 0.6%, and SUTA taxes are $100. August is Billie Sanders' first month of pay for the year. The following entry represents the employer payroll liabilities and expense for the month of August. The second entry records the health insurance premium liability.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Aug. 31	Employer Payroll Taxes Expense	265	
	Federal Unemployment Tax Payable		12
	State Unemployment Tax Payable		100
	FICA Social Security Tax Payable		124
	FICA Medicare Tax Payable		29
	To recognize employer payroll liabilities for August		
Aug. 31	Benefits Expense	300	
	Health Insurance Payable		300
	To recognize employer benefit liabilities for August		

Employer Payroll Tax Expense is the equity account used to recognize payroll expenses during the period (increases on the debit side). The amount of $265 is the sum of all liabilities from that period. Notice that FICA Social Security Tax Payable and FICA Medicare Tax Payable were used in the employee payroll entry earlier and again here in the employer payroll. You only need to use one account if the payments are for the same recipient and purpose. The amounts of Social Security ($124) and Medicare ($29) taxes withheld match the amounts withheld from employee payroll. Federal Unemployment Tax Payable and State Unemployment Tax Payable recognize the liabilities for federal and state unemployment deductions, respectively. The federal

unemployment tax ($12) is computed by multiplying the federal unemployment tax rate of 0.6% by $2,000. These liability accounts increase (credit side) when the amount owed increases.

The second entry recognizes the liability created from providing the voluntary benefit, health insurance coverage. Voluntary and involuntary employer payroll items should be separated. It is also important to separate estimated liabilities from certain voluntary benefits due to their uncertainty. Benefits Expense recognizes the health insurance expense from August. Health Insurance Payable recognizes the outstanding liability for health-care coverage covered by the employer ($500 × 60% = $300).

The following entries represent payment of the employer payroll and benefit liabilities in the following period.

JOURNAL			
Date	**Account**	**Debit**	**Credit**
Aug. 31	Federal Unemployment Tax Payable	12	
	State Unemployment Tax Payable	100	
	FICA Social Security Tax Payable	124	
	FICA Medicare Tax Payable	29	
	Cash		265
	To recognize payment of employer payroll liabilities		
Aug. 31	Health Insurance Payable	300	
	Cash		300
	To record payment of accrued health insurance premiums		

When payment occurs, all payable accounts decrease (debit) because the company paid all taxes and benefits owed for those liabilities. Cash is the accepted form of payment at the payee organizations (Social Security Administration, and health plan administrator, for example).

LINK TO LEARNING

The IRS oversees all tax-related activities on behalf of the US Department of the Treasury. In an effort to assist taxpayers with determining amounts they may owe, the IRS has established a withholdings calculator (https://openstax.org/l/50WitholdCalc) that can let an employee know if he or she needs to submit a new W-4 form to the employer based on the results.

Key Terms

account payable account for financial obligations to suppliers after purchasing products or services on credit

Additional Medicare Tax requirement for employers to withhold 0.9% from employee pay for individuals who exceed an income threshold based on their filing status

contingency current situation, where the outcome is unknown or uncertain and will not be resolved until a future point in time

contingent liability uncertain outcome to a current condition that could produce a future debt or negative obligation for the company

current liability debt and obligation due within a company's standard operating period

current portion of a note payable portion of a long-term note due during the company's current operating period

defined contribution plans money set aside and held in account for employee's retirement with possible contribution from employers

federal income tax withholding amount withheld from employee pay based on employee responses given on Form W-4

Federal Insurance Contribution Act (FICA) tax involuntary tax mandated by FICA that requires employers to withhold taxes from employee wages "to provide benefits for retirees, the disabled, and children"

Federal Unemployment Tax Act (FUTA) response to a law requiring employers to pay into a federal unemployment insurance system that covers employees in case of job disruption due to factors outside of their control

gross income (pay) amount earned by the employee before any reductions in pay occur due to involuntary and voluntary deductions

interest monetary incentive to the lender, which justifies loan risk

involuntary deduction withholding that neither the employer nor the employee have control over, and is required by law

likelihood of occurrence contingent liability must be recognized and disclosed if there is a probable liability determination before the preparation of financial statements has occurred

local income tax withholding applied to those living or working within a jurisdiction to cover schooling, social services, park maintenance, and law enforcement

measurement requirement company's ability to reasonably estimate the amount of loss

Medicare tax rate currently 1.45% of employee gross income with no taxable earnings cap

net income (pay) remaining employee earnings balance after involuntary and voluntary deductions from employee pay; also known as "take-home pay"

note payable debt to a lender with specific repayment terms, which can include principal and interest

principal initial borrowed amount of a loan, not including interest

probable and estimable contingent liability is likely to occur and can be reasonably estimated

probable and inestimable contingent liability is likely to occur but cannot be reasonably estimated

reasonably possible contingent liability could occur but is not probable

remote contingent liability is unlikely to occur

short-term note payable debt created and due within a company's operating period (less than a year)

Social Security tax rate currently 6.2% of employees gross wage earnings with a maximum taxable earnings amount of $127,200 in 2017 and $128,400 in 2018

state income tax withholding reduction to employee pay determined by responses given on Form W-4, or

on a state withholdings certificate

State Unemployment Tax Act (SUTA) response to a law requiring employers to pay into a state unemployment insurance system that covers employees in case of job disruption due to factors outside of their control

taxes payable liability created when a company collects taxes on behalf of employees and customers

unearned revenue customer payment made in advance of receiving a product or service from the company

vacation compensation stipend provided by the employer to employees when they take time off for vacation

voluntary deduction not required to be removed from employee pay unless the employee designates reduction of this amount

Summary

12.1 Identify and Describe Current Liabilities

- Current liabilities are debts or obligations that arise from past business activities and are due for payment within a company's operating period (one year). Common examples of current liabilities include accounts payable, unearned revenue, the current portion of a noncurrent note payable, and taxes payable.
- Accounts payable is used to record purchases from suppliers on credit. Accounts payable typically does not include interest payments.
- Unearned revenue is recorded when customers pay in advance for products or services before receiving their benefits. The company maintains the liability until services or products are rendered.
- Notes payable is a debt to a lender with specific repayment terms, which can include principal and interest. Interest accrued can be computed with the annual interest rate, principal loan amount, and portion of the year accrued.
- Employers withhold taxes from employees and customers for payment to government agencies at a later date, but within the business operating period. Common taxes are sales tax and federal, state, and local income taxes.

12.2 Analyze, Journalize, and Report Current Liabilities

- When the merchandiser initially pays the supplier on credit, it increases both Accounts Payable (a credit) and the appropriate merchandise Inventory account (a debit). When the amount due is later paid, it decreases both Accounts Payable (a debit) and Cash (a credit).
- When the company collects payment from a customer in advance of providing a product or service, it increases both Unearned Revenue (a credit) and Cash (a debit). When the company provides the product or service, Unearned Revenue decreases (a debit), and Revenue increases (a credit) to realize the amount earned.
- To recognize payment of the current portion of a noncurrent note payable, both Notes Payable and Cash would decrease, resulting in a debit and a credit, respectively. To recognize interest accumulation, both Interest Expense and Interest Payable would increase, resulting in a debit and a credit, respectively.
- To recognize sales tax in the initial sale to a customer, Cash or Accounts Receivable increases (a debit), and Sales Tax Payable increases (a credit), as does Sales (a credit). When the company remits the sales tax payment to the governing body, Sales Tax Payable decreases (a debit), as does Cash (a credit).

12.3 Define and Apply Accounting Treatment for Contingent Liabilities

- Contingent liabilities arise from a current situation with an uncertain outcome that may occur in the future. Contingent liabilities may include litigation, warranties, insurance claims, and bankruptcy.
- Two FASB recognition requirements must be met before declaring a contingent liability. There must be a

probable likelihood of occurrence, and the loss amount is reasonably estimated.

- The four contingent liability treatments are probable and estimable, probable and inestimable, reasonably possible, and remote.
- Recognition in financial statements, as well as a note disclosure, occurs when the outcome is probable and estimable. Probable and not estimable and reasonably possible outcomes require note disclosures only. There is not recognition or note disclosure for a remote outcome.

12.4 Prepare Journal Entries to Record Short-Term Notes Payable

- Short-term notes payable is a debt created and due within a company's operating period (less than a year). This debt includes a written promise to pay principal and interest.
- If a company does not pay for its purchases within a specified time frame, a supplier will convert the accounts payable into a short-term note payable with interest. When the company pays the amount owed, short-term notes payable and Cash will decrease, while interest expense increases.
- A company may borrow from a bank because it does not have enough cash on hand to pay for a capital expenditure or cover temporary expenses. The loan will consist of short-term repayment with interest, affecting short-term notes payable, cash, and interest expense.

12.5 Record Transactions Incurred in Preparing Payroll

- An employee's net income (pay) results from gross income (pay) minus any involuntary and voluntary deductions. Employee payroll deductions may include federal, state, and local income taxes; FICA Social Security; FICA Medicare; and voluntary deductions such as health insurance, retirement plan contributions, and union dues.
- When recording employee payroll liabilities, Salaries Expense, Salaries Payable, and all payables for income taxes, Social Security, Medicare, and voluntary deductions, are reported. When the company pays the accrued salaries, Salaries Payable is reduced, as is cash.
- Employers are required to match employee withholdings for Social Security and Medicare. They must also remit FUTA and SUTA taxes, as well as voluntary deductions and benefits provided to employees.
- When recording employer payroll liabilities, Employer Payroll Taxes Expense and all payables associated with FUTA, SUTA, Social Security, Medicare, and voluntary deductions are required. When the company pays all employer liabilities, each payable and cash account decreases.

Multiple Choice

1. LO 12.1 Which of the following is *not* considered a current liability?

A. Accounts Payable
B. Unearned Revenue
C. the component of a twenty-year note payable due in year 20
D. current portion of a noncurrent note payable

2. LO 12.1 A company regularly purchases materials from a manufacturer on credit. Payments for these purchases occur within the company's operating cycle. They do not include interest and are established with an invoice outlining purchase details, credit terms, and shipping charges. Which current liability situation does this best describe?

A. sales tax payable
B. accounts payable
C. unearned revenue
D. income taxes payable

3. LO 12.1 The following is selected financial data from Block Industries:

Cash	$20,000
Accounts receivable	13,400
Equipment	10,650
Prepaid expenses	5,000
Accounts payable	12,300
Unearned revenue	7,500
Long-term notes payable	10,000
Common stock	18,000
Revenue	11,700
Sales tax payable	6,000
Interest expense	4,500
Depreciation expense	1,000

How much does Block Industries have in current liabilities?

A. $19,800
B. $18,300
C. $12,300
D. $25,800

4. LO 12.1 A ski company takes out a $400,000 loan from a bank. The bank requires eight equal repayments of the loan principal, paid annually. Assume no interest is paid or accumulated on the loan until the final repayment. How much of the loan principal is considered a current portion of a noncurrent note payable in year 3?

A. $50,000
B. $150,000
C. $100,000
D. $250,000

5. LO 12.2 Nido Co. has a standing agreement with a supplier for purchasing car parts. The terms of the agreement are 3/15, n/30 from the invoice date of September 1. The company makes a purchase on September 1 for $5,000 and pays the amount due on September 13. What amount does Nido Co. pay in cash on September 13?

A. $5,000
B. $4,850
C. $150
D. $4,250

6. LO 12.2 A client pays cash in advance for a magazine subscription to *Living Daily*. *Living Daily* has yet to provide the magazine to the client. What accounts would *Living Daily* use to recognize this advance payment?

A. unearned subscription revenue, cash
B. cash, subscription revenue
C. subscription revenue, unearned subscription revenue
D. unearned subscription revenue, subscription revenue, cash

7. LO 12.2 Lime Co. incurs a $4,000 note with equal principal installment payments due for the next eight years. What is the amount of the current portion of the noncurrent note payable due in the second year?

A. $800
B. $1,000
C. $500
D. nothing, since this is a noncurrent note payable

8. LO 12.3 Which of the following best describes a contingent liability that is likely to occur but cannot be reasonably estimated?

A. reasonably possible
B. probable and estimable
C. probable and inestimable
D. remote

9. LO 12.3 Blake Department Store sells television sets with one-year warranties that cover repair and replacement of television parts. In the month of June, Blake sells forty television sets with a per unit cost of $500. If Blake estimates warranty fulfillment at 10% of sales, what would be the warranty liability reported in June?

A. $1,000
B. $2,000
C. $500
D. $20,000

10. LO 12.3 What accounts are used to record a contingent warranty liability that is probable and estimable but has yet to be fulfilled?

A. warranty liability and cash
B. warranty expense and cash
C. warranty liability and warranty expense, cash
D. warranty expense and warranty liability

11. LO 12.3 Which of the following best describes a contingent liability that is unlikely to occur?

A. remote
B. probable and estimable
C. reasonably possible
D. probable and inestimable

12. LO 12.4 Which of the following accounts are used when a short-term note payable with 5% interest is honored (paid)?

A. short-term notes payable, cash
B. short-term notes payable, cash, interest expense
C. interest expense, cash
D. short-term notes payable, interest expense, interest payable

13. LO 12.4 Which of the following is not a characteristic of a short-term note payable?

A. Payment is due in less than a year.
B. It bears interest.
C. It can result from an accounts payable conversion.
D. It is reported on the balance sheet under noncurrent liabilities.

14. LO 12.4 Sunlight Growers borrows $250,000 from a bank at a 4% annual interest rate. The loan is due in three months. At the end of the three months, the company pays the amount due in full. How much did the company remit to the bank?

A. $250,000
B. $10,000
C. $252,500
D. $2,500

15. LO 12.4 Marathon Peanuts converts a $130,000 account payable into a short-term note payable, with an annual interest rate of 6%, and payable in four months. How much interest will Marathon Peanuts owe at the end of four months?

A. $2,600
B. $7,800
C. $137,800
D. $132,600

16. LO 12.5 An employee earns $8,000 in the first pay period. The FICA Social Security Tax rate is 6.2%, and the FICA Medicare tax rate is 1.45%. What is the employee's FICA taxes responsibility?

A. $535.50
B. $612
C. None, only the employer pays FICA taxes
D. $597.50
E. $550

17. LO 12.5 Which of the following is considered an employer payroll tax?

A. FICA Medicare
B. FUTA
C. SUTA
D. A and B only
E. B and C only
F. A, B, and C

18. LO 12.5 Employees at Rayon Enterprises earn one day a month of vacation compensation (twelve days total each year). Vacation compensation is paid at an hourly rate of $45, based on an eight-hour work day. Rayon's first pay period is January. It is now April 30, how much vacation liability has accumulated if the company has four employees and no vacation compensation has been paid?

A. $1,440
B. $4,320
C. $5,760
D. $7,200

19. LO 12.5 An employee and employer cost-share health insurance. If the employee covers three-fourths of the cost and the employer covers the rest, what would be the employee's responsibility if the total premium was $825?

A. $618.75
B. $206.25
C. $412.50
D. $275

Questions

1. LO 12.1 Why is Accounts Payable classified as a current liability?

2. LO 12.1 On which financial statement are current liabilities reported?

3. LO 12.1 What is the difference between a noncurrent liability and a current liability?

4. LO 12.1 How is the sales tax rate usually determined? Does the company get to keep the sales tax as earned revenue?

5. LO 12.2 If Bergen Air Systems takes out a $100,000 loan, with eight equal principal payments due over the next eight years, how much will be accounted for as a current portion of a noncurrent note payable each year?

6. LO 12.2 What amount is payable to a state tax board if the original sales price is $3,000, and the tax rate is 3.5%?

7. LO 12.2 What specific accounts are recognized when a business purchases equipment on credit?

8. LO 12.3 What is a contingent liability?

9. LO 12.3 What are the two FASB required conditions for a contingent liability to be recognized?

10. LO 12.3 If a bankruptcy is deemed likely to occur and is reasonably estimated, what would be the recognition and disclosure requirements for the company?

11. LO 12.3 Name the four contingent liability treatments.

12. LO 12.3 A company's sales for January are $250,000. If the company projects warranty obligations to be 5% of sales, what is the warranty liability amount for January?

13. LO 12.4 What is a key difference between a short-term note payable and a current portion of a noncurrent note payable?

14. LO 12.4 What business circumstance could bring about a short-term note payable created from a purchase?

15. LO 12.4 What business circumstance could produce a short-term notes payable created from a loan?

16. LO 12.4 Jain Enterprises honors a short-term note payable. Principal on the note is $425,000, with an annual interest rate of 3.5%, due in 6 months. What journal entry is created when Jain honors the note?

17. LO 12.5 What are examples of involuntary deductions employers are required to collect for employee and employer payroll liabilities?

18. LO 12.5 What are the tax rates for FICA Social Security and FICA Medicare? What are the maximum taxable earnings amounts for each of these taxes?

19. LO 12.5 What are FUTA and SUTA taxes? Is there any possible reduction in the FUTA tax rate? If so, what is the reduction, and how is this determined?

20. LO 12.5 Use Figure 12.15 as a reference to answer the following questions.

A. If an employee makes $1,400 per month and files as single with no withholding allowances, what would be his monthly income tax withholding?
B. What would it be if an employee makes $2,500 per month and files as single with two withholding allowances?

Exercise Set A

EA1. LO 12.1 Campus Flights takes out a bank loan in the amount of $200,500 on March 1. The terms of the loan include a repayment of principal in ten equal installments, paid annually from March 1. The annual interest rate on the loan is 8%, recognized on December 31. (Round answers to the nearest whole dollar if needed.)

A. Compute the interest recognized as of December 31 in year 1 rounded to the whole dollar.
B. Compute the principal due in year 1.

EA2. LO 12.1 Consider the following accounts and determine if the account is a current liability, a noncurrent liability, or neither.

A. cash
B. federal income tax payable this year
C. long-term note payable
D. current portion of a long-term note payable
E. note payable due in four years
F. interest expense
G. state income tax

EA3. LO 12.1 Lamplight Plus sells lamps to consumers. The company contracts with a supplier who provides them with lamp fixtures. There is an agreement that Lamplight Plus is not required to provide cash payment immediately and instead will provide payment within thirty days of the invoice date.

Additional information:

- Lamplight purchases thirty light fixtures for $20 each on August 1, invoice date August 1, with no discount terms
- Lamplight returns ten light fixtures (receiving a credit amount for the total purchase price per fixture of $20 each) on August 3.
- Lamplight purchases an additional fifteen light fixtures for $15 each on August 19, invoice date August 19, with no discount terms.
- Lamplight pays $100 toward its account on August 22.

What amount does Lamplight Plus still owe to the supplier on August 30? What account is used to recognize this outstanding amount?

EA4. LO 12.2 Review the following transactions and prepare any necessary journal entries for Olinda Pet Supplies.

A. On March 2, Olinda Pet Supplies receives advance cash payment from a customer for forty dog food dishes (from their Dish inventory), costing $25 each. Olinda had yet to supply the dog food bowls as of March 2.
B. On April 4, Olinda provides all of the dog food bowls to the customer.

EA5. LO 12.2 Review the following transactions and prepare any necessary journal entries for Tolbert Enterprises.

A. On April 7, Tolbert Enterprises contracts with a supplier to purchase 300 water bottles for their merchandise inventory, on credit, for $10 each. Credit terms are 2/10, n/60 from the invoice date of April 7.
B. On April 15, Tolbert pays the amount due in cash to the supplier.

EA6. LO 12.2 Elegant Electronics sells a cellular phone on September 2 for $450. On September 6, Elegant sells another cellular phone for $500. Sales tax is computed at 3.5% of the total sale. Prepare journal entries for each sale, including sales tax, and the remittance of all sales tax to the tax board on October 23.

EA7. LO 12.2 Homeland Plus specializes in home goods and accessories. In order for the company to expand its business, the company takes out a long-term loan in the amount of $650,000. Assume that any loans are created on January 1. The terms of the loan include a periodic payment plan, where interest payments are accumulated each year but are only computed against the outstanding principal balance during that current period. The annual interest rate is 8.5%. Each year on December 31, the company pays down the principal balance by $80,000. This payment is considered part of the outstanding principal balance when computing the interest accumulation that also occurs on December 31 of that year.

A. Determine the outstanding principal balance on December 31 of the first year that is computed for interest.
B. Compute the interest accrued on December 31 of the first year.
C. Make a journal entry to record interest accumulated during the first year, but not paid as of December 31 of that first year.

EA8. LO 12.2 Bhakti Games is a chain of board game stores. Record entries for the following transactions related to Bhakti's purchase of inventory.

A. On October 5, Bhakti purchases and receives inventory from XYZ Entertainment for $5,000 with credit terms of 2/10 net 30.
B. On October 7, Bhakti returns $1,000 worth of the inventory purchased from XYZ.
C. Bhakti makes payment in full on its purchase from XYZ on October 14.

EA9. LO 12.3 Following is the unadjusted trial balance for Sun Energy Co. on December 31, 2017.

SUN ENERGY CO. Unadjusted Trial Balance Year Ended December 31, 2017		
Account	**Debit**	**Credit**
Cash	$ 5,000	
Account Receivable	2,000	
Merchandise Inventory	4,500	
Buildings	2,400	
Equipment	3,200	
Accounts Payable		$ 5,700
Salaries Payable		2,500
Common Stock		1,500
Dividends		
Sales Revenue		13,700
COGS	3,800	
Salaries Expense	2,500	
Totals	$23,400	$23,400

You are also given the following supplemental information: A pending lawsuit, claiming $2,700 in damages, is considered likely to favor the plaintiff and can be reasonably estimated. Sun Energy Co. believes a customer may win a lawsuit for $3,500 in damages, but the outcome is only reasonably possible to occur. Sun Energy calculated warranty expense estimates of $210.

A. Using the unadjusted trial balance and supplemental information for Sun Energy Co., construct an income statement for the year ended December 31, 2017. Pay particular attention to expenses resulting from contingencies.
B. Construct a balance sheet, for December 31, 2017, from the given unadjusted trial balance, supplemental information, and income statement for Sun Energy Co., paying particular attention to contingent liabilities.
C. Prepare any necessary contingent liability note disclosures for Sun Energy Co. Only give one to three sentences for each contingency note disclosure.

EA10. LO 12.4 Barkers Baked Goods purchases dog treats from a supplier on February 2 at a quantity of 6,000 treats at $1 per treat. Terms of the purchase are 2/10, n/30. Barkers pays half the amount due in cash on February 28 but cannot pay the remaining balance due in four days. The supplier renegotiates the terms on March 4 and allows Barkers to convert its purchase payment into a short-term note, with an annual interest rate of 6%, payable in 9 months.

Show the entries for the initial purchase, the partial payment, and the conversion.

EA11. LO 12.4 Use information from Exercise 66.. Compute the interest expense due when Barkers honors the note. Show the journal entry to recognize payment of the short-term note on December 4.

EA12. LO 12.4 Scrimiger Paints wants to upgrade its machinery and on September 20 takes out a loan from the bank in the amount of $500,000. The terms of the loan are 2.9% annual interest rate and payable in 8 months. Interest is due in equal payments each month.

Compute the interest expense due each month. Show the journal entry to recognize the interest payment on October 20, and the entry for payment of the short-term note and final interest payment on May 20. Round to the nearest cent if required.

EA13. LO 12.5 Following are payroll deductions for Mars Co. Classify each payroll deduction as either a voluntary or involuntary deduction. Record a (V) for voluntary and an (I) for involuntary.

Payroll Deductions

Payroll Deduction	Voluntary (V) or Involuntary (I)?
FICA Social Security Tax	
Vacation pay	
401(k) retirement plan contribution	
Charitable contributions	
Federal Unemployment Tax (FUTA)	
Health insurance plan contribution	
FICA Medicare Tax	
State Unemployment Tax (SUTA)	

Table 12.3

EA14. LO 12.5 Toren Inc. employs one person to run its solar management company. The employee's gross income for the month of May is $6,000. Payroll for the month of May is as follows: FICA Social Security tax rate at 6.2%, FICA Medicare tax rate at 1.45%, federal income tax of $400, state income tax of $75, health-care insurance premium of $200, and union dues of $50. The employee is responsible for covering 30% of his or her health insurance premium.

A. Record the journal entry to recognize employee payroll for the month of May, dated May 31, 2017.
B. Record remittance of the employee's salary with cash on June 1.

EA15. LO 12.5 In this exercise, you prepared the journal entries for the employee of Toren Inc. You have now been given the following additional information:

- May is the first pay period for this employee. FUTA taxes are 0.6% and SUTA taxes are 5.4% of the first $7,000 paid to the employee. FICA Social Security and FICA Medicare match employee deductions. The employer is responsible for 70% of the health insurance premium.

Using the information from this exercise and the additional information provided:

A. Record the employer payroll for the month of May, dated May 31, 2017.
B. Record the payment in cash of all employer liabilities only on June 1.

EA16. LO 12.5 An employee and employer cost-share pension plan contributions and health insurance premium payments. If the employee covers 35% of the pension plan contribution and 25% of the health insurance premium, what would be the employee's total benefits responsibility if the total pension contribution was $900, and the health insurance premium was $375?

Include the journal entry representing the payroll benefits accumulation for the employer in the month of February.

Exercise Set B

EB1. LO 12.1 Everglades Consultants takes out a loan in the amount of $375,000 on April 1. The terms of the loan include a repayment of principal in eight, equal installments, paid annually from the April 1 date. The annual interest rate on the loan is 5%, recognized on December 31. (Round answers to the nearest cent, if needed.)

A. Compute the interest recognized as of December 31 in year 1.
B. Compute the principal due in year 1.

EB2. LO 12.1 Match each of the following accounts with the appropriate transaction or description.

A. Sales Tax Payable	i. A customer pays in advance for services
B. Income Taxes Payable	ii. A risk incentive rate for a loan
C. Current portion of a long-term note payable	iii. State withholding from an employee's paycheck
D. Interest Payable	iv. The portion of a note due within the operating period
E. Accounts Payable	v. A credit line between a purchaser and a supplier
F. Unearned Revenue	vi. Extra tax collected on the sale of a product

EB3. LO 12.1 Pianos Unlimited sells pianos to customers. The company contracts with a supplier who provides it with replacement piano keys. There is an agreement that Pianos Unlimited is not required to provide cash payment immediately, and instead will provide payment within thirty days of the invoice date.

Additional information:

- Pianos Unlimited purchases 400 piano keys for $7 each on September 1, invoice date September 1, with discount terms 2/10, n/30.
- Pianos Unlimited returns 150 piano keys (receiving a credit amount for the total purchase price per key of $7 each) on September 8.
- The company purchases an additional 230 keys for $5 each on September 15, invoice date September 15, with no discount terms.
- The company pays 50% of the total amount due to the supplier on September 24.

What amount does Pianos Unlimited still owe to the supplier on September 30? What account is used to recognize this outstanding amount?

EB4. LO 12.2 Review the following transactions and prepare any necessary journal entries for Bernard Law Offices.

A. On June 1, Bernard Law Offices receives an advance cash payment of $4,500 from a client for three months of legal services.
B. On July 31, Bernard recognizes legal services provided.

EB5. LO 12.2 Review the following transactions and prepare any necessary journal entries for Lands Inc.

A. On December 10, Lands Inc. contracts with a supplier to purchase 450 plants for its merchandise inventory, on credit, for $12.50 each. Credit terms are 4/15, n/30 from the invoice date of December 10.
B. On December 28, Lands pays the amount due in cash to the supplier.

EB6. LO 12.2 Monster Drinks sells twenty-four cases of beverages on October 18 for $120 per case. On October 25, Monster sells another thirty-five cases for $140 per case. Sales tax is computed at 4% of the total sale. Prepare journal entries for each sale, including sales tax, and the remittance of all sales tax to the tax board on November 5.

EB7. LO 12.2 McMasters Inc. specializes in BBQ accessories. In order for the company to expand its business, they take out a long-term loan in the amount of $800,000. Assume that any loans are created on January 1. The terms of the loan include a periodic payment plan, where interest payments are accumulated each year but are only computed against the outstanding principal balance during that current period. The annual interest rate is 9%. Each year on December 31, the company pays down the principal balance by $50,000. This payment is considered part of the outstanding principal balance when computing the interest accumulation that also occurs on December 31 of that year.

A. Determine the outstanding principal balance on December 31 of the first year that is computed for interest.
B. Compute the interest accrued on December 31 of the first year.
C. Make a journal entry to record interest accumulated during the first year, but not paid as of December 31 of that first year.

EB8. LO 12.3 Following is the unadjusted trial balance for Pens Unlimited on December 31, 2017.

PENS UNLIMITED
Unadjusted Trial Balance
Year Ended December 31, 2017

Account	Debit	Credit
Cash	$ 8,500	
Account Receivable	3,000	
Merchandise Inventory	6,750	
Buildings	5,600	
Equipment	4,000	
Accounts Payable		$ 7,500
Salaries Payable		4,250
Common Stock		5,000
Dividends		
Sales Revenue		20,750
COGS	5,400	
Salaries Expense	4,250	
Totals	$37,500	$37,500

You are also given the following supplemental information: A pending lawsuit, claiming $4,200 in damages, is considered likely to favor the plaintiff and can be reasonably estimated. Pens Unlimited believes a customer may win a lawsuit for $5,000 in damages, but the outcome is only reasonably possible to occur. Pens Unlimited records warranty estimates on the basis of 2% of annual sales revenue.

A. Using the unadjusted trial balance and supplemental information for Pens Unlimited, construct an income statement for the year ended December 31, 2017. Pay particular attention to expenses resulting from contingencies.
B. Construct a balance sheet, for December 31, 2017, from the given unadjusted trial balance, supplemental information, and income statement for Pens Unlimited. Pay particular attention to contingent liabilities.
C. Prepare any necessary contingent liability note disclosures for Pens Unlimited. Only give one to three sentences for each contingency note disclosure.

EB9. LO 12.4 Airplanes Unlimited purchases airplane parts from a supplier on March 19 at a quantity of 4,800 parts at $12.50 per part. Terms of the purchase are 3/10, n/30. Airplanes pays one-third of the amount due in cash on March 30 but cannot pay the remaining balance due. The supplier renegotiates the terms on April 18 and allows Airplanes to convert its purchase payment into a short-term note, with an annual interest rate of 9%, payable in six months.

Show the entries for the initial purchase, the partial payment, and the conversion.

EB10. LO 12.4 Use information from this exercise. Compute the interest expense due when Airplanes Unlimited honors the note. Show the journal entry to recognize payment of the short-term note on October 18.

EB11. LO 12.4 Whole Leaves wants to upgrade their equipment, and on January 24 the company takes out a loan from the bank in the amount of $310,000. The terms of the loan are 6.5% annual interest rate, payable in three months. Interest is due in equal payments each month.

Compute the interest expense due each month. Show the journal entry to recognize the interest payment on February 24, and the entry for payment of the short-term note and final interest payment on April 24. Round to the nearest cent if required.

EB12. LO 12.5 Reference Figure 12.15 and use the following information to complete the requirements.

Employee	Monthly Gross Income	Withholding Allowances
Debbie	$1,150	0
Michael	$1,270	2
Karen	$2,600	1

A. Determine the federal income tax withholdings amount per monthly pay period for each employee.
B. Record the employee payroll entry (all employees) for the month of January assuming FICA Social Security is 6.2%, FICA Medicare is 1.45%, and state income tax is equal to 3% of gross income. (Round to the nearest cent if necessary.)

EB13. LO 12.5 Marc & Associates employs Janet Evanovich at its law firm. Her gross income for June is $7,500. Payroll for the month of June follows: federal income tax of $650, state income tax of $60, local income tax of $30, FICA Social Security tax rate at 6.2%, FICA Medicare tax rate at 1.45%, health-care insurance premium of $300, donations to a charity of $50, and pension plan contribution of $200. The employee is responsible for covering 40% of his or her health insurance premium.

A. Record the journal entry to recognize employee payroll for the month of June; dated June 30, 2017.
B. Record remittance of the employee's salary with cash on July 1.

EB14. LO 12.5 In this exercise, you prepared the journal entries for Janet Evanovich, an employee of Marc & Associates. You have now been given the following additional information: June is the first pay period for this employee. FUTA taxes are 0.6% and SUTA taxes are 5.4% of the first $7,000 paid to the employee. FICA Social Security and FICA Medicare match employee deductions. The employer is responsible for 60% of the health insurance premium. The employer matches 50% of employee pension plan contributions.

Using the information from this exercise and the additional information provided:

A. Record the employer payroll for the month of June, dated June 30, 2017.
B. Record the payment in cash of all employer liabilities only on July 1.

EB15. LO 12.5 An employee and employer cost-share 401(k) plan contributions, health insurance premium payments, and charitable donations. The employer also provides annual vacation compensation equal to ten days of pay at a rate of $30 per hour, eight-hour work day. The employee makes a gross wage of $3,000 monthly. The employee decides to use five days of vacation during the current pay period. Employees cover 30% of the 401(k) plan contribution and 30% of the health insurance premium. The employee also donates 1% of gross pay to a charitable organization.

A. What would be the employee's total benefits responsibility if the total 401(k) contribution is $700 and the health insurance premium is $260?
B. Include the journal entry representing the payroll benefits accumulation for the employer in the month of March, if the employer matches the employee's charitable donation of 1%.

Problem Set A

PA1. LO 12.1 Consider the following situations and determine (1) which type of liability should be recognized (specific account), and (2) how much should be recognized in the current period (year).

A. A business sets up a line of credit with a supplier. The company purchases $10,000 worth of equipment on credit. Terms of purchase are 5/10, n/30.
B. A customer purchases a watering hose for $25. The sales tax rate is 5%.
C. Customers pay in advance for season tickets to a soccer game. There are fourteen customers, each paying $250 per season ticket. Each customer purchased two season tickets.
D. A company issues 2,000 shares of its common stock with a price per share of $15.

PA2. LO 12.1 Stork Enterprises delivers care packages for special occasions. They charge $45 for a small package, and $80 for a large package. The sales tax rate is 6%. During the month of May, Stork delivers 38 small packages and 22 large packages.

A. What is the total tax charged to the customer per small package? What is the overall charge per small package?
B. What is the total tax charged to the customer per large package? What is the overall charge per large package?
C. How much sales tax liability does Stork Enterprises have for the month of May?
D. What accounts are used to recognize this tax situation for the month of May?
E. When Stork remits payment to the sales tax governing body, what happens to the sales tax liability?

PA3. LO 12.2 Review the following transactions, and prepare any necessary journal entries for Renovation Goods.

A. On May 12, Renovation Goods purchases 750 square feet of flooring (Flooring Inventory) at $3.00 per square foot from a supplier, on credit. Terms of the purchase are 2/10, n/30 from the invoice date of May 12.
B. On May 15, Renovation Goods purchases 200 measuring tapes (Tape Inventory) at $5.75 per tape from a supplier, on credit. Terms of the purchase are 4/15, n/60 from the invoice date of May 15.
C. On May 22, Renovation Goods pays cash for the amount due to the flooring supplier from the May 12 transaction.
D. On June 3, Renovation Goods pays cash for the amount due to the tape supplier from the May 15 transaction.

PA4. LO 12.2 Review the following transactions, and prepare any necessary journal entries for Juniper Landscaping Services.

A. On November 5, Juniper receives advance cash payment from a customer for landscaping services in the amount of $3,500. Juniper had yet to provide landscaping services as of November 5.
B. On December 11, Juniper provides all of the landscaping services to the customer from November 5.
C. On December 14, Juniper receives advance payment from another customer for landscaping services in the amount of $4,400. Juniper has yet to provide landscaping services as of December 14.
D. On January 19 of the following year, Juniper provides and recognizes 80% of landscaping services to the customer from December 14.

PA5. LO 12.2 Review the following transactions, and prepare any necessary journal entries.

A. On July 16, Arrow Corp. purchases 200 computers (Equipment) at $500 per computer from a supplier, on credit. Terms of the purchase are 4/10, n/50 from the invoice date of July 16.
B. On August 10, Hondo Inc. receives advance cash payment from a client for legal services in the amount of $9,000. Hondo had yet to provide legal services as of August 10.
C. On September 22, Jack Pies sells thirty pies for $25 cash per pie. The sales tax rate is 8%.
D. On November 8, More Supplies paid a portion of their noncurrent note in the amount of $3,250 cash.

PA6. LO 12.3 Machine Corp. has several pending lawsuits against its company. Review each situation and (1) determine the treatment for each situation as probable and estimable, probable and inestimable, reasonably possible, or remote; (2) determine what, if any, recognition or note disclosure is required; and (3) prepare any journal entries required to recognize a contingent liability.

A. A pending lawsuit, claiming $100,000 in damages, is considered likely to favor the plaintiff and can be reasonably estimated.
B. Machine Corp. believes there might be other potential lawsuits about this faulty machinery, but this is unlikely to occur.
C. A claimant sues Machine Corp. for damages, from a dishonored service contract agreement; the plaintiff will likely win the case but damages cannot be reasonably estimated.
D. Machine Corp. believes a customer will win a lawsuit it filed, but the outcome is not likely and is not remote. It is possible the customer will win.

PA7. LO 12.3 Emperor Pool Services provides pool cleaning and maintenance services to residential clients. It offers a one-year warranty on all services. Review each of the transactions, and prepare any necessary journal entries for each situation.

A. March 31: Emperor provides cleaning services for fifteen pools during the month of March at a sales price per pool of $550 cash. Emperor records warranty estimates when sales are recognized and bases warranty estimates on 2% of sales.
B. April 5: A customer files a warranty claim that Emperor honors in the amount of $100 cash.
C. April 13: Another customer, J. Jones, files a warranty claim that Emperor does not honor due to customer negligence.
D. June 8: J. Jones files a lawsuit requesting damages related to the dishonored warranty in the amount of $1,500. Emperor determines that the lawsuit is likely to end in the plaintiff's favor and the $1,500 is a reasonable estimate for damages.

PA8. LO 12.4 Serene Company purchases fountains for its inventory from Kirkland Inc. The following transactions take place during the current year.

A. On July 3, the company purchases thirty fountains for $1,200 per fountain, on credit. Terms of the purchase are 2/10, n/30, invoice dated July 3.
B. On August 3, Serene does not pay the amount due and renegotiates with Kirkland. Kirkland agrees to convert the debt owed into a short-term note, with an 8% annual interest rate, payable in two months from August 3.
C. On October 3, Serene Company pays its account in full.

Record the journal entries to recognize the initial purchase, the conversion, and the payment.

PA9. LO 12.4 Mohammed LLC is a growing consulting firm. The following transactions take place during the current year.

A. On June 10, Mohammed borrows $270,000 from a bank to cover the initial cost of expansion. Terms of the loan are payment due in four months from June 10, and annual interest rate of 5%.
B. On July 9, Mohammed borrows an additional $100,000 with payment due in four months from July 9, and an annual interest rate of 12%.
C. Mohammed pays their accounts in full on October 10 for the June 10 loan, and on November 9 for the July 9 loan.

Record the journal entries to recognize the initial borrowings, and the two payments for Mohammed.

PA10. LO 12.5 Lemur Corp. is going to pay three employees a year-end bonus. The amount of the year-end bonus and the amount of federal income tax withholding are as follows.

Employee	Filing Status	Allowances	Gross Income	Federal Income Withholding
Sarah	Married	4	$10,000	$ 962
Joe	Single	2	$ 9,000	$1,362
Kevin	Single	1	$ 4,000	$ 357

Lemur's payroll deductions include FICA Social Security at 6.2%, FICA Medicare at 1.45%, FUTA at 0.6%, SUTA at 5.4%, federal income tax as previously shown, state income tax at 5% of gross pay, and 401(k) employee contributions at 2% of gross pay.

Record the entry for the employee payroll on December 31.

PA11. LO 12.5 Record the journal entries for each of the following payroll transactions.

Apr. 2	Paid $650 and $340 cash to a federal depository for FICA Social Security and FICA Medicare, respectively
Apr. 4	Paid accumulated employee salaries of $15,220
Apr. 11	Issued checks in the amounts of $480 for federal income tax and $300 for state income tax to an IRS-approved bank
Apr. 14	Paid cash to health insurance carrier for total outstanding health insurance liability of $800
Apr. 22	Remitted cash payments for FUTA and SUTA to federal and state unemployment agencies in the amounts of $130 and $250, respectively

Problem Set B

PB1. LO 12.1 Consider the following situations and determine (1) which type of liability should be recognized (specific account), and (2) how much should be recognized in the current period (year).

A. A business depreciates a building with a book value of $12,000, using straight-line depreciation, no salvage value, and a remaining useful life of six years.
B. An organization has a line of credit with a supplier. The company purchases $35,500 worth of inventory on credit. Terms of purchase are 3/20, n/60.
C. An employee earns $1,000 in pay and the employer withholds $46 for federal income tax.
D. A customer pays $4,000 in advance for legal services. The lawyer has previously recognized 30% of the services as revenue. The remainder is outstanding.

PB2. LO 12.1 Perfume Depot sells two different tiers of perfume products to customers. They charge $30 for tier 1 perfume and $100 for tier 2 perfume. The sales tax rate is 4.5%. During the month of October, Perfume Depot sells 75 tier 1 perfumes, and 60 tier 2 perfumes.

A. What is the total tax charged to the customer per tier 1 perfume? What is the overall charge per tier 1 category perfume?
B. What is the total tax charged to the customer per tier 2 perfume? What is the overall charge per tier 2 category perfume?
C. How much sales tax liability does Perfume Depot have for the month of October?
D. What accounts are used to recognize this tax situation for the month of October?
E. When Perfume Depot remits payment to the sales tax governing body, what happens to the sales tax liability?

PB3. LO 12.2 Review the following transactions, and prepare any necessary journal entries for Sewing Masters Inc.

A. On October 3, Sewing Masters Inc. purchases 800 yards of fabric (Fabric Inventory) at $9.00 per yard from a supplier, on credit. Terms of the purchase are 1/5, n/40 from the invoice date of October 3.
B. On October 8, Sewing Masters Inc. purchases 300 more yards of fabric from the same supplier at an increased price of $9.25 per yard, on credit. Terms of the purchase are 5/10, n/20 from the invoice date of October 8.
C. On October 18, Sewing Masters pays cash for the amount due to the fabric supplier from the October 8 transaction.
D. On October 23, Sewing Masters pays cash for the amount due to the fabric supplier from the October 3 transaction.

PB4. LO 12.2 Review the following transactions and prepare any necessary journal entries for *Woodworking Magazine*. *Woodworking Magazine* provides one issue per month to subscribers for a service fee of $240 per year. Assume January 1 is the first day of operations for this company, and no new customers join during the year.

A. On January 1, *Woodworking Magazine* receives advance cash payment from forty customers for magazine subscription services. Handyman had yet to provide subscription services as of January 1.
B. On April 30, *Woodworking* recognizes subscription revenues earned.
C. On October 31, *Woodworking* recognizes subscription revenues earned.
D. On December 31, *Woodworking* recognizes subscription revenues earned.

PB5. LO 12.2 Review the following transactions and prepare any necessary journal entries.

A. On January 5, Bunnet Co. purchases 350 aprons (Supplies) at $25 per apron from a supplier, on credit. Terms of the purchase are 3/10, n/30 from the invoice date of January 5.
B. On February 18, Melon Construction receives advance cash payment from a client for construction services in the amount of $20,000. Melon had yet to provide construction services as of February 18.
C. On March 21, Noonan Smoothies sells 875 smoothies for $4 cash per smoothie. The sales tax rate is 6.5%.
D. On June 7, Organic Methods paid a portion of their noncurrent note in the amount of $9,340 cash.

PB6. LO 12.3 Roundhouse Tools has several potential warranty claims as a result of damaged tool kits. Review each situation and (1) determine the treatment for each situation as probable and estimable, probable and inestimable, reasonably possible, or remote; (2) determine what, if any, recognition or note disclosure is required; and (3) prepare any journal entries required to recognize a contingent liability.

A. Roundhouse Tools has several claims for replacement of another tool kit not listed as one of their damaged tool kits. The honored warranty for these tool kits is not likely but is not remote. It is possible.
B. A pending warranty claim has been received with the projected cost to be $450. Roundhouse Tools believes honoring that warranty claim is likely to occur and that figure is reasonably estimated.
C. Roundhouse Tools believes other potential warranties may have to be honored outside of the warranty period, but this is unlikely to occur.
D. Warranty replacements will cost the company a percentage of sales for the period. This amount allotted for warranty replacements cannot be reasonably estimated but is likely to occur.

PB7. LO 12.3 Shoe Hut sells custom, handmade shoes. It offers a one-year warranty on all shoes for repair or replacement. Review each of the transactions and prepare any necessary journal entries for each situation.

A. May 31: Shoe Hut sells 100 pairs of shoes during the month of May at a sales price per pair of shoes of $240 cash. Shoe Hut records warranty estimates when sales are recognized and bases warranty estimates on 4% of sales.
B. June 2: A customer files a warranty claim that Shoe Hut honors in the amount of $30 for repair to laces. Laces Inventory corresponds to shoelace inventory used for repairs.
C. June 4: Another customer files a warranty claim that Shoe Hut honors. Shoe Hut replaces the damaged shoes at a cost of $200, affecting their Shoe Replacement Inventory account.
D. August 10: Shoe Hut explores the possibility of bankruptcy, given the current economic conditions (recession). It determines the bankruptcy is unlikely to occur (remote).

PB8. LO 12.4 Air Compressors Inc. purchases compressor parts for its inventory from a supplier. The following transactions take place during the current year:

A. On April 5, the company purchases 400 parts for $8.30 per part, on credit. Terms of the purchase are 4/10, n/30, invoice dated April 5.
B. On May 5, Air Compressors does not pay the amount due and renegotiates with the supplier. The supplier agrees to $400 cash immediately as partial payment on note payable due, converting the debt owed into a short-term note, with a 7% annual interest rate, payable in three months from May 5.
C. On August 5, Air Compressors pays its account in full.

Record the journal entries to recognize the initial purchase, the conversion plus cash, and the payment.

PB9. LO 12.4 Pickles R Us is a pickle farm located in the Northeast. The following transactions take place:

A. On November 6, Pickles borrows $820,000 from a bank to cover the initial cost of expansion. Terms of the loan are payment due in six months from November 6, and annual interest rate of 3%.
B. On December 12, Pickles borrows an additional $200,000 with payment due in three months from December 12, and an annual interest rate of 10%.
C. Pickles pays its accounts in full on March 12, for the December 12 loan, and on May 6 for the November 6 loan.

Record the journal entries to recognize the initial borrowings, and the two payments for Pickles.

PB10. LO 12.5 Use Figure 12.15 to complete the following problem. Roland Inc. employees' monthly gross pay information and their W-4 Form withholding allowances follow.

Employee	Monthly Gross Income	Withholding Allowances
Jim	$1,000	1
Amy	$1,200	2
Stephanie	$2,300	3

Roland's payroll deductions include FICA Social Security at 6.2%, FICA Medicare at 1.45%, FUTA at 0.6%, SUTA at 5.4%, federal income tax (based on withholdings table) of gross pay, state income tax at 3% of gross pay, and health insurance coverage premiums of $1,000 split 50% employees and 50% employer. Assume each employee files as single, gross income is the same amount each month, October is the first month of business operation for the company, and salaries have yet to be paid.

Record the entry or entries for accumulated employee and employer payroll for the month of October; dated October 31.

PB11. LO 12.5 Use the information from this problem to complete this problem. Record entries for each transaction listed.

Nov. 1	Paid cash to a federal depository for FICA Social Security and FICA Medicare; paid accumulated salaries
Nov. 3	Remitted cash payment for FUTA and SUTA to federal and state unemployment agencies
Nov. 10	Issued a check to an IRS-approved bank for federal and state income taxes
Nov. 12	Paid cash to health insurance carrier for total outstanding health insurance liability

Thought Provokers

TP1. LO 12.1 Research a Major League Baseball team's season ticket prices. Pick one season ticket price level and answer the following questions:

- What team did you choose, and what are the ticket prices for a season?
- What is the sales tax rate for the purchase of season tickets?
- How many games are included in the season package?
- What are the refund and exchange policies for purchases?
- What are some benefits to the team with customers paying in advance for season tickets?
- Explain in detail the unearned revenue liability created from season ticket sales.
- When does the team recognize this future revenue as earned?
- What effect does the refund or exchange policy have on the unearned revenue account, and the ability of the team to recognize revenue?
- If unearned revenue was split equally among all games (not including playoff games), how much would be recognized per game?
- Explain in detail the sales tax liability created from season ticket sales.
- When does the team collect sales tax?
- What is the final purchase price of the season ticket with sales tax?
- Where does the team recognize the sales tax liability (which statement and account[s])?
- To whom does the team pay the sales tax collected?
- When is sales tax payment required?

TP2. LO 12.2 Review Exercise 19. from the previous module. Review current season ticket prices for one Major League Baseball team. Choose one season ticket price area to review.

A. Determine what is recognized as per ticket revenue after each game is played for your chosen season ticket price area. Assume an equal amount is distributed per game. Do not include playoff games or preseason games in your computations. If parking and other amenities are factored into the season ticket price, please continue to include them in your calculations.
B. Determine an average attendance figure for this team during the 2016 season for all seating areas, and per game (assume equal distribution of game attendance), and use this as a projection for future attendance. You may use Ballparks of Baseball http://www.ballparksofbaseball.com/2010s-ballpark-attendance/ for attendance figures.
C. Assume that attendance is distributed equally between all season ticket areas. Determine the attendance for your season ticket area for the season and per game.
D. Determine the total unearned ticket revenue amount before the season begins. Assume all season ticket holders paid with cash, in full.
E. Prepare the journal entry to recognize unearned ticket revenue at the beginning of the season for your chosen season ticket area. Assume all seats are filled by season ticket holders. Show any support calculations and documentation used.
F. Prepare the journal entry to recognize ticket revenue earned after the first game is played in your chosen season ticket area.
G. Suppose the team only records revenues every three months (at the end of each month), record the journal entry to recognize the first three months of ticket revenue earned during the season in your chosen season ticket area.

TP3. LO 12.3 Toyota is a car manufacturer that has issued several recalls over the years. One major recall centered on faulty air bags from Takata. A prior recall focused on unintentional pedal acceleration. Research information about the car manufacturer, and one of the two recall situations described. Answer the following questions:

- What are some of the main points discussed in the supplements you researched?
- What negative impact did this recall have on Toyota?
- As a result of the recall, what contingent liabilities were (or could be) created?
- How did Toyota handle the reporting of these contingent liabilities?
- How did Toyota determine the estimated liability amounts?
- Do you agree with Toyota's treatment assignment for reported liabilities (probable and estimable, probable and inestimable, for example)?
- What note disclosures accompanied the recognized contingent liabilities?
- What long-term effect, if any, did the recall have on Toyota's financials and reputation?

TP4. LO 12.4 You own a farm and grow seasonal products such as pumpkins, squash, and pine trees. Most of your business revenues are earned during the months of October to December. The rest of your year supports the growing process, where revenues are minimal and expenses are high. In order to cover the expenses from January to September, you consider borrowing a short-term note from a bank for $300,000.

- Research the lending practices of a local bank.
- Determine the interest rate charged for a $300,000 loan.
- What collateral does the bank require to secure the loan?
- Determine your overall payback amount if you were to repay the loan in less than one year. Choose either a payback with periodic payments or all at the end of the loan term, and compare the outcomes.
- After conducting your research, would you consider borrowing the money?
- What positive and negative outcomes accompany borrowing the money?

TP5. LO 12.5 Payroll Comparison Research Paper: Search the Internet for local public K–12 school districts, community colleges, and public universities that publish their employees' salary (pay) schedules. Also research any available data on employee benefits provided to each of these schools. Review federal and state taxation rates on income, unemployment, Social Security, and Medicare. Write a comprehensive paper addressing the following questions and situations. You must provide scholarly data and source information to support your claims.

- Which schools did you compare?
- How do the salaries compare for each school entity?
- What voluntary benefits were provided by the employer (school district)?
- What involuntary deductions would be taken out of these salaries?
- What would your federal, state, and local income tax rates be if you worked for one of these schools? Hint: Choose one of the salaries from the schedule.
- Create a Form W-4 to determine your tax liability.
- Assume you are the employer for your chosen school. Prepare journal entries to record January's employee and employer payroll (assume January is the first pay period and you are preparing the entry for one employee). You must record the liabilities from the January 31 payroll, along with the payment of these liabilities on February 1.
- Record any observations you have made at the culmination of your research, and connect these observations to what you've learned about current liabilities.

16 Statement of Cash Flows

Figure 16.1 Cash. (credit: modification of "Money" by "Tax Credits"/Flickr, CC BY 2.0)

Chapter Outline

Why It Matters

Most financial accounting processes focus on the accrual basis of accounting, which reflects revenue earned, regardless of whether that revenue has been collected or not, and the related costs involved in producing that revenue, whether those costs have been paid or not. Yet the single-minded focus on accrued revenues and expenses, without consideration of the cash impact of these transactions, can jeopardize the ability of users of the financial statements to make well-informed decisions. Some investors say that "cash is king," meaning that they think a company's cash flow is more important than its net income in determining investment opportunities. Companies go bankrupt because they run out of cash. Financial statement users should be able to develop a picture of how well a company's net income generates cash and the sources and uses of a company's cash. From the statement of cash flows, it becomes possible to reconcile income on the income statement to the cash actually generated during the same period. Having cash alone is not important, but the source and use of cash are also important, specifically where the cash is coming from. If the business is generating cash from operations (selling products and services), that is positive. If the company only has cash

as it is taking out loans and selling assets, one must be careful in their analysis.

16.1 Explain the Purpose of the Statement of Cash Flows

The **statement of cash flows** is a basic financial statement that displays the sources and uses of a company's cash and reconciles beginning cash to ending cash. **Cash flow** is the amount of cash received by or disbursed by a business or organization. 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?

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. https://www.ifrs.org/issued-standards/list-of-standards/ias-7-statement-of-cash-flows/

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 (https://openstax.org/l/50CashFlowsVid) 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 (https://cnx.org/content/chapter/latest/#m67935) .

LINK TO LEARNING

AccountingCoach (https://openstax.org/l/50AccountCoach) is a great resource for many accounting topics, including cash flow issues.

16.2 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.

16.3 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 16.2 Comparative Balance Sheet. (attribution: Copyright Rice University, OpenStax, under CC BY 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 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 16.4 Statement of Cash Flows. (attribution: Copyright Rice University, OpenStax, under CC BY 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.

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

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 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 items: Sales $189,000. Cost of Goods Sold (75,600). Operating Expense (except depreciation) (81,500). Depreciation Expense (12,000). Net Income 19,900. Balance Sheet items: 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 flow 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 flow 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.

Payment of Notes Payable (principal)	$(10,000)
Payment of Dividends	(440)

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.

16.4 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 16.6 Comparative Balance Sheet. (attribution: Copyright Rice University, OpenStax, under CC BY 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 16.7 Income Statement. (attribution: Copyright Rice University, OpenStax, under CC BY 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.

Directive

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 16.8 Statement of Cash Flows. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

16.5 Use Information from the Statement of Cash Flows to Prepare Ratios to Assess Liquidity and Solvency

Cash flow ratio analysis allows financial statement users to see the company's liquidity position from a clearer perspective. The ratios presented in this section focus on **free cash flow**, calculated as operating cash, reduced by expected capital expenditures and by cash dividends payments. The free cash flow value is thus an adaptation of cash flow from operating activities. The result obtained in the initial free cash flow calculation is then used to calculate the **free cash flow to sales ratio**, which is the ratio of free cash flow to sales revenue, and the **free cash flow to assets ratio**, which is the ratio of free cash flow to total assets. These three tools give indicators about the company's flexibility and agility, which equates to their ability to seize opportunities in the future, as they arise.

ETHICAL CONSIDERATIONS

Cash Flow Analysis

Cash is required to pay the bills. All businesses need to have a clear picture of available cash so they can plan and pay their bills. The statement of cash flows allows investors direct insight into the actual activity on the company's cash balances. "As Wall Street analysts have lost faith in earnings-based metrics in the wake of Enron, WorldCom, and others, many have gravitated toward the cash flow statement. Companies are regularly evaluated on the basis of free cash flow yield and other measures of cash generation."[3] The operating cash flow ratio, and the cash flow margin ratio, and the other cash flow–related metrics discussed allow an investor and other users of the financial statements to "review a company's financial position by calculating whether the company can pay current debt from its cash received from operations or whether the company can generate cash from its sales."[4] This helps investors and other users of the financial statements ensure the veracity of a company's financial statements and its ability to pay its bills.

Free Cash Flow

Free cash flow calculations start with cash flows from operating activities, reduced by planned capital expenditures and planned cash dividend payments. In the example case demonstrated, free cash flow would be as follows:

Free cash flow calculation:

Cash flow from operating	$ 13,840
– Cash planned for capital expenditures	(40,000)
– Cash dividends	(440)
= Free Cash Flow	(26,600)

The absence of free cash flow is an indicator of severe liquidity concern for Propensity Company and could be an early indicator that the company may not be able to continue operations. This could also be a one-time occurrence, in a year where a large capital investment was planned, to be financed with resources from the company's capital reserves from previous years' profits. In such a case, the negative free cash flow would not be an issue of concern.

LINK TO LEARNING

This article by Investopedia presents information about how to use free cash flow (https://openstax.org/l/50FreeCashFlow) to evaluate strengths of various businesses:

3 Marc A. Siegel. "Accounting Shenanigans on the Cash Flow Statement." *CPA Journal*. March 2006. http://archives.cpajournal.com/2006/306/essentials/p38.htm

4 Steven D. Jones. "Why Cash Flow Matters in Evaluating a Company." *The Wall Street Journal*. August 11, 2016. https://www.wsj.com/articles/SB997466275287616386. Miriam Gottfried. "Spoiler Alert for Netflix: Debt and Cash Flow Matter." *The Wall Street Journal*. April 17, 2017. https://www.wsj.com/articles/spoiler-alert-for-netflix-debt-and-cash-flow-matter-1492468397

Cash Flows to Sales

The cash flows to sales ratio is computed by dividing free cash flow by sales revenue. In the Propensity Company case, free cash flow had a negative outcome, so the calculation would not be useful in this case.

Cash Flows to Assets

The cash flows to assets ratio is computed by dividing free cash flow by total assets. Again, when the free cash flow had a negative outcome, as it did in the Propensity Company example scenario, the calculation would not be useful

CONCEPTS IN PRACTICE

Lehman Brothers: Would You Have Invested?

Between 2005 and 2007, Lehman Brothers (an investment bank) increased its net income from $3.1 billion to $4.1 billion. It received nearly $42 billion interest and dividends on its investments, a primary part of its business model, in 2007 alone. It also had $7.2 billion available in cash at the end of 2007. Would you be interested in investing in Lehman Brothers? However, Lehman Brothers went bankrupt in September 2008; it was the biggest corporate bankruptcy in history. Could investors have known?

A clue would be its free cash ratio. Assuming that you would expect Lehman Brothers' actual capital expenditures and dividend payments from 2007 be expected in 2008, Lehman's free cash ratio would be calculated as, in millions:

Cash flows from operating activities	$(45,595)
Cash planned for capital expenditures	(1,931)
Cash dividends:	(418)
Free cash flow	$(47,944)

Lehman Brothers invested heavily in securities created from subprime mortgages. When the subprime mortgage market collapsed in 2008, Lehman Brothers was not able to generate enough cash to stay in business. The large negative free cash flow gave warning that Lehman Brothers was a risky investment.

IFRS CONNECTION

Statement of Cash Flows

In every type of business across the globe, it is important to understand the business's cash position. Analyzing cash inflows and outflows, current cash flow, and cash flow trends, and predicting future cash flows all importantly inform decision-making. The US Securities and Exchange Commission (SEC) requires the statement of cash flows as the mechanism that allows users to better assess a company's cash position. US generally accepted accounting principles (GAAP) and International Financial Reporting Standards (IFRS) set forth rules regarding the composition and presentation of the statement of cash

flows.

- Method: Both GAAP and IFRS recommend and encourage the direct method of preparing the statement of cash flows but allow the indirect method. Under US GAAP, if the direct method is used, a reconciliation between net income and operating income must also be presented. This reconciliation is not required under IFRS.
- Presentation: The three categories—Cash Flows from Operating Activities, Cash Flows from Investing Activities, and Cash Flows from Financing Activities—are required under both US GAAP and IFRS. US GAAP requires the presentation of only one year of information, while IFRS requires two years of data.
- Categorizing Transactions: IFRS is more flexible in where to present certain cash flow transactions than is US GAAP. This flexibility occurs around interest, dividends, and taxes. As shown in Table 16.1, US GAAP is more rigid in reporting.

Comparing GAAP and IFRS

	US GAAP	IFRS
Interest paid	Operating	Operating or financing
Interest received	Operating	Operating or investing
Dividends paid	Financing	Operating or financing
Dividends received	Operating	Operating or investing
Taxes	Operating	Usually operating but option to dissect tax into operating and financing components

Table 16.1

Understanding the impact of these potential differences is important. The statement of cash flows is used not only to evaluate from where a company receives and spends its cash, but also to predict future cash flows. The flexibility of these reporting items in the statement of cash flows can result in decreased comparability between similar companies using different reporting methods. For example, Free Cash Flow (Operating Cash Flows less Capital Expenditures), will have different results if interest and dividends are classified in sections other than operating activities.

Let’s consider an example: World-Wide Co. is headquartered in London and currently reports under US GAAP because it is traded on the New York Stock Exchange (NYSE). World-Wide is considering switching to reporting under IFRS to make the company more comparable to its competitors, since most of them use IFRS. World-Wide has the following information in the operating activities section of its most recent statement of cash flows.

Cash flows from operating activities	$2,500,000
Cash interest payments	200,000
Cash interest received	90,000
Taxes paid	125,000
Cash dividends received	50,000

World-Wide had $1,000,000 in capital expenditures during the year, and they paid dividends of $80,000 to shareholders.

Based on this information, World-Wide's Free Cash Flow would be as follows:

Free Cash Flow = Cash from Operating Activities – Capital Expenditures

or

$$\$2,500,000 - \$1,000,000 = \$1,500,000$$

If World-Wide switches to IFRS reporting, it has determined that its cash interest payments would be classified as financing activities because the payments are related to long-term debt. The interest received is from a short-term receivable and thus will remain classified as an operating activity, but the dividends received are from a long-term investment and will be reclassified to an investing activity. And, $60,000 of the taxes have been identified as being associated with tax consequences of an investing opportunity and therefore will be reclassified as an investing activity. With these reclassifications, the free cash flow of World-Wide would be as follows:

$$FCF = (\$2,500,000 + \$200,000 - \$50,000 + \$60,000) - 1,000,000 = \$1,710,000$$

The take-away from this example is that the flexibility afforded by IFRS can have an impact on comparability between companies.

These, and other differences, between US GAAP and IFRS arise because of the more rules-based nature of the standards put forth by FASB versus the more principles-based rules set forth by IASB. The IASB, in creating IFRS standards, follows a substance-over-form viewpoint that allows firms more flexibility in assessing the intent of transactions. Anytime more judgement is allowed and/or utilized, there must be adequate disclosure to explain the chosen reporting methodology.

16.6 Appendix: Prepare a Completed Statement of Cash Flows Using the Direct Method

PROPENSITY COMPANY Statement of Cash Flows: Direct Method For the Year Ended December 31, 2018		
Cash Flow from Operating Activities:		
Cash Collected from Customers		$242,500
Cash Payments:		
To Suppliers for Inventory	$157,300	
For Salaries	42,200	
For Insurance	12,700	
For Interest	3,500	
For Income Taxes	1,860	
For Other Operating Expenses	11,100	228,660
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 16.9 Statement of Cash Flows. (attribution: Copyright Rice University, OpenStax, under CC BY 4.0 license)

As previously mentioned, the net cash flows for all sections of the statement of cash flows are identical when using the direct method or the indirect method. The difference is just in the way that net cash flows from operating activities are calculated and presented. The direct approach requires that each item of income and expense be converted from the accrual basis value to the cash basis value for that item. This is accomplished by adjusting the accrual amount for the revenue or expense by any related current operating asset or liability. Revenue and expense items that are not related to those current asset and liability accounts would not need an adjustment.

In the following section, we demonstrate the calculations needed to assess the component pieces of the operating section using the direct approach.

Cash Collected from Customers

Cash collected from customers is different from the sales revenue that is recorded on the accrual basis financial statements. To reconcile the amount of sales revenue reported on the income statement to the cash collected from sales, calculate the maximum amount of cash that could have been collected this period (potential cash collected) by combining (a) the amount that was due from customers on the first day of the period (beginning accounts receivable) and (b) total sales revenue recorded this period. If there were no outstanding accounts receivable balance at the end of the period, then one could reasonably assume that this total was collected in full during this period. Thus, the amount collected for sales can be determined by subtracting the ending accounts receivable balance from the total potential cash that could have been collected.

Cash Collected from Sales Revenue	
Beginning balance, Accounts Receivable	$ 26,000
+ Accrual Basis Sales	238,000
= Potential Cash Collected	264,000
– Ending balance, Accounts Receivable	21,500
= Cash Collected from Customers this Period	**$242,500**

Cash Paid to Suppliers for Inventory

Cash paid for inventory is different from the cost of goods sold that is recorded on the accrual basis financial statements. To reconcile the amount of cost of goods sold reported on the income statement to the cash paid for inventory, it is necessary to perform two calculations. The first part of the calculation determines how much inventory was purchased, and the second part of the calculation determines how much of those purchases were paid for during the current period.

First, calculate the maximum amount of inventory that was available for sale this period by combining (a) the amount of inventory that was on hand on the last day of the period (ending inventory) and (b) total cost of goods sold recorded this period. If there were no inventory balance at the beginning of the period, then one could reasonably assume that this total was purchased entirely during the current period. Thus, the amount of inventory purchased this period can be determined by subtracting the beginning inventory balance from the total goods (inventory) available for sale.

Second, calculate the maximum amount of cash that could have been paid for inventory this period (total obligation to pay inventory costs) by combining (a) the amount that was due to suppliers on the first day of the period (beginning accounts payable) and (b) total inventory purchases this period, from the first inventory calculation. If there were no outstanding accounts payable balance at the end of the period, then one could reasonably assume that this total was paid in full during this current period. Thus, the amount paid for inventory can be determined by subtracting the ending accounts payable balance from the total obligation to pay inventory costs that could have been paid. The final number of the second calculation is the actual cash paid for inventory.

Cash Paid for Inventory Purchases: Part 1	
Ending balance, Inventory	$ 48,000
+ Cost of Goods Sold	153,000
= Goods Available for Sale	201,000
– Beginning balance, Inventory	45,500
= Inventory Purchased this Period	155,500
Cash Paid for Inventory Purchases: Part 2	
Beginning balance, Accounts Payable	19,000
+ Inventory Purchased (from Part 1)	155,500
= Total Obligation to Pay Inventory Costs	174,500
– Ending balance, Accounts Payable	17,200
= Cash Paid for Inventory this Period	**$157,300**

Cash Paid for Salaries

Cash paid for salaries is different from the salaries expense that is recorded on the accrual basis financial statements. To reconcile the amount of salaries expense reported on the income statement to the cash paid for salaries, calculate the maximum amount of cash that could have been paid for salaries this period (total obligation to pay salaries) by combining (a) the amount that was due to employees on the first day of the period (beginning salaries payable) and (b) total salaries expense recorded this period. If there were no outstanding salaries payable balance at the end of the period, then one could reasonably assume that this total was paid in full during this current period. Thus, the amount paid for salaries can be determined by subtracting the ending salaries payable balance from the total obligation to pay salaries that could have been paid.

Cash Paid for Expense Related to a Current Liability	
Beginning balance, Salaries Payable	$ 1,500
+ Expense on Income Statement	42,600
= Total Obligation to Pay Salaries	44,100
– Ending balance, Salaries Payable	1,900
= Cash paid for Salaries this Period	**$42,200**

Cash Paid for Insurance

Cash paid for insurance is different from the insurance expense that is recorded on the accrual basis financial statements. To reconcile the amount of insurance expense reported on the income statement to the cash paid for insurance premiums, calculate the maximum amount of cash that could have been paid for insurance this period (total insurance premiums expended) by combining (a) the amount of insurance premiums that were prepaid on the last day of the period (ending prepaid insurance) and (b) total insurance expense recorded this period. If there were no prepaid insurance balance at the beginning of the period, then one could reasonably assume that this total was paid entirely during the current period. Thus, the amount paid for insurance this period can be determined by subtracting the beginning prepaid insurance balance from the total insurance premiums that had been recorded as expended.

Cash Paid for Expense Related to a Prepaid Asset	
Ending balance, Prepaid Insurance	$ 2,500
+ Insurance Expense on Income Statement	12,000
= Total Insurance Premiums Expended	14,500
– Beginning balance, Prepaid Insurance	1,800
= Insurance Paid this Period	**$12,700**

Key Terms

cash flow amount of cash received by or disbursed by a business or organization

direct method approach used to determine net cash flows from operating activities, whereby accrual basis revenue and expenses are converted to cash basis collections and payments

financing activity cash business transaction reported on the statement of cash flows that obtains or retires financing

free cash flow operating cash, reduced by expected capital expenditures and by cash dividends payments

free cash flow to assets ratio ratio of free cash flow to total assets

free cash flow to sales ratio ratio of free cash flow to sales revenue

indirect method approach used to determine net cash flows from operating activities, starting with net income and adjusting for items that impact new income but do not require outlay of cash

investing activity cash business transaction reported on the statement of cash flows from the acquisition or disposal of a long-term asset

net cash flow method used to determine profitability by measuring the difference between an entity's cash inflows and cash outflows

noncash expense expense that reduces net income but is not associated with a cash flow; most common example is depreciation expense

noncash transaction business transaction that involves investing and/or financing exchanges that do not affect cash

operating activity cash business transaction reported on the statement of cash flows that relates to ongoing day-to-day operations

statement of cash flows basic financial statement that reconciles accrual basis net income to change in cash from beginning to end of a period

Summary

16.1 Explain the Purpose of the Statement of Cash Flows

- The statement of cash flows presents the sources and uses of cash.
- The statement of cash flows is used to predict future cash flows and to assess the quality of an entity's earnings.
- There are two approaches utilized to prepare the statement of cash flow: the indirect method and the direct method.

16.2 Differentiate between Operating, Investing, and Financing Activities

- Transactions must be segregated into the three types of activities presented on the statement of cash flows: operating, investing, and financing.
- Operating cash flows arise from the normal operations of producing income, such as cash receipts from revenue and cash disbursements to pay for expenses.
- Investing cash flows arise from a company investing in or disposing of long-term assets.
- Financing cash flows arise from a company raising funds through debt or equity and repaying debt.

16.3 Prepare the Statement of Cash Flows Using the Indirect Method

- Preparing the operating section of statement of cash flows by the indirect method starts with net income from the income statement and adjusts for items that affect cash flows differently than they affect net income.

- Multiple levels of adjustments are required to reconcile accrual-based net income to cash flows from operating activities.
- The investing section of statement of cash flows relates to changes in long-term assets.
- The financing section of statement of cash flows relates to changes in long-term liabilities and changes in equity.
- Company activities that reflect changes in long-term assets, long-term liabilities, or equity, but have no cash impact, require special reporting treatment, as noncash investing and financing transactions.

16.4 Prepare the Completed Statement of Cash Flows Using the Indirect Method

- Preparing the operating section of statement of cash flows by the indirect method starts with net income from the income statement and adjusts for items that affect cash flows differently than they affect net income.
- Multiple levels of adjustments are required to reconcile accrual-based net income to cash flows from operating activities.
- The investing section of the statement of cash flows relates to changes in long-term assets.
- The financing section of statement of cash flows relates to changes in long-term liabilities and changes in equity.
- Company activities that reflect changes in long-term assets, long-term liabilities, or equity, but have no cash impact, require special reporting treatment, as noncash investing and financing transactions.

16.5 Use Information from the Statement of Cash Flows to Prepare Ratios to Assess Liquidity and Solvency

- Free cash flow relates to the amount of expected cash from operations which is left over after planned capital expenditures and dividends are paid.
- The cash flow to assets ratio correlates the company's free cash flow to its total asset value.
- The cash flow to sales ratio considers free cash flow in relation to the company's sales revenue.

16.6 Appendix: Prepare a Completed Statement of Cash Flows Using the Direct Method

- This section included an example of a statement of cash flows, prepared under the direct method, using the continuing example for Propensity Company.
- The direct method of preparing the statement of cash flows is identical to the indirect method except for the cash flows from the operating section.
- To complete the cash flows from operating activities, the direct method directly shows the cash collected from customers from revenue activities and the cash spent on operations, rather than reconciling net income to cash flows from operating activities as done using the indirect method. Calculating the amounts directly collected from revenues and spent on expenditures involves calculating the cash effect of the accrual amounts reported on the income statement.

Multiple Choice

1. LO 16.1 Which of the following statements is false?

A. Noncash activities should be reported in accrual basis financial statements.
B. Net cash flow from operating activities relates to normal business operations.
C. Net income usually equals net cash flow from operating activities.
D. The statement of cash flows is an essential part of the basic financial statements.

2. LO 16.2 Which of these transactions would *not* be part of the cash flows from the operating activities section of the statement of cash flows?

A. credit purchase of inventory
B. sales of product, for cash
C. cash paid for purchase of equipment
D. salary payments to employees

3. LO 16.2 Which is the proper order of the sections of the statement of cash flows?

A. financing, investing, operating
B. operating, investing, financing
C. investing, operating, financing
D. operating, financing, investing

4. LO 16.2 Which of these transactions would be part of the financing section?

A. inventory purchased for cash
B. sales of product, for cash
C. cash paid for purchase of equipment
D. dividend payments to shareholders, paid in cash

5. LO 16.2 Which of these transactions would be part of the operating section?

A. land purchased, with note payable
B. sales of product, for cash
C. cash paid for purchase of equipment
D. dividend payments to shareholders, paid in cash

6. LO 16.2 Which of these transactions would be part of the investing section?

A. land purchased, with note payable
B. sales of product, for cash
C. cash paid for purchase of equipment
D. dividend payments to shareholders, paid in cash

7. LO 16.3 What is the effect on cash when current noncash operating assets increase?

A. Cash increases by the same amount.
B. Cash decreases by the same amount.
C. Cash decreases by twice as much.
D. Cash does not change.

8. LO 16.3 What is the effect on cash when current liabilities increase?

A. Cash increases by the same amount.
B. Cash decreases by the same amount.
C. Cash decreases by twice as much.
D. Cash does not change.

9. LO 16.3 What is the effect on cash when current noncash operating assets decrease?

A. Cash increases by the same amount.
B. Cash decreases by the same amount.
C. Cash decreases by twice as much.
D. Cash does not change.

10. LO 16.3 What is the effect on cash when current liabilities decrease?

A. Cash increases by the same amount.
B. Cash decreases by the same amount.
C. Cash decreases by twice as much.
D. Cash does not change.

11. LO 16.3 Which of the following would trigger a subtraction in the indirect operating section?

A. gain on sale of investments
B. depreciation expense
C. decrease in accounts receivable
D. decrease in bonds payable

12. LO 16.3 Which of the following represents a source of cash in the investing section?

A. sale of investments
B. depreciation expense
C. decrease in accounts receivable
D. decrease in bonds payable

13. LO 16.3 Which of the following would be included in the financing section?

A. loss on sale of investments
B. depreciation expense
C. increase in notes receivable
D. decrease in notes payable

14. LO 16.4 If beginning cash equaled $10,000 and ending cash equals $19,000, which is true?

A. Operating cash flow 9,000; Investing cash flow (3,500); Financing cash flow (2,500)
B. Operating cash flow 4,500; Investing cash flow 9,000; Financing cash flow (4,500)
C. Operating cash flow 2,000; Investing cash flow (13,000); Financing cash flow 2,000
D. none of the above

15. LO 16.5 Which of the following is a stronger indicator of cash flow flexibility?

A. cash flow from operating activities
B. cash flow to sales ratio
C. free cash flow
D. all three indicate comparable degrees of flexibility

Questions

1. LO 16.1 What function does the statement of cash flows serve, as one of the four basic financial statements?

2. LO 16.1 Is it possible for a company to have significant net income in the same time period that net cash flows are negative? Explain.

3. LO 16.2 What categories of activities are reported on the statement of cash flows? Does it matter in what order these sections are presented?

4. LO 16.2 Describe three examples of operating activities, and identify whether each of them represents cash collected or cash spent.

5. LO 16.2 Describe three examples of investing activities, and identify whether each of them represents cash collected or cash spent.

6. LO 16.2 Describe three examples of financing activities, and identify whether each of them represents cash collected or cash spent.

7. LO 16.3 Explain the difference between the two methods used to prepare the operating section of the statement of cash flows. How do the results of these two approaches compare?

8. LO 16.3 Why is depreciation an addition in the operating section of the statement of cash flows, when prepared by the indirect method?

9. LO 16.3 When preparing the operating section of the statement of cash flows, using the indirect method, how must gains and losses be handled? Why?

10. LO 16.3 If a company reports a gain/(loss) from the sale of assets, as part of the net income on the income statement, and the net book value of those assets on the date of the sale is known, can the amount of the cash proceeds from the sale be determined? If so, how?

11. LO 16.3 Note payments reduce cash and are related to long-term debt. Do these facts automatically lead to their inclusion as elements of the financing section of the statement of cash flows? Explain.

12. LO 16.4 Is there any significance that can be attributed to whether net cash flows are generated from operating activities, versus investing and/or financing activities? Explain.

13. LO 16.4 Would there ever be activities that relate to operating, investing, or financing activities that would not be reported in their respective sections of the statement of cash flows? Explain. If a company had any such activities, how would they be reported in the financial statements, if at all?

14. LO 16.5 What insight does the calculation of free cash flow provide about the company's cash flow position?

15. LO 16.6 Why is using the direct method to prepare the operating section of the statement of cash flows more challenging for accountants than preparing the balance sheet, income statement, and retained earnings statement?

Exercise Set A

EA1. LO 16.1 Provide journal entries to record each of the following transactions. For each, identify whether the transaction represents a source of cash (S), a use of cash (U), or neither (N).

A. Declared and paid to shareholders, a dividend of $24,000.
B. Issued common stock at par value for $12,000 cash.
C. Sold a tract of land that had cost $10,000, for $16,000.
D. Purchased a company truck, with a note payable of $38,000.
E. Collected $8,000 from customer accounts receivable.

EA2. LO 16.2 In which section of the statement of cash flows would each of the following transactions be included? For each, identify the appropriate section of the statement of cash flows as operating (O), investing (I), financing (F), or none (N). (Note: some transactions might involve two sections.)

A. paid advertising expense
B. paid dividends to shareholders
C. purchased business equipment
D. sold merchandise to customers
E. purchased plant assets

EA3. LO 16.2 In which section of the statement of cash flows would each of the following transactions be included? For each, identify the appropriate section of the statement of cash flows as operating (O), investing (I), financing (F), or none (N). (Note: some transactions might involve two sections.)

A. borrowed from the bank for business loan
B. declared dividends, to be paid next year
C. purchased treasury stock
D. purchased a two-year insurance policy
E. purchased plant assets

EA4. LO 16.3 Use the following information from Albuquerque Company's financial statements to determine operating net cash flows (indirect method).

Net income	$325,000
Change in accumulated depreciation (no sale of depreciable assets this year)	26,200
Loss on sale of company truck	7,800

EA5. LO 16.3 What adjustment(s) should be made to reconcile net income to net cash flows from operating activities (indirect method) considering the following balances in current assets?

Accounts receivable, beginning of year	$20,000
Accounts receivable, end of year	25,000
Prepaid insurance, beginning of year	12,000
Prepaid insurance, end of year	9,000

EA6. LO 16.3 Use the following information from Birch Company's balance sheets to determine net cash flows from operating activities (indirect method), assuming net income for 2018 of $122,000.

	Dec. 31, 2018	**Dec. 31, 2017**
Accounts Receivable	$12,800	$15,000
Prepaid Insurance	4,000	3,500
Accounts Payable	9,000	8,200
Accrued Liabilities	2,500	2,800

EA7. LO 16.3 Use the following information from Chocolate Company's financial statements to determine operating net cash flows (indirect method).

	Income Statement	Balance Sheet
Sales	$ 98,500	
Cost of Goods Sold	(62,000)	
Salaries Expense	(18,000)	
Depreciation Expense	(9,000)	
Net Income	9,500	
Accounts Receivable decrease		$2,000
Merchandise Inventory increase		1,600
Salaries Payable increase		450

EA8. LO 16.3 Use the following information from Denmark Company's financial statements to determine operating net cash flows (indirect method).

Net income	$145,000
Depreciation expense	16,500
Loss on sale of land	5,000
Decrease in accounts receivable	1,500
Decrease in accounts payable	1,250

EA9. LO 16.3 Use the following excerpts from Eagle Company's financial records to determine net cash flows from financing activities.

Acquired new plant assets	$18,000
Borrowed from bank, note payable	40,000
Declared and paid dividends to shareholders	15,000

EA10. LO 16.3 Use the following excerpts from Fruitcake Company's financial records to determine net cash flows from investing activities.

Acquired new plant assets	$18,000
Collected interest on investment assets	4,000
Sold land used in business	36,500

EA11. LO 16.3 Use the following excerpts from Grenada Company's financial records to determine net cash flows from operating activities and net cash flows from investing activities.

Net income this year	$158,750
Purchased plant assets this year	40,000
Sold tract of land this year	35,000
Original cost of land that was sold	25,000

EA12. LO 16.4 Provide the missing piece of information for the following statement of cash flows puzzle.

Cash flows from operating activities	$ 60,000
Cash flows from investing activities	(28,500)
Cash flows from financing activities	?
Cash at the beginning of the year	12,000
Cash at the end of the year	19,500

EA13. LO 16.4 Provide the missing piece of information for the following statement of cash flows puzzle.

Cash flows from operating activities	$?
Cash flows from investing activities	8,900
Cash flows from financing activities	(25,000)
Cash at the beginning of the year	24,000
Cash at the end of the year	22,100

EA14. LO 16.5 Use the following excerpts from Kirsten Company's Statement of Cash Flows and other financial records to determine the company's free cash flow.

From Statement of Cash Flows:	
Cash flows from operating activities	$135,000
Cash flows from investing activities	(50,000)
Cash flows from financing activities	65,000
From other records:	
Cash capital expenditures	75,000
Cash dividends paid	15,000

EA15. LO 16.5 Use the following excerpts from Franklin Company's statement of cash flows and other financial records to determine the company's free cash flow for 2018 and 2017.

	2018	2017
Cash flows from operating activities	$222,000	$200,000
Cash flows from investing activities	(33,000)	(35,000)
Cash flows from financing activities	66,000	60,000
Capital expenditures were 50% of investing activities, both years		
Cash dividends paid were $15,000, both years		

EA16. LO 16.5 The following are excerpts from Hamburg Company's statement of cash flows and other financial records.

From Statement of Cash Flows:	
Cash flows from operating activities	$100,000
Cash flows from investing activities	(50,000)
Cash flows from financing activities	(25,000)
From other records:	
Capital expenditure costs	20,000
Cash dividends payments	22,500
Sales revenue	221,000
Total assets	302,500

Compute the following for the company:

A. free cash flow
B. cash flows to sales ratio
C. cash flows to assets ratio

EA17. LO 16.6 Use the following excerpts from Algona Company's financial statements to determine cash received from customers in 2018.

From Balance Sheets	**Dec. 31, 2018**	**Dec. 31, 2017**
Accounts Receivable	$ 85,000	$105,000
From Income Statement:	**2018**	
Sales	700,000	

EA18. LO 16.6 Use the following excerpts from Huckleberry Company's financial statements to determine cash paid to suppliers for inventory in 2018.

From Balance Sheets:	**Dec. 31, 2018**	**Dec. 31, 2017**
Inventory	$ 74,000	$82,000
Accounts Payable	55,000	58,000
From Income Statement:	**2018**	
Cost of Goods Sold	$520,000	

Exercise Set B

EB1. LO 16.1 Provide journal entries to record each of the following transactions. For each, identify whether the transaction represents a source of cash (S), a use of cash (U), or neither (N).

A. Paid $22,000 cash on bonds payable.
B. Collected $12,600 cash for a note receivable.
C. Declared a dividend to shareholders for $16,000, to be paid in the future.
D. Paid $26,500 to suppliers for purchases on account.
E. Purchased treasury stock for $18,000 cash.

EB2. LO 16.2 In which section of the statement of cash flows would each of the following transactions be included? For each, identify the appropriate section of the statement of cash flows as operating (O), investing (I), financing (F), or none (N). (Note: some transactions might involve two sections.)

A. collected accounts receivable from customers
B. issued common stock for cash
C. declared and paid dividends
D. paid accounts payable balance
E. sold a long-term asset for the same amount as purchased

EB3. LO 16.2 In which section of the statement of cash flows would each of the following transactions be included? For each, identify the appropriate section of the statement of cash flows as operating (O), investing (I), financing (F), or none (N). (Note: some transactions might involve two sections.)

A. purchased stock in Xerox Corporation
B. purchased office supplies
C. issued common stock
D. sold plant assets for cash
E. sold equipment for cash

EB4. LO 16.3 Use the following information from Hamlin Company's financial statements to determine operating net cash flows (indirect method).

Net income	$113,750
Change in accumulated depreciation (no sale of depreciable assets this year)	9,800
Gain on sale of investments	11,400

EB5. LO 16.3 What adjustment(s) should be made to reconcile net income to net cash flows from operating activities (indirect method) considering the following balances in current assets?

Accounts payable, beginning of year	$18,000
Accounts payable, end of year	28,000
Salaries payable, beginning of year	6,000
Salaries payable, end of year	4,000

EB6. LO 16.3 Use the following excerpts from Indigo Company's balance sheets to determine net cash flows from operating activities (indirect method), assuming net income for 2018 of $225,000.

	Dec. 31, 2018	**Dec. 31, 2017**
Accounts Receivable	$33,000	$31,500
Prepaid Insurance	17,000	18,000
Accounts Payable	19,000	19,500
Accrued Liabilities	11,700	11,000

EB7. LO 16.3 Use the following information from Jumper Company's financial statements to determine operating net cash flows (indirect method).

	Income Statement	**Balance Sheet**
Sales	$111,000	
Cost of Goods Sold	(73,000)	
Salaries Expense	(12,000)	
Depreciation Expense	(8,000)	
Net Income	18,000	
Accounts Receivable decrease		$3,500
Merchandise Inventory increase		2,200
Salaries Payable increase		925

EB8. LO 16.3 Use the following information from Kentucky Company's financial statements to determine operating net cash flows (indirect method).

Net income	$176,000
Depreciation expense	18,750
Gain on sale of plant assets	15,000
Increase in accounts receivable	12,000
Decrease in accounts payable	5,500

EB9. LO 16.3 Use the following excerpts from Leopard Company's financial records to determine net cash flows from investing activities.

Collected payments on a customer note receivable	$27,500
Purchased plant assets	19,000
Received dividend income from stocks owned	2,500

EB10. LO 16.3 Use the following information from Manuscript Company's financial records to determine net cash flows from financing activities.

Repaid principal on bank loan	$16,500
Issued common stock, at par value	32,000
Declared dividends, to be paid to shareholders next year	9,000

EB11. LO 16.3 Use the following excerpts from Nutmeg Company's financial records to determine net cash flows from operating activities and net cash flows from investing activities.

Net income this year	$83,700
Purchased land this year	20,000
Sold investments this year	31,500
Original cost of investments that were sold	33,000

EB12. LO 16.4 Provide the missing piece of information for the following statement of cash flows puzzle.

Cash flows from operating activities	$ 75,000
Cash flows from investing activities	13,300
Cash flows from financing activities	(33,000)
Cash at the beginning of the year	?
Cash at the end of the year	65,000

EB13. LO 16.4 Provide the missing piece of information for the following statement of cash flows puzzle.

Cash flows from operating activities	$ 88,000
Cash flows from investing activities	?
Cash flows from financing activities	(45,000)
Cash at the beginning of the year	77,000
Cash at the end of the year	113,000

EB14. LO 16.5 Use the following excerpts from Indira Company's Statement of Cash Flows and other financial records to determine the company's free cash flow.

From Statement of Cash Flows:	
Cash flows from operating activities	$ 98,700
Cash flows from investing activities	125,000
Cash flows from financing activities	(16,500)
From other records:	
Cash capital expenditures	40,000
Cash dividends paid	12,000

EB15. LO 16.5 Use the following excerpts from Bolognese Company's statement of cash flows and other financial records to determine the company's free cash flow for 2018 and 2017.

	2018	2017
Cash flows from operating activities	$121,000	$114,000
Cash flows from investing activities	(56,000)	(40,000)
Cash flows from financing activities	(12,000)	(15,000)
Capital expenditures were 40% of investing activities, both years		
Cash dividends paid were $20,000, both years		

EB16. LO 16.5 The following shows excerpts from Camole Company's statement of cash flows and other financial records.

From Statement of Cash Flows:	
Cash flows from operating activities	$225,000
Cash flows from investing activities	(75,000)
Cash flows from financing activities	61,500
From other records:	
Capital expenditure costs	144,000
Cash dividends payments	36,000
Sales revenue	642,000
Total assets	450,000

Compute the following for the company:

A. free cash flow
B. cash flows to sales ratio
C. cash flows to assets ratio

EB17. LO 16.6 Use the following excerpts from Brownstone Company's financial statements to determine cash received from customers in 2018.

From Balance Sheets	**Dec. 31, 2018**	**Dec. 31, 2017**
Accounts Receivable	$ 25,000	$20,000
From Income Statement:	**2018**	
Sales	220,000	

EB18. LO 16.6 Use the following excerpts from Jasper Company's financial statements to determine cash paid to suppliers for inventory in 2018.

From Balance Sheets:	**Dec. 31, 2018**	**Dec. 31, 2017**
Inventory	$ 35,000	$31,000
Accounts Payable	22,000	20,500
From Income Statement:	**2018**	
Cost of Goods Sold	175,900	

Problem Set A

PA1. LO 16.2 Provide journal entries to record each of the following transactions. For each, also identify *the appropriate section of the statement of cash flows, and **whether the transaction represents a source of cash (S), a use of cash (U), or neither (N).

A. paid $12,000 of accounts payable
B. collected $6,000 from a customer
C. issued common stock at par for $24,000 cash
D. paid $6,000 cash dividend to shareholders
E. sold products to customers for $15,000
F. paid current month's utility bill, $1,500

PA2. LO 16.3 Use the following information from Acorn Company's financial statements to determine operating net cash flows (indirect method).

	2018 Income Statement	Balance Sheets
Sales	$ 453,000	
Cost of Goods Sold	(359,000)	
Operating Expenses, other than depreciation expense	(65,000)	
Depreciation Expense	(8,000)	
Loss on sale of plant assets	(11,900)	
Net Income	9,100	
		Dec. 31, 2018
Accounts Receivable		$29,500
Accounts Payable		13,250
		Dec. 31, 2017
Accounts Receivable		$26,500
Accounts Payable		11,750

PA3. LO 16.3 Use the following information from Berlin Company's financial statements to prepare the operating activities section of the statement of cash flows (indirect method) for the year 2018.

	Dec. 31, 2018	Dec. 31, 2017
Cash	$29,000	$24,000
Accounts Receivable	11,500	12,000
Prepaid Assets	1,200	1,000
Total Assets	41,700	37,000
Accrued Liabilities	1,700	1,800
Common Stock	33,000	30,000
Retained Earnings	7,000	5,200
Total Liabilities and Equity	41,700	37,000
Additional information:		
Net income	5,800	
Dividends paid	4,000	

PA4. LO 16.3 Use the following information from Coconut Company's financial statements to prepare the operating activities section of the statement of cash flows (indirect method) for the year 2018.

	Dec. 31, 2018	Dec. 31, 2017
Cash	$201,000	$175,000
Accounts Receivable	22,000	21,500
Inventory	33,750	30,500
Prepaid Rent	6,000	2,000
Accounts Payable	19,500	28,750
Additional information:		
Net income	55,000	
Depreciation expense	11,500	

PA5. LO 16.3 Use the following information from Dubuque Company's financial statements to prepare the operating activities section of the statement of cash flows (indirect method) for the year 2018.

From the Dec. 31, 2018, balance sheet, changes from prior year:	
Accounts Receivable	$ 7,600
Inventory	3,200
Prepaid Insurance	(2,000)
Accounts Payable	(4,000)
Sales Tax Payable	1,900
From the 2018 Income Statement:	
Gain from sale of investments	12,000
Depreciation Expense	26,500
Net Income	79,300

PA6. LO 16.3 Use the following information from Eiffel Company's financial statements to prepare the operating activities section of the statement of cash flows (indirect method) for the year 2018.

	2018 Income Statement	**Balance Sheets**
Sales	$ 299,000	
Cost of Goods Sold	(135,000)	
Operating Expenses, other than depreciation expense	(27,000)	
Depreciation Expense	(17,000)	
Gain on Sale of Plant Assets	16,500	
Net Income	136,500	
		Dec. 31, 2018
Accounts Receivable		$45,300
Inventory		1,600
Accounts Payable		22,500
Accrued Liabilities		900
		Dec. 31, 2017
Accounts Receivable		$43,400
Inventory		1,800
Accounts Payable		21,250
Accrued Liabilities		1,150

PA7. LO 16.3 Analysis of Forest Company's accounts revealed the following activity for its Land account, with descriptions added for clarity of analysis. How would these two transactions be reported for cash flow purposes? Note the section of the statement of cash flow, if applicable, and if the transaction represents a cash source, cash use, or noncash transaction.

	Land
Account balance, beginning of year	$220,000
Purchase of land this year, for cash	95,000
Purchase of land this year, with note payable	75,000
Account balance, end of year	390,000

PA8. LO 16.4 Use the following excerpts from Zowleski Company's financial information to prepare a statement of cash flows (indirect method) for the year 2018.

	Dec. 31, 2018	Dec. 31, 2017
Cash	$ 92,300	$ 85,000
Account Receivable	22,000	22,900
Merchandise Inventory	140,000	131,000
Plant Assets	180,000	150,000
Accumulated Depreciation	(25,000)	(21,000)
Total Assets	409,300	367,900
Accounts Payable	18,500	21,000
Notes Payable	135,500	120,000
Common Stock	20,000	20,000
Retained Earnings	235,300	206,900
Total Liabilities and Equity	409,300	367,900
Additional information:		
Net income for 2018	28,400	
Depreciation expense for 2018 (accumulated depreciation increase)	4,000	
Plant assets purchased (plant assets increase), financed by note	30,000	
Notes payable increased by amount of plant asset purchase	30,000	
Notes payable decreased by amount of principal note payments	14,500	

PA9. LO 16.4 Use the following excerpts from Yardley Company's financial information to prepare a statement of cash flows (indirect method) for the year 2018.

	2018 Income Statement	Balance Sheets
Sales	$ 455,000	
Cost of Goods Sold	(221,500)	
Operating Expenses, other than depreciation expense	(58,600)	
Depreciation Expense	(24,000)	
Gain on Sale of Plant Assets	23,500	
Net Income	174,400	
		Dec. 31, 2018
Cash		$321,450
Accounts Receivable		39,750
Inventory		33,000
Accounts Payable		17,550
Accrued Liabilities		3,500
		Dec. 31, 2017
Cash		$133,500
Accounts Receivable		36,500
Inventory		35,000
Accounts Payable		19,550
Accrued Liabilities		2,200
Additional information:		
Plant assets were sold for $40,000; book value $16,500		
Dividends of $25,000 were declared and paid		

PA10. LO 16.4 Use the following excerpts from Wickham Company's financial information to prepare a statement of cash flows (indirect method) for the year 2018.

	Dec. 31, 2018	Dec. 31, 2017
Cash	$225,000	$200,000
Account Receivable	38,350	35,350
Merchandise Inventory	59,500	58,200
Land	150,000	50,000
Plant Assets	160,000	160,000
Accumulated Depreciation	(49,000)	(37,000)
Total Assets	583,850	466,550
Accounts Payable	29,100	27,300
Accrued Liabilities	15,500	12,000
Common Stock	45,000	20,000
Retained Earnings	494,250	407,250
Total Liabilities and Equity	583,850	466,550
Additional information:		
Net income for 2018	98,000	
Depreciation expense for 2018	12,000	
Land purchased, for cash	100,000	
Stock issued in exchange for cash, at par value	25,000	
Dividends declared and paid	11,000	

PA11. LO 16.4 Use the following excerpts from Tungsten Company's financial information to prepare a statement of cash flows (indirect method) for the year 2018.

Beginning cash	$18,444
Net income	36,500
Depreciation expense	11,000
Accounts receivable change	(8,300)
Inventory change	4,900
Prepaid assets change	3,400
Investments change (no asset sales)	10,000
Accounts payable change	450
Note payable principal balance change (no new loans)	(9,400)
Common stock balance change (due to stock issuance)	20,000

PA12. LO 16.5 The following shows excerpts from financial information relating to Aspen Company and Bergamot Company.

	Aspen	Bergamot
Net Cash Flows from Operating Activities	$320,000	$486,900
Total Assets	450,400	625,000
Net Income	300,000	550,200
Sales Revenue	463,500	875,000
Capital Expenditures	120,750	250,000
Dividend Payments	25,000	65,700

Compute the following for both companies. Compare your results.

A. free cash flow
B. cash flows to sales ratio
C. cash flows to assets ratio

PA13. LO 16.6 Use the following excerpts from Fromera Company's financial information to prepare the operating section of the statement of cash flows (direct method) for the year 2018.

	2018 Income Statement	Balance Sheets
Sales	$ 299,000	
Cost of Goods Sold	(135,000)	
Operating Expenses, other than depreciation expense	(27,000)	
Depreciation Expense	(17,000)	
Gain on Sale of Plant Assets	16,500	
Net Income	136,500	
		Dec. 31, 2018
Accounts Receivable (associated with Sales)		$45,300
Inventory (associated with Inventory)		1,600
Accounts Payable (associated with Inventory)		22,500
Accrued Liabilities (associated with Other Expense)		900
		Dec. 31, 2017
Accounts Receivable (associated with Sales)		$43,400
Inventory (associated with Inventory)		1,800
Accounts Payable (associated with Inventory)		21,250
Accrued Liabilities (associated with Other Expense)		1,150

PA14. LO 16.6 Use the following excerpts from Victrolia Company's financial information to prepare a statement of cash flows (direct method) for the year 2018.

	2018 Income Statement	Balance Sheets
Sales	$ 455,000	
Cost of Goods Sold	(221,500)	
Operating Expenses, other than depreciation expense	(58,600)	
Depreciation Expense	(24,000)	
Gain on Sale of Plant Assets	23,500	
Net Income	174,400	
		Dec. 31, 2018
Cash		$321,450
Accounts Receivable		39,750
Inventory		33,000
Accounts Payable		17,550
Accrued Liabilities		3,500
		Dec. 31, 2017
Cash		$133,500
Accounts Receivable		36,500
Inventory		35,000
Accounts Payable		19,550
Accrued Liabilities		2,200

Additional information:
Plant assets were sold for $40,000; book value $16,500
Dividends of $25,000 were declared and paid

PA15. LO 16.6 Use the following cash transactions relating to Lucknow Company to determine the cash flows from operating, using the direct method.

Beginning cash balance	$122,000
Collected from customers	33,000
Paid dividends to stockholders	3,000
Paid for interest on notes payable	4,750
Collected dividends from stock owned	3,500
Collected cash from sale of land	20,000
Paid principal payments on notes payable	12,000
Collected cash from issuance of stock	40,000
Paid suppliers for merchandise	29,400
Ending cash balance	169,350

Problem Set B

PB1. LO 16.2 Provide journal entries to record each of the following transactions. For each, also identify: *the appropriate section of the statement of cash flows, and **whether the transaction represents a source of cash (S), a use of cash (U), or neither (N).

A. reacquired $30,000 treasury stock
B. purchased inventory for $20,000
C. issued common stock of $40,000 at par
D. purchased land for $25,000
E. collected $22,000 from customers for accounts receivable
F. paid $33,000 principal payment toward note payable to bank

PB2. LO 16.3 Use the following information from Grenada Company's financial statements to prepare the operating activities section of the statement of cash flows (indirect method) for the year 2018.

	2018 Income Statement	**Balance Sheets**
Sales	$ 286,000	
Cost of Goods Sold	(159,000)	
Operating Expenses, other than depreciation expense	(77,500)	
Depreciation Expense	(9,500)	
Gain on Sale of Investments	14,200	
Net Income	54,200	
		Dec. 31, 2018
Accounts Receivable		$16,500
Accounts Payable		7,400
		Dec. 31, 2017
Accounts Receivable		$18,250
Accounts Payable		8,800

PB3. LO 16.3 Use the following information from Honolulu Company's financial statements to prepare the operating activities section of the statement of cash flows (indirect method) for the year 2018.

	Dec. 31, 2018	Dec. 31, 2017
Cash	$275,000	$254,000
Accounts Receivable	143,000	132,000
Prepaid Assets	8,500	9,000
Total Assets	426,500	395,000
Accrued Liabilities	120,000	112,000
Common Stock	285,000	270,000
Retained Earnings	21,500	13,000
Total Liabilities and Equity	426,500	395,000
Additional information:		
Net income	20,500	
Dividends paid	12,000	

PB4. LO 16.3 Use the following information from Isthmus Company's financial statements to prepare the operating activities section of the statement of cash flows (indirect method) for the year 2018.

	Dec. 31, 2018	Dec. 31, 2017
Cash	$295,000	$259,000
Account Receivable	45,300	48,700
Inventory	92,200	91,000
Accounts Payable	23,000	26,300
Salaries Payable	1,700	1,500
Additional information:		
Net income	45,200	
Depreciation expense	33,300	

PB5. LO 16.3 Use the following information from Juniper Company's financial statements to prepare the operating activities section of the statement of cash flows (indirect method) for the year 2018.

From the Dec. 31, 2018, balance sheet, changes from prior year:	
Account Receivable	$ 4,000
Inventory	(5,500)
Prepaid Insurance	4,000
Accounts Payable	3,000
Sales Tax Payable	(200)
From the 2018 Income Statement:	
Loss from sale of land	4,200
Depreciation Expense	17,250
Net Income	22,222

PB6. LO 16.3 Use the following excerpts from Kayak Company's financial information to prepare the operating section of the statement of cash flows (indirect method) for the year 2018.

	2018 Income Statement	Balance Sheets
Sales	$ 777,000	
Cost of Goods Sold	(555,000)	
Operating Expenses, other than depreciation expense	(22,000)	
Depreciation Expense	(44,000)	
Loss on Sale of Plant Assets	(11,000)	
Net Income	145,000	
		Dec. 31, 2018
Accounts Receivable		$63,300
Inventory		2,400
Accounts Payable		35,000
Accrued Liabilities		2,100
		Dec. 31, 2017
Accounts Receivable		$63,000
Inventory		2,800
Accounts Payable		37,400
Accrued Liabilities		2,650

PB7. LO 16.3 Analysis of Longmind Company's accounts revealed the following activity for Equipment, with descriptions added for clarity of analysis. How would these two transactions be reported for cash flow purposes? Note the section of the statement of cash flow, if applicable, and if the transaction represents a cash source, cash use, or noncash transaction.

	Equipment
Account balance, beginning of year	$ 88,000
Purchase of equipment this year, for cash	29,500
Purchase of equipment this year, with note payable	34,750
Account balance, end of year	152,250

	Equipment
Account balance, beginning of year	$ 88,000
• Purchase of equipment this year, for cash	29,500
• Purchase of equipment this year, with note payable	34,750
Account balance, end of year	152,250

PB8. LO 16.4 Use the following excerpts from Stern Company's financial information to prepare a statement of cash flows (indirect method) for the year 2018.

	Dec. 31, 2018	Dec. 31, 2017
Cash	$121,000	$101,000
Account Receivable	37,200	35,300
Merchandise Inventory	120,000	128,700
Plant Assets	304,000	254,000
Accumulated Depreciation	(85,000)	(64,000)
Total Assets	497,200	455,000
Accounts Payable	23,200	19,900
Notes Payable	179,500	144,000
Common Stock	30,000	30,000
Retained Earnings	264,500	261,100
Total Liabilities and Equity	497,200	455,000
Additional information:		
Net income for 2018	3,400	
Depreciation expense for 2018 (accumulated depreciation increase)	21,000	
Plant assets purchased (plant assets increase), financed by note	50,000	
Notes payable increased by amount of plant asset purchase	50,000	
Notes payable decreased by amount of principal note payments	14,500	

PB9. LO 16.4 Use the following excerpts from Unigen Company's financial information to prepare the operating section of the statement of cash flows (indirect method) for the year 2018.

	2018 Income Statement	Balance Sheets
Sales	$ 777,000	
Cost of Goods Sold	(555,000)	
Operating Expenses, other than depreciation expense	(22,000)	
Depreciation Expense	(44,000)	
Loss on Sale of Plant Assets	(11,000)	
Net Income	145,000	
Cash		**Dec. 31, 2018**
Accounts Receivable		$429,850
Inventory		63,300
Accounts Payable		2,400
Accrued Liabilities		35,000
		2,100
Cash		**Dec. 31, 2017**
Accounts Receivable		$228,700
Inventory		63,000
Accounts Payable		2,800
Accrued Liabilities		37,400
		2,650
Additional information:		
Plant assets were sold for $22,000; book value $33,000		
Dividends of $18,000 were declared and paid		

PB10. LO 16.4 Use the following excerpts from Mountain Company's financial information to prepare a statement of cash flows (indirect method) for the year 2018.

	Dec. 31, 2018	Dec. 31, 2017
Cash	$100,000	$ 93,000
Account Receivable	19,000	18,000
Merchandise Inventory	29,000	31,500
Investments	132,000	120,000
Plant Assets	90,000	90,000
Accumulated Depreciation	(37,000)	(23,000)
Total Assets	333,000	329,500
Accounts Payable	12,100	13,400
Accrued Liabilities	2,400	1,900
Common Stock	81,000	63,000
Retained Earnings	237,500	251,200
Total Liabilities and Equity	333,000	329,500
Additional information:		
Net income (loss) for 2018	(5,700)	
Depreciation expense for 2018	14,000	
Investments purchased, for cash	12,000	
Common stock issued for cash, at par value	18,000	
Dividends declared and paid	8,000	

PB11. LO 16.4 Use the following excerpts from OpenAir Company's financial information to prepare a statement of cash flows (indirect method) for the year 2018.

Beginning cash	$120,000
Net income	87,500
Depreciation expense	22,000
Accounts receivable change	8,900
Inventory change	(6,500)
Prepaid assets change	2,400
Investments change (no asset sales)	30,000
Accounts payable change	(800)
Note payable principal balance change (no new loans)	(21,000)
Common stock balance change (due to stock issuance)	36,000

PB12. LO 16.5 The following shows excerpts from financial information relating to Stanwell Company and Thodes Company.

	Stanwell	Thodes
Net Cash Flows from Operating Activities	$138,000	$115,000
Total Assets	272,000	350,000
Net Income	35,000	32,000
Sales Revenue	385,000	250,000
Capital Expenditures	28,000	60,000
Dividend Payments	17,000	13,000

Compute the following for both companies. Compare your results.

A. free cash flow
B. cash flows to sales ratio
C. cash flows to assets ratio

PB13. LO 16.6 Use the following excerpts from Swansea Company's financial information to prepare the operating section of the statement of cash flows (direct method) for the year 2018.

	2018 Income Statement	Balance Sheets
Sales	$ 777,000	
Cost of Goods Sold	(555,000)	
Operating Expenses, other than depreciation expense	(22,000)	
Depreciation Expense	(44,000)	
Loss on Sale of Plant Assets	(11,000)	
Net Income	145,000	
		Dec. 31, 2018
Accounts Receivable (associated with Sales)		$63,300
Inventory (associated with Inventory)		2,400
Accounts Payable (associated with Inventory)		35,000
Accrued Liabilities (associated with Other Expense)		2,100
		Dec. 31, 2017
Accounts Receivable (associated with Sales)		$63,000
Inventory (associated with Inventory)		2,800
Accounts Payable (associated with Inventory)		37,400
Accrued Liabilities (associated with Other Expense)		2,650

PB14. LO 16.6 Use the following excerpts from Swahilia Company's financial information to prepare a statement of cash flows (direct method) for the year 2018.

	2018 Income Statement	Balance Sheets
Sales	$ 777,000	
Cost of Goods Sold	(555,000)	
Operating Expenses, other than depreciation expense	(22,000)	
Depreciation Expense	(44,000)	
Loss on Sale of Plant Assets	(11,000)	
Net Income	145,000	
		Dec. 31, 2018
Cash		$429,850
Accounts Receivable		63,300
Inventory		2,400
Accounts Payable		35,000
Accrued Liabilities		2,100
		Dec. 31, 2017
Cash		$228,700
Accounts Receivable		63,000
Inventory		2,800
Accounts Payable		37,400
Accrued Liabilities		2,650

Additional information:
Plant assets were sold for $22,000; book value $33,000
Dividends of $18,000 were declared and paid

PB15. LO 16.6 Use the following cash transactions relating to Warthoff Company to determine the cash flows from operating, using the direct method.

Beginning cash balance	$45,000
Collected from customers	24,500
Paid dividends to stockholders	5,000
Paid for interest on notes payable	3,200
Collected dividends from stock owned	1,800
Collected cash from sale of land	15,000
Paid principal payments on notes payable	18,800
Collected cash from issuance of stock	25,000
Paid suppliers for merchandise	31,000
Ending cash balance	53,300

Thought Provokers

TP1. LO 16.2 Use the EDGAR (Electronic Data Gathering, Analysis, and Retrieval system) search tools on the US Securities and Exchange Commission website (https://www.sec.gov/edgar/searchedgar/companysearch.html) to locate the latest Form 10-K for a company you would like to analyze. Submit a short memo that provides the following information:

- the name and ticker symbol of the company you have chosen
- the following information from the company's statement of cash flows:
  - A. amount of cash flows from operating activities
  - B. amount of cash flows from investing activities
  - C. amount of cash flows from financing activities
- the URL to the company's Form 10-K to allow accurate verification of your answers

TP2. LO 16.3 Use a spreadsheet and the following financial information from Mineola Company's financial statements to build a template that automatically calculates the net operating cash flow. It should be suitable for use in preparing the operating section of the statement of cash flows (indirect method) for the year 2018.

	Dec. 31, 2018	**Dec. 31, 2017**
Cash	$57,000	$42,000
Account Receivable	12,500	15,000
Prepaid Assets	1,500	1,100
Total Assets	71,000	58,100
Accounts Payable	2,700	1,800
Common Stock	39,000	30,000
Retained Earnings	29,300	26,300
Total Liabilities and Equity	71,000	58,100
Additional information:		
Net income	7,000	
Dividends paid	4,000	

TP3. LO 16.3 Consider the dilemma you might someday face if you are the chief financial officer of a company that is struggling to maintain a positive cash flow, despite the fact that the company is reporting a substantial positive net income. Maybe the problem is so severe that there is often insufficient cash to pay ordinary business expenses, like utilities, salaries, and payments to suppliers. Assume that you have been asked to communicate to your board of directors about your company's year, in retrospect, as well as your vision for the company's future. Write a memo that expresses your insights about past experience and present prospects for the company. Note that the challenge of the assignment is to keep your integrity intact, while putting a positive spin on the situation, as much as is reasonably possible. How can you envision the situation turning into a success story?

TP4. LO 16.4 Use the EDGAR (Electronic Data Gathering, Analysis, and Retrieval system) search tools on the US Securities and Exchange Commission website (https://www.sec.gov/edgar/searchedgar/companysearch.html) to locate the latest Form 10-K for a company you would like to analyze. Pick a company and submit a short memo that provides the following information:

- The name and ticker symbol of the company you have chosen.
- A description of two items from the company's statement of cash flows:
  - One familiar item that you expected to be reported on the statement, based on what you've learned about cash flows
  - One unfamiliar item that you did not expect to be on the statement, based on what you've learned about cash flows
- The URL to the company's Form 10-K to allow accurate verification of your answers

TP5. LO 16.5 If you had $100,000 available for investing, which of these companies would you choose to invest with? Support your answer with analysis of free cash flow, based on the data provided, and include in your decision whatever other reasoning you chose to utilize.

	Aswan	**Merrick**
From Statement of Cash Flows:		
Cash flows from operating activities	$ 88,000	$146,500
Cash flows from investing activities	(30,000)	(50,000)
Cash flows from financing activities	58,000	(24,750)
From other records:		
Capital expenditure costs	30,000	50,000
Cash dividends payments	32,000	52,000
Sales Revenue	326,000	542,000
Net Income	65,000	160,500
Total Assets	150,000	350,000

A Financial Statement Analysis

Financial Statement Analysis

Financial statement analysis reviews financial information found on financial statements to make informed decisions about the business. The income statement, statement of retained earnings, balance sheet, and statement of cash flows, among other financial information, can be analyzed. The information obtained from this analysis can benefit decision-making for internal and external stakeholders and can give a company valuable information on overall performance and specific areas for improvement. The analysis can help them with budgeting, deciding where to cut costs, how to increase revenues, and future capital investments opportunities.

When considering the outcomes from analysis, it is important for a company to understand that data produced needs to be compared to others within industry and close competitors. The company should also consider their past experience and how it corresponds to current and future performance expectations. Three common analysis tools are used for decision-making; horizontal analysis, vertical analysis, and financial ratios.

For our discussion of financial statement analysis, we will use Banyan Goods. Banyan Goods is a merchandising company that sells a variety of products. Figure A.1 shows the comparative income statements and balance sheets for the past two years.

BARRY'S SUPERSTORE
Comparative Year-End Income Statements

	Prior Year	Current Year
Net Sales	$100,000	$120,000
Cost of Goods Sold	50,000	60,000
Gross Profit	50,000	60,000
Rent Expense	5,000	5,500
Depreciation Expense	2,500	3,600
Salaries Expense	3,000	5,400
Utility Expense	1,500	2,500
Operating Income	38,000	43,000
Interest Expense	3,000	2,000
Income Tax Expense	5,000	6,000
Net Income	$ 30,000	$ 35,000

BARRY'S SUPERSTORE
Comparative Year-End Balance Sheets

	Prior Year	Current Year
Assets:		
Cash	$90,000	$110,000
Accounts Receivable	20,000	30,000
Inventory	35,000	40,000
Short-Term Investments	15,000	20,000
Total Current Asstes	160,000	200,000
Equipment	40,000	50,000
Total Assets	$200,000	$250,000
Liabilities:		
Accounts Payable	$ 60,000	$ 75,000
Unearned Revenue	10,000	25,000
Total Current Liabilities	70,000	100,000
Notes Payable	40,000	50,000
Total Liabilities	110,000	150,000
Stockholder Equity		
Common Stock	75,000	80,000
Ending Retained Earnings	15,000	20,000
Total Stockholder Equity	90,000	100,000
Total Liabilities and Stockholder Equity	$200,000	$250,000

Figure A.1 Comparative Income Statements and Balance Sheets.

Keep in mind that the comparative income statements and balance sheets for Banyan Goods are simplified for our calculations and do not fully represent all the accounts a company could maintain. Let's begin our analysis discussion by looking at horizontal analysis.

Horizontal Analysis

Horizontal analysis (also known as trend analysis) looks at trends over time on various financial statement line items. A company will look at one period (usually a year) and compare it to another period. For example, a company may compare sales from their current year to sales from the prior year. The trending of items on these financial statements can give a company valuable information on overall performance and specific areas for improvement. It is most valuable to do horizontal analysis for information over multiple periods to see how change is occurring for each line item. If multiple periods are not used, it can be difficult to identify a trend. The year being used for comparison purposes is called the base year (usually the prior period). The year of comparison for horizontal analysis is analyzed for dollar and percent changes against the base year.

The dollar change is found by taking the dollar amount in the base year and subtracting that from the year of analysis.

Dollar Change = Year of Analysis Amount – Base Year Amount

Using Banyan Goods as our example, if Banyan wanted to compare net sales in the current year (year of analysis) of $120,000 to the prior year (base year) of $100,000, the dollar change would be as follows:

$$\text{Dollar change} = \$120{,}000 - \$1000{,}000 = \$20{,}000 \tag{A1}$$

The percentage change is found by taking the dollar change, dividing by the base year amount, and then multiplying by 100.

$$\textbf{Percent Change} = \left(\frac{\textbf{Dollar Change}}{\textbf{Base Year Amount}}\right) \times 100$$

Let's compute the percentage change for Banyan Goods' net sales.

$$\text{Percentage change} = \left(\frac{\$20{,}000}{\$100{,}000}\right) \times 100 = 20\% \tag{A2}$$

This means Banyan Goods saw an increase of $20,000 in net sales in the current year as compared to the prior year, which was a 20% increase. The same dollar change and percentage change calculations would be used for the income statement line items as well as the balance sheet line items. Figure A.2 shows the complete horizontal analysis of the income statement and balance sheet for Banyan Goods.

BARRY'S SUPERSTORE
Comparative Year-End Income Statements
Horizontal Analysis

	Prior Year	Current Year	Dollar Change	% Change
Net Sales	$100,000	$120,000	$20,000	20%
Cost of Goods Sold	50,000	60,000	$10,000	20%
Gross Profit	50,000	60,000	$10,000	20%
Rent Expense	5,000	5,500	$ 500	10%
Depreciation Expense	2,500	3,600	$ 1,100	44%
Salaries Expense	3,000	5,400	$ 2,400	80%
Utility Expense	1,500	2,500	$ 1,000	67% *
Operating Income	38,000	43,000	$ 5,000	13% *
Interest Expense	3,000	2,000	($ 1,000)	(33%)*
Income Tax Expense	5,000	6,000	$ 1,000	20%
Net Income	$ 30,000	$ 35,000	$ 5,000	17% *

*Rounded to nearest whole percent

BARRY'S SUPERSTORE
Comparative Year-End Balance Sheets
Horizontal Analysis

	Prior Year	Current Year	Dollar Change	% Change
Assets:				
Cash	$90,000	$110,000	$20,000	22%*
Accounts Receivable	20,000	30,000	$10,000	50%
Inventory	35,000	40,000	$ 5,000	14%*
Short-Term Investments	15,000	20,000	$ 5,000	33%*
Total Current Asstes	160,000	200,000	$40,000	25%
Equipment	40,000	50,000	$10,000	25%
Total Assets	$200,000	$250,000	$50,000	25%
Liabilities:				
Accounts Payable	$ 60,000	$ 75,000	$15,000	25%
Unearned Revenue	10,000	25,000	$15,000	150%
Total Current Liabilities	70,000	100,000	$30,000	43%*
Notes Payable	40,000	50,000	$10,000	25%
Total Liabilities	110,000	150,000	$40,000	36%*
Stockholder Equity				
Common Stock	75,000	80,000	$ 5,000	7%*
Ending Retained Earnings	15,000	20,000	$ 5,000	33%*
Total Stockholder Equity	90,000	100,000	$10,000	11%*
Total Liabilities and Stockholder Equity	$200,000	$250,000	$50,000	25%

*Rounded to nearest whole percent

Figure A.2 Income Statements and Horizontal Analysis.

Depending on their expectations, Banyan Goods could make decisions to alter operations to produce expected outcomes. For example, Banyan saw a 50% accounts receivable increase from the prior year to the current year. If they were only expecting a 20% increase, they may need to explore this line item further to determine what caused this difference and how to correct it going forward. It could possibly be that they are extending credit more readily than anticipated or not collecting as rapidly on outstanding accounts receivable. The company will need to further examine this difference before deciding on a course of action. Another method of analysis Banyan might consider before making a decision is vertical analysis.

Vertical Analysis

Vertical analysis shows a comparison of a line item within a statement to another line item within that same statement. For example, a company may compare cash to total assets in the current year. This allows a company to see what percentage of cash (the comparison line item) makes up total assets (the other line item) during the period. This is different from horizontal analysis, which compares across years. Vertical analysis compares line items within a statement in the current year. This can help a business to know how much of one item is contributing to overall operations. For example, a company may want to know how much inventory contributes to total assets. They can then use this information to make business decisions such as preparing the budget, cutting costs, increasing revenues, or capital investments.

The company will need to determine which line item they are comparing all items to within that statement and then calculate the percentage makeup. These percentages are considered *common-size* because they make businesses within industry comparable by taking out fluctuations for size. It is typical for an income statement to use net sales (or sales) as the comparison line item. This means net sales will be set at 100% and all other

line items within the income statement will represent a percentage of net sales.

On the balance sheet, a company will typically look at two areas: (1) total assets, and (2) total liabilities and stockholders' equity. Total assets will be set at 100% and all assets will represent a percentage of total assets. Total liabilities and stockholders' equity will also be set at 100% and all line items within liabilities and equity will be represented as a percentage of total liabilities and stockholders' equity. The line item set at 100% is considered the base amount and the comparison line item is considered the comparison amount. The formula to determine the common-size percentage is:

$$\textbf{Common-Size Percentage} = \left(\frac{\textbf{Comparision Amount}}{\textbf{Base Amount}}\right) \times 100$$

For example, if Banyan Goods set total assets as the base amount and wanted to see what percentage of total assets were made up of cash in the current year, the following calculation would occur.

$$\text{Common-size percentage} = \left(\frac{\$110{,}000}{\$250{,}000}\right) \times 100 = 44\% \tag{A3}$$

Cash in the current year is $110,000 and total assets equal $250,000, giving a common-size percentage of 44%. If the company had an expected cash balance of 40% of total assets, they would be exceeding expectations. This may not be enough of a difference to make a change, but if they notice this deviates from industry standards, they may need to make adjustments, such as reducing the amount of cash on hand to reinvest in the business. Figure A.3 shows the common-size calculations on the comparative income statements and comparative balance sheets for Banyan Goods.

BARRY'S SUPERSTORE
Comparative Year-End Income Statements
Vertical Analysis

			Common Size*	
	Prior Year	Current Year	Prior Year	Current Year
Net Sales	$100,000	$120,000	100%	100%
Cost of Goods Sold	50,000	60,000	50%	50%
Gross Profit	50,000	60,000	50%	50%
Rent Expense	5,000	5,500	5%	5%
Depreciation Expense - Eq.	2,500	3,600	3%	3%
Salaries Expense	3,000	5,400	3%	5%
Utility Expense	1,500	2,500	2%	2%
Operating Income	38,000	43,000	38%	36%
Interest Expense	3,000	2,000	3%	2%
Income Tax Expense	5,000	6,000	5%	5%
Net Income	$ 30,000	$ 35,000	30%	29%

BARRY'S SUPERSTORE
Comparative Year-End Balance Sheets
Vertical Analysis

			Common Size	
	Prior Year	Current Year	Prior Year	Current Year
Assets:				
Cash	$90,000	$110,000	45%	44%
Accounts Receivable	20,000	30,000	10%	12%
Inventory	35,000	40,000	17.5%	16%
Short-Term Investments	15,000	20,000	7.5%	8%
Total Current Asstes	160,000	200,000	80%	80%
Equipment	40,000	50,000	20%	20%
Total Assets	$200,000	$250,000	100%	100%
Liabilities:				
Accounts Payable	$ 60,000	$ 75,000	30%	30%
Unearned Revenue	10,000	25,000	5%	10%
Total Current Liabilities	70,000	100,000	35%	40%
Notes Payable	40,000	50,000	20%	20%
Total Liabilities	110,000	150,000	55%	60%
Stockholder Equity				
Common Stock	75,000	80,000	37.5%	32%
Ending Retained Earnings	15,000	20,000	7.5%	8%
Total Stockholder Equity	90,000	100,000	45%	40%
Total Liabilities and Stockholder Equity	$200,000	$250,000	100%	100%

*Some figures rounded to the nearest whole percent, which may alter the total percentage to +/– 1% of 100%

Figure A.3 Income Statements and Vertical Analysis.

Even though vertical analysis is a statement comparison within the same year, Banyan can use information from the prior year's vertical analysis to make sure the business is operating as expected. For example, unearned revenues increased from the prior year to the current year and made up a larger portion of total liabilities and stockholders' equity. This could be due to many factors, and Banyan Goods will need to examine this further to see why this change has occurred. Let's turn to financial statement analysis using financial ratios.

Overview of Financial Ratios

Financial ratios help both internal and external users of information make informed decisions about a company. A stakeholder could be looking to invest, become a supplier, make a loan, or alter internal operations, among other things, based in part on the outcomes of ratio analysis. The information resulting from ratio analysis can be used to examine trends in performance, establish benchmarks for success, set budget expectations, and compare industry competitors. There are four main categories of ratios: liquidity, solvency, efficiency, and profitability. Note that while there are more ideal outcomes for some ratios, the industry in which the business operates can change the influence each of these outcomes has over stakeholder decisions. (You will learn more about ratios, industry standards, and ratio interpretation in advanced accounting courses.)

Liquidity Ratios

Liquidity ratios show the ability of the company to pay short-term obligations if they came due immediately with assets that can be quickly converted to cash. This is done by comparing current assets to current liabilities. Lenders, for example, may consider the outcomes of liquidity ratios when deciding whether to extend a loan to a company. A company would like to be liquid enough to manage any currently due obligations but not too liquid where they may not be effectively investing in growth opportunities. Three common liquidity measurements are working capital, current ratio, and quick ratio.

Working Capital

Working capital measures the financial health of an organization in the short-term by finding the difference between current assets and current liabilities. A company will need enough current assets to cover current liabilities; otherwise, they may not be able to continue operations in the future. Before a lender extends credit, they will review the working capital of the company to see if the company can meet their obligations. A larger difference signals that a company can cover their short-term debts and a lender may be more willing to extend the loan. On the other hand, too large of a difference may indicate that the company may not be correctly using their assets to grow the business. The formula for working capital is:

Working Capital = Current Assets – Current Liabilities

Using Banyan Goods, working capital is computed as follows for the current year:

$$\text{Working capital} = \$200{,}000 - \$100{,}000 = \$100{,}000 \tag{A4}$$

In this case, current assets were $200,000, and current liabilities were $100,000. Current assets were far greater than current liabilities for Banyan Goods and they would easily be able to cover short-term debt.

The dollar value of the difference for working capital is limited given company size and scope. It is most useful to convert this information to a ratio to determine the company's current financial health. This ratio is the current ratio.

Current Ratio

Working capital expressed as a ratio is the current ratio. The current ratio considers the amount of current assets available to cover current liabilities. The higher the current ratio, the more likely the company can cover its short-term debt. The formula for current ratio is:

$$\textbf{Current Ratio} = \left(\frac{\textbf{Current Assets}}{\textbf{Current Liabilities}}\right)$$

The current ratio in the current year for Banyan Goods is:

$$\text{Current ratio} = \left(\frac{\$200{,}000}{\$100{,}000}\right) = 2 \text{ or } 2{:}1 \tag{A5}$$

A 2:1 ratio means the company has twice as many current assets as current liabilities; typically, this would be plenty to cover obligations. This may be an acceptable ratio for Banyan Goods, but if it is too high, they may want to consider using those assets in a different way to grow the company.

Quick Ratio

The quick ratio, also known as the acid-test ratio, is similar to the current ratio except current assets are more narrowly defined as the most liquid assets, which exclude inventory and prepaid expenses. The conversion of inventory and prepaid expenses to cash can sometimes take more time than the liquidation of other current assets. A company will want to know what they have on hand and can use quickly if an immediate obligation is due. The formula for the quick ratio is:

$$\textbf{Quick Ratio} = \left(\frac{\textbf{Cash + Short-Term Investments + Accounts Receivable}}{\textbf{Current Liabilities}}\right)$$

The quick ratio for Banyan Goods in the current year is:

$$\text{Quick ratio} = \left(\frac{\$110{,}000 + \$20{,}000 + \$30{,}000}{\$100{,}000}\right) = 1.6 \text{ or } 1.6{:}1 \tag{A6}$$

A 1.6:1 ratio means the company has enough quick assets to cover current liabilities.

Another category of financial measurement uses solvency ratios.

Solvency Ratios

Solvency implies that a company can meet its long-term obligations and will likely stay in business in the future. To stay in business the company must generate more revenue than debt in the long-term. Meeting long-term obligations includes the ability to pay any interest incurred on long-term debt. Two main solvency ratios are the debt-to-equity ratio and the times interest earned ratio.

Debt to Equity Ratio

The debt-to-equity ratio shows the relationship between debt and equity as it relates to business financing. A company can take out loans, issue stock, and retain earnings to be used in future periods to keep operations running. It is less risky and less costly to use equity sources for financing as compared to debt resources. This is mainly due to interest expense repayment that a loan carries as opposed to equity, which does not have this requirement. Therefore, a company wants to know how much debt and equity contribute to its financing. Ideally, a company would prefer more equity than debt financing. The formula for the debt to equity ratio is:

$$\textbf{Debt-to-Equity Ratio} = \left(\frac{\textbf{Total Liabilities}}{\textbf{Total Stockholder Equity}}\right)$$

The information needed to compute the debt-to-equity ratio for Banyan Goods in the current year can be found on the balance sheet.

$$\text{Debt-to-equity ratio} = \left(\frac{\$150{,}000}{\$100{,}000}\right) = 1.5 \text{ or } 1.5{:}1 \tag{A7}$$

This means that for every $1 of equity contributed toward financing, $1.50 is contributed from lenders. This would be a concern for Banyan Goods. This could be a red flag for potential investors that the company could be trending toward insolvency. Banyan Goods might want to get the ratio below 1:1 to improve their long-term business viability.

Times Interest Earned Ratio

Time interest earned measures the company's ability to pay interest expense on long-term debt incurred. This ability to pay is determined by the available earnings before interest and taxes (EBIT) are deducted. These earnings are considered the operating income. Lenders will pay attention to this ratio before extending credit. The more times over a company can cover interest, the more likely a lender will extend long-term credit. The formula for times interest earned is:

$$\textbf{Times Interest Earned} = \left(\frac{\textbf{Earnings before Interest and Taxes}}{\textbf{Interest Expense}}\right)$$

The information needed to compute times interest earned for Banyan Goods in the current year can be found on the income statement.

$$\text{Times interest earned} = \left(\frac{\$43{,}000}{\$2{,}000}\right) = 21.5 \text{ times} \tag{A8}$$

The $43,000 is the operating income, representing earnings before interest and taxes. The 21.5 times outcome suggests that Banyan Goods can easily repay interest on an outstanding loan and creditors would have little risk that Banyan Goods would be unable to pay.

Another category of financial measurement uses efficiency ratios.

Efficiency Ratios

Efficiency shows how well a company uses and manages their assets. Areas of importance with efficiency are management of sales, accounts receivable, and inventory. A company that is efficient typically will be able to generate revenues quickly using the assets it acquires. Let's examine four efficiency ratios: accounts receivable turnover, total asset turnover, inventory turnover, and days' sales in inventory.

Accounts Receivable Turnover

Accounts receivable turnover measures how many times in a period (usually a year) a company will collect cash from accounts receivable. A higher number of times could mean cash is collected more quickly and that credit customers are of high quality. A higher number is usually preferable because the cash collected can be reinvested in the business at a quicker rate. A lower number of times could mean cash is collected slowly on these accounts and customers may not be properly qualified to accept the debt. The formula for accounts receivable turnover is:

$$\text{Accounts Receivable Turnover} = \left(\frac{\text{Net Credit Sales}}{\text{Average Accounts Receivable}}\right)$$

$$\text{Average Accounts Receivable} = \left(\frac{\text{Beginning Accounts Receivable + Ending Accounts Receivable}}{2}\right)$$

Many companies do not split credit and cash sales, in which case net sales would be used to compute accounts receivable turnover. Average accounts receivable is found by dividing the sum of beginning and ending accounts receivable balances found on the balance sheet. The beginning accounts receivable balance in the current year is taken from the ending accounts receivable balance in the prior year.

When computing the accounts receivable turnover for Banyan Goods, let's assume net credit sales make up $100,000 of the $120,000 of the net sales found on the income statement in the current year.

$$\begin{aligned} \text{Average accounts receivable} &= \frac{\$20{,}000 + \$30{,}000}{2} = \$25{,}000 \\ \text{Accounts receivable turnover} &= \frac{\$100{,}000}{\$25{,}000} = 4 \text{ times} \end{aligned} \tag{A9}$$

An accounts receivable turnover of four times per year may be low for Banyan Goods. Given this outcome, they may want to consider stricter credit lending practices to make sure credit customers are of a higher quality. They may also need to be more aggressive with collecting any outstanding accounts.

Total Asset Turnover

Total asset turnover measures the ability of a company to use their assets to generate revenues. A company would like to use as few assets as possible to generate the most net sales. Therefore, a higher total asset turnover means the company is using their assets very efficiently to produce net sales. The formula for total asset turnover is:

$$\text{Total Asset Turnover} = \left(\frac{\text{Net Sales}}{\text{Average Total Assets}}\right)$$

$$\text{Average Total Assets} = \left(\frac{\text{Beginning Total Assets + Ending Total Assets}}{2}\right)$$

Average total assets are found by dividing the sum of beginning and ending total assets balances found on the balance sheet. The beginning total assets balance in the current year is taken from the ending total assets balance in the prior year.

Banyan Goods' total asset turnover is:

$$\begin{aligned} \text{Average total assets} &= \frac{\$200{,}000 + \$250{,}000}{2} = \$225{,}000 \\ \text{Total assets turnover} &= \frac{\$120{,}000}{\$225{,}000} = 0.53 \text{ times (rounded)} \end{aligned} \tag{A10}$$

The outcome of 0.53 means that for every $1 of assets, $0.53 of net sales are generated. Over time, Banyan Goods would like to see this turnover ratio increase.

Inventory Turnover

Inventory turnover measures how many times during the year a company has sold and replaced inventory.

This can tell a company how well inventory is managed. A higher ratio is preferable; however, an extremely high turnover may mean that the company does not have enough inventory available to meet demand. A low turnover may mean the company has too much supply of inventory on hand. The formula for inventory turnover is:

$$\textbf{Inventory Turnover} = \left(\frac{\textbf{Cost of Goods Sold}}{\textbf{Average Inventory}}\right)$$

$$\textbf{Average Inventory} = \left(\frac{\textbf{Beginning Inventory + Ending Inventory}}{\textbf{2}}\right)$$

Cost of goods sold for the current year is found on the income statement. Average inventory is found by dividing the sum of beginning and ending inventory balances found on the balance sheet. The beginning inventory balance in the current year is taken from the ending inventory balance in the prior year.

Banyan Goods' inventory turnover is:

$$\begin{aligned} \text{Average inventory} &= \frac{\$35{,}000 + \$40{,}000}{2} = \$37{,}500 \\ \text{Inventory turnover} &= \frac{\$60{,}000}{\$37{,}500} = 1.6 \text{ times} \end{aligned} \tag{A11}$$

1.6 times is a very low turnover rate for Banyan Goods. This may mean the company is maintaining too high an inventory supply to meet a low demand from customers. They may want to decrease their on-hand inventory to free up more liquid assets to use in other ways.

Days' Sales in Inventory

Days' sales in inventory expresses the number of days it takes a company to turn inventory into sales. This assumes that no new purchase of inventory occurred within that time period. The fewer the number of days, the more quickly the company can sell its inventory. The higher the number of days, the longer it takes to sell its inventory. The formula for days' sales in inventory is:

$$\textbf{Days' Sales in Inventory} = \left(\frac{\textbf{Ending Inventory}}{\textbf{Cost of Goods Sold}}\right) \times \textbf{365}$$

Banyan Goods' days' sales in inventory is:

$$\text{Days' sales in inventory} = \left(\frac{\$40{,}000}{\$60{,}000}\right) \times 365 = 243 \text{ days (rounded)} \tag{A12}$$

243 days is a long time to sell inventory. While industry dictates what is an acceptable number of days to sell inventory, 243 days is unsustainable long-term. Banyan Goods will need to better manage their inventory and sales strategies to move inventory more quickly.

The last category of financial measurement examines profitability ratios.

Profitability Ratios

Profitability considers how well a company produces returns given their operational performance. The company needs to leverage its operations to increase profit. To assist with profit goal attainment, company revenues need to outweigh expenses. Let's consider three profitability measurements and ratios: profit margin, return on total assets, and return on equity.

Profit Margin

Profit margin represents how much of sales revenue has translated into income. This ratio shows how much of each $1 of sales is returned as profit. The larger the ratio figure (the closer it gets to 1), the more of each sales dollar is returned as profit. The portion of the sales dollar not returned as profit goes toward expenses. The formula for profit margin is:

$$\textbf{Profit Margin} = \left(\frac{\textbf{Net Income}}{\textbf{Net Sales}}\right)$$

For Banyan Goods, the profit margin in the current year is:

$$\text{Profit margin} = \left(\frac{\$35{,}000}{\$120{,}000}\right) = 0.29 \text{ (rounded) or } 29\% \tag{A13}$$

This means that for every dollar of sales, $0.29 returns as profit. If Banyan Goods thinks this is too low, the company would try and find ways to reduce expenses and increase sales.

Return on Total Assets

The return on total assets measures the company's ability to use its assets successfully to generate a profit. The higher the return (ratio outcome), the more profit is created from asset use. Average total assets are found by dividing the sum of beginning and ending total assets balances found on the balance sheet. The beginning total assets balance in the current year is taken from the ending total assets balance in the prior year. The formula for return on total assets is:

$$\textbf{Return on Total Assets} = \left(\frac{\textbf{Net Income}}{\textbf{Average Total Assets}}\right)$$

$$\textbf{Average Total Assets} = \left(\frac{\textbf{Beginning Total Assets + Ending Total Assets}}{\textbf{2}}\right)$$

For Banyan Goods, the return on total assets for the current year is:

$$\begin{aligned} \text{Average total assets} &= \frac{\$200{,}000 + \$250{,}000}{2} = \$225{,}000 \\ \text{Return on total assets} &= \frac{\$35{,}000}{\$225{,}000} = 0.16 \text{ (rounded) or } 16\% \end{aligned} \tag{A14}$$

The higher the figure, the better the company is using its assets to create a profit. Industry standards can dictate what is an acceptable return.

Return on Equity

Return on equity measures the company's ability to use its invested capital to generate income. The invested capital comes from stockholders investments in the company's stock and its retained earnings and is leveraged to create profit. The higher the return, the better the company is doing at using its investments to yield a profit. The formula for return on equity is:

$$\textbf{Return on Equity} = \left(\frac{\textbf{Net Income}}{\textbf{Average Stockholder Equity}}\right)$$

$$\textbf{Average Stockholder Equity} = \left(\frac{\textbf{Beginning Stockholder Equity + Ending Stockholder Equity}}{\textbf{2}}\right)$$

Average stockholders' equity is found by dividing the sum of beginning and ending stockholders' equity balances found on the balance sheet. The beginning stockholders' equity balance in the current year is taken from the ending stockholders' equity balance in the prior year. Keep in mind that the net income is calculated after preferred dividends have been paid.

For Banyan Goods, we will use the net income figure and assume no preferred dividends have been paid. The return on equity for the current year is:

$$\begin{aligned} \text{Average stockholder equity} &= \frac{\$90{,}000 + \$100{,}000}{2} = \$95{,}000 \\ \text{Return on equity} &= \frac{\$35{,}000}{\$95{,}000} = 0.37 \text{ (rounded) or } 37\% \end{aligned} \tag{A15}$$

The higher the figure, the better the company is using its investments to create a profit. Industry standards can dictate what is an acceptable return.

Advantages and Disadvantages of Financial Statement Analysis

There are several advantages and disadvantages to financial statement analysis. Financial statement analysis can show trends over time, which can be helpful in making future business decisions. Converting information to percentages or ratios eliminates some of the disparity between competitor sizes and operating abilities, making it easier for stakeholders to make informed decisions. It can assist with understanding the makeup of current operations within the business, and which shifts need to occur internally to increase productivity.

A stakeholder needs to keep in mind that past performance does not always dictate future performance. Attention must be given to possible economic influences that could skew the numbers being analyzed, such as inflation or a recession. Additionally, the way a company reports information within accounts may change over time. For example, where and when certain transactions are recorded may shift, which may not be readily evident in the financial statements.

A company that wants to budget properly, control costs, increase revenues, and make long-term expenditure decisions may want to use financial statement analysis to guide future operations. As long as the company understands the limitations of the information provided, financial statement analysis is a good tool to predict growth and company financial strength.

SAMPLE CHAPTERS NOT FINAL DRAFT

B Time Value of Money

Present Value of $1 Table

Present Value of $1 Table

$$\text{Factor} = \frac{1}{(1+i)^n}$$

Period (n)	Rate (i) 1%	2%	3%	5%	8%	10%	12%	15%	20%
1	0.990	0.980	0.971	0.952	0.926	0.909	0.893	0.870	0.833
2	0.980	0.961	0.943	0.907	0.857	0.826	0.797	0.756	0.694
3	0.971	0.942	0.915	0.864	0.794	0.751	0.712	0.658	0.579
4	0.961	0.924	0.888	0.823	0.735	0.683	0.636	0.572	0.482
5	0.952	0.906	0.863	0.784	0.681	0.621	0.567	0.497	0.402
6	0.942	0.888	0.837	0.746	0.630	0.564	0.507	0.432	0.335
7	0.933	0.871	0.813	0.711	0.583	0.513	0.452	0.376	0.279
8	0.924	0.853	0.789	0.677	0.540	0.467	0.404	0.327	0.233
9	0.914	0.837	0.766	0.645	0.500	0.424	0.361	0.284	0.194
10	0.905	0.820	0.744	0.614	0.463	0.386	0.322	0.247	0.162
11	0.896	0.804	0.722	0.585	0.429	0.350	0.287	0.215	0.135
12	0.888	0.788	0.701	0.557	0.397	0.319	0.257	0.187	0.112
13	0.879	0.773	0.681	0.530	0.368	0.290	0.229	0.163	0.093
14	0.861	0.758	0.661	0.505	0.340	0.263	0.205	0.141	0.078
15	0.861	0.743	0.642	0.481	0.315	0.239	0.183	0.123	0.065
16	0.853	0.728	0.623	0.458	0.292	0.218	0.163	0.107	0.054
17	0.844	0.714	0.605	0.436	0.270	0.198	0.146	0.093	0.045
18	0.836	0.700	0.587	0.416	0.250	0.180	0.130	0.081	0.038
19	0.828	0.686	0.570	0.396	0.232	0.164	0.116	0.070	0.031
20	0.820	0.673	0.554	0.377	0.215	0.149	0.104	0.061	0.026

Figure B.1 Present Value of $1 Table.

Present Value of an Ordinary Annuity Table

Future Value of an Ordinary Annuity Table

$$\text{Factor} = \frac{[1 - 1 / (1 + i)^n]}{i}$$

Rate (*i*)

Period (*n*)	1%	2%	3%	5%	8%	10%	12%	15%	20%
1	0.990	0.980	0.971	0.952	0.926	0.909	0.893	0.870	0.833
2	1.970	1.942	1.913	1.859	1.783	1.736	1.690	1.626	1.528
3	2.941	2.884	2.829	2.723	2.577	2.487	2.402	2.283	2.106
4	3.902	3.808	3.717	3.546	3.312	3.170	3.037	2.855	2.589
5	4.853	4.713	4.580	4.329	3.993	3.791	3.605	3.352	2.991
6	5.795	5.601	5.417	5.076	4.623	4.355	4.111	3.785	3.326
7	6.728	6.472	6.230	5.786	5.206	4.868	4.564	4.160	3.605
8	7.652	7.325	7.020	6.463	5.747	5.335	4.968	4.487	3.837
9	8.566	8.162	7.786	7.108	6.247	5.759	5.328	4.772	4.031
10	9.471	8.983	8.530	7.722	6.710	6.145	5.650	5.019	4.192
11	10.368	9.787	9.253	8.306	7.139	6.495	5.938	5.234	4.327
12	11.255	10.575	9.954	8.863	7.536	6.814	6.194	5.421	4.439
13	12.134	11.348	10.635	9.394	7.904	7.103	6.424	5.583	4.533
14	13.004	12.106	11.296	9.899	8.244	7.367	6.628	5.725	4.611
15	13.865	12.849	11.938	10.380	8.559	7.606	6.811	5.847	4.675
16	14.718	13.578	12.561	10.838	8.851	7.824	6.974	5.954	4.730
17	15.562	14.292	13.166	11.274	9.122	8.022	7.120	6.047	4.775
18	16.398	14.992	13.754	11.690	9.372	8.201	7.250	6.128	4.812
19	17.226	15.678	14.324	12.085	9.604	8.365	7.366	6.198	4.844
20	18.046	16.351	14.877	12.462	9.818	8.514	7.469	6.259	4.870

Figure B.2 Present Value of an Ordinary Annuity Table.

Future Value of $1 Table

Future Value of $1 Table
Factor = $(1 + i)^n$

Period (n) \ Rate (i)	1%	2%	3%	5%	8%	10%	12%	15%	20%
1	1.010	1.020	1.030	1.050	1.080	1.100	1.120	1.150	1.200
2	1.020	1.040	1.061	1.103	1.166	1.210	1.254	1.323	1.440
3	1.030	1.061	1.093	1.158	1.260	1.331	1.405	1.521	1.728
4	1.041	1.082	1.126	1.216	1.360	1.464	1.574	1.749	2.074
5	1.051	1.104	1.159	1.276	1.469	1.611	1.762	2.011	2.488
6	1.062	1.126	1.194	1.340	1.587	1.772	1.974	2.313	2.986
7	1.072	1.149	1.230	1.407	1.714	1.949	2.211	2.660	3.583
8	1.083	1.172	1.267	1.477	1.851	2.144	2.476	3.059	4.300
9	1.094	1.195	1.305	1.551	1.999	2.358	2.773	3.518	5.160
10	1.105	1.219	1.344	1.629	2.159	2.594	3.106	4.046	6.192
11	1.116	1.243	1.384	1.710	2.332	2.853	3.479	4.652	7.430
12	1.127	1.268	1.426	1.796	2.518	3.138	3.896	5.350	8.916
13	1.138	1.294	1.469	1.886	2.720	3.452	4.363	6.153	10.699
14	1.149	1.319	1.513	1.980	2.937	3.797	4.887	7.076	12.839
15	1.161	1.346	1.558	2.079	3.172	4.177	5.474	8.137	15.407
16	1.173	1.373	1.605	2.183	3.426	4.595	6.130	9.358	18.488
17	1.184	1.400	1.653	2.292	3.700	5.054	6.866	10.761	22.186
18	1.196	1.428	1.702	2.407	3.996	5.560	7.690	12.375	26.623
19	1.208	1.457	1.754	2.527	4.316	6.116	8.613	14.232	31.948
20	1.220	1.486	1.806	2.653	4.661	6.727	9.646	16.367	38.338

Figure B.3 Future Value of $1 Table.

Future Value of an Ordinary Annuity Table

Future Value of an Ordinary Annuity Table

$$\text{Factor} = \frac{[(1+i)^n - 1]}{i}$$

Period (n) \ Rate (i)	1%	2%	3%	5%	8%	10%	12%	15%	20%
1	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
2	2.010	2.020	2.030	2.050	2.080	2.100	2.120	2.150	2.200
3	3.030	3.060	3.091	3.153	3.246	3.310	3.374	3.473	3.640
4	4.060	4.122	4.184	4.310	4.506	4.641	4.779	4.993	5.368
5	5.101	5.204	5.309	5.526	5.867	6.105	6.353	6.742	7.442
6	6.152	6.308	6.468	6.802	7.336	7.716	8.115	8.754	9.930
7	7.214	7.434	7.662	8.142	8.923	9.487	10.089	11.067	12.916
8	8.286	8.583	8.892	9.549	10.637	11.436	12.300	13.727	16.499
9	9.369	9.755	10.159	11.027	12.488	13.579	14.776	16.786	20.799
10	10.462	10.950	11.464	12.578	14.487	15.937	17.549	20.304	25.959
11	11.567	12.169	12.808	14.207	16.645	18.531	20.655	24.349	32.150
12	12.683	13.412	14.192	15.917	18.977	21.384	24.133	29.002	39.581
13	13.809	14.680	15.618	17.713	21.495	24.523	28.029	34.352	48.497
14	14.947	15.974	17.086	19.599	24.215	27.975	32.393	40.505	59.196
15	16.097	17.293	18.599	21.579	27.152	31.772	37.280	47.580	72.035
16	17.258	18.639	20.157	23.657	30.324	35.950	42.753	55.717	87.442
17	18.430	20.012	21.762	25.840	33.750	40.545	48.884	65.075	105.930
18	19.615	21.412	23.414	28.132	37.450	45.599	55.750	75.836	128.120
19	20.811	22.841	25.117	30.539	41.446	51.159	63.440	88.212	154.740
20	22.019	24.297	26.870	33.066	45.762	57.275	72.052	102.440	186.690

Figure B.4 Future Value of an Ordinary Annuity Table.

C Suggested Resources

The resources listed provide further information on several topics: financial statements from real-world companies, accounting software and tools, personal finance, accounting organizations, and exams and professional certifications for accountants.

Sample Financial Statements

The following income statements and balance sheets show the finances of companies representing the manufacturing, retail, and service industries.

Manufacturing Company: General Motors

- Income statement: https://www.nasdaq.com/symbol/gm/financials?query=income-statement
- Balance sheet: https://www.nasdaq.com/symbol/gm/financials?query=balance-sheet

Retail Company: Costco Wholesale

- Income statement: https://www.nasdaq.com/symbol/cost/financials
- Balance sheet: https://www.nasdaq.com/symbol/cost/financials?query=balance-sheet

Service Company: Prudential

- Income statement https://www.marketwatch.com/investing/stock/pru/financials
- Balance sheet: https://www.marketwatch.com/investing/stock/pru/financials/balance-sheet

Accounting Software and Tools

The resources listed offer a variety of tutorials, training videos, and practice activities using software and tools common in accounting.

QuickBooks

- QuickBooks tutorials: https://quickbooks.intuit.com/tutorials/

Peachtree/Sage 50

- Peachtree 2011 guide: https://www.perdisco.com/peachtreeLearning/quickReferenceGuide/2011.aspx
- Sage 50 training course with videos: https://www.freebookkeepingaccounting.com/single-post/Sage-50-Accounts-Training-Course-Part-1

Microsoft Excel

- Excel tutorials, video guides, trainings, and worksheets: https://chandoo.org/wp/welcome/
- YouTube channel with accounting-specific video tutorials: https://www.youtube.com/user/ExcelIsFun

Financial Calculators

- HP10B setup video guide: https://www.youtube.com/watch?v=lmMdRfKre44
- HP10BII video introduction and examples: https://www.youtube.com/watch?v=fTqkkeG1xlw
- HP10B and HP12C time value of money calculations video guides: https://www.youtube.com/user/mssuprof/videos

Personal Finance

These resources can assist you with personal financial planning.

Earnings

- Current starting salaries for recent college graduates for various majors and degrees: https://careers.kennesaw.edu/employers/docs/2018-nace-salary-survey-winter.pdf
- Accounting-specific salaries and positions: https://www.roberthalf.com/blog/salaries-and-skills/the-rise-of-the-accountant-salary-and-10-top-accounting-jobs

Take-Home Pay

- Salary calculator that determines your net pay—the amount you'll take home in your paycheck that you need to plan your budget around. In addition to calculating state and federal taxes, this resource allows you to input other withholdings such as health insurance or 401K contributions: https://www.paycheckcity.com/

Saving and Retirement Planning

Determining how much your savings will grow and how much you will have in retirement are very important components of personal financial planning. These links will help you better plan for those aspects of saving.

- This basic savings growth calculator includes graphs that provide helpful visuals of the impact of changing any assumptions such as the timing or amount of contributions or the interest rate earned: https://smartasset.com/investing/investment-calculator
- To estimate retirement savings growth, use this calculator that allows you to see the impact of saving now (enter your current age) versus saving later (enter a future age): https://www.daveramsey.com/smartvestor/investment-calculator
- This calculator lets you more accurately plan how your retirement savings will grow by allowing you to input any matching amounts contributed by employers: https://nb.fidelity.com/public/nb/401k/tools/calculators/contributioncalculator

Budgeting

- A well-planned budget is the cornerstone of personal financial planning. Using the salary, pay and savings numbers obtained from the resources above, this calculator will help you create a detailed financial budget: https://www.clearpoint.org/tools/budget-calculator/

Debt Reduction

- Whether it is student loans, credit cards, car loans or any other kind of debt, it is always beneficial to understand the impact of differing payments on paying off debt. This resource will help you see the impact of changing the amount paid on the payoff timing and interest paid on the debt: https://www.money-zine.com/calculators/loan-calculators/debt-reduction-calculator/

Accounting-Related Organizations

A number of organizations are dedicated to regulating and supporting the variety of work undertaken in the discipline of accounting.

- Governmental Accounting Standards Board (GASB): https://www.gasb.org
- Financial Accounting Standards Board (FASB): https://www.fasb.org
- U.S. Securities and Exchange Commission (SEC): https://www.sec.gov
- Association of Chartered Certified Accountants (ACCA): https://www.accaglobal.com
- Institute of Management Accountants (IMA): https://www.imanet.org

Accounting Exams and Certificates

These sites provide information on exams and professional certifications.

Certified Public Accountant (CPA)

- American Institute of Certified Public Accountants (AICPA): https://www.aicpa.org/content/aicpa/
- National Association of State Boards of Accountancy (NASBA): https://nasba.org/
- This Way to the CPA: https://thiswaytocpa.com/

Certified Management Accountant (CMA)

- Institute of Management Accountants (IMA): https://www.imanet.org/cma-certification?ssopc=1

Certified Internal Auditor (CIA)

- Institute of Internal Auditors (IIA)-Global: https://global.theiia.org/Pages/globaliiaHome.aspx
- Institute of Internal Auditors (IIA)-North America: https://na.theiia.org/Pages/IIAHome.aspx

Certified Fraud Examiner (CFE)

- Association of Certified Fraud Examiners (ACFE): http://www.acfe.com/default.aspx

Chartered Financial Analyst (CFA)

- CFA Institute: https://www.cfainstitute.org/Pages/index.aspx

Certified Financial Planner (CFP)

- Certified Financial Planners (CFP) Board: https://www.cfp.net/home

SAMPLE CHAPTERS NOT FINAL DRAFT

Answer Key

Chapter 1

Multiple Choice

1. B
3. C
5. A
7. B
9. B
11. E
13. A
15. D
17. A
19. B

Questions

1. Answers will vary but should include factors such as starting salaries, value of fringe benefits, cost of living, and other monetary factors.
3. Answers will vary but should include considerations such as price, convenience, features, ease of purchase, availability, and other decision-making factors.
5. Responses should comment on the growth Netflix has experienced. Although this may have been due to subscription price increases, the biggest driver of these increases is the number of subscriptions. While this is only a few data points, it does appear likely that Netflix will continue to grow sales in the next year or so. Factors influencing this prediction would be competition, changes in the streaming market, and economic considerations.
7. Answers will vary, but responses should state, in a sentence or two, the primary purpose of the entity. The goal of this exercise is to have students clearly communicate why the entity exists, the stakeholders served by the entity, and the role accounting plays in the organization.
9. Answers will vary but should highlight aspects of each model: *Brick-and-mortar*: higher investment in physical storefront, interior, etc., to attain visual appeal; insurance and regulatory requirements; space/storage considerations; lower delivery costs; no delivery time. *Online*: less overhead costs, higher delivery costs, higher website and technology costs, competition.
11. Manufacturer: movies; service: hotels, restaurants, waste removal, entertainment; retail: shopDisney, clothes and apparel.
13. Answers will vary but should include the key services of the SEC related to regulation and enforcement. You may be particularly interested to explore the SEC's whistle-blowing initiatives. Responses regarding required filings for publicly traded companies should include a discussion about the relationship between transparency and protecting the public interest. The significant amount of invested capital by the investing public is also relevant to the discussion.
15. Answers will vary but should include the increase in popularity of energy drinks and Monster's partnership with the Coca-Cola Company (which now owns close to a 17% stake in Monster). Considerations as to whether or not to purchase Monster shares today would include the estimated future performance of the company, the energy drink market, purchasing at a high point, etc.
17. Answers will vary but should include a discussion of the importance for accountants to provide information that is unbiased. Accountants have an obligation to protect the public interest by reporting information that is useful for decision-making but does not sway the user in a particular way. Accountants are in a unique position where they serve many stakeholders, including their employer, clients, and the public. The interests of all stakeholders must be considered while maintaining the highest level of integrity.
19. Answers will vary and may include certifications/licensing in nursing, information technology, engineering, human resources management, counseling, medicine, and many other occupations.

Chapter 2

Multiple Choice

1. D
3. A
5. B
7. A
9. B

11. D
13. B
15. C
17. C

Questions

1. Income statement shows the financial performance of a business for a period of time; statement of owner's equity shows the change in net worth of a business for a period of time; balance sheet shows the financial position of a business on a specific date; statement of cash flows shows the cash inflows and outflows of the business for a period of time.
3. Both revenues and gains represent inflows to the business, making it more valuable. Revenues relate to the primary purpose of the business, while gains represent incidental or peripheral activities. This is important to stakeholders because revenues represent ongoing or permanent activities, while gains represent infrequent or transient activities. Stakeholders should focus on permanent earnings and put peripheral or incidental earnings into the proper context.
5. Equity is the net worth of the business. It can also be thought of as the net assets (assets minus liabilities) of the business. Activities that affect equity include revenues, expenses, gains, losses, and investment by and distributions to owners.
7. Both tangible and intangible assets have value to the company and can be bought, sold, or impaired; tangible assets have physical substance, while intangible assets do not.
9. Assets = Liabilities + Owner's Equity. Answers will vary and should include a combination of revenues/gains (increases), expenses/losses (decreases), investments (increases), and distributions (decreases). It is important to understand the following transactions/exchanges will not change equity: an asset for an asset, liability for liability, asset acquisitions by incurring liabilities, and asset reductions to reduce liabilities.
11. Revenues and investments increase equity, while expenses and distributions decrease equity.

Chapter 6

Multiple Choice

1. C
3. A
5. D
7. D
9. C
11. A
13. C
15. A
17. C
19. D
21. B
23. D
25. B
27. B

Questions

1. It helps solidify a long-term relationship with the customer, encourages 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 the business, paying down loans quicker, and distributing dividends to shareholders.
3. A sales return occurs when a customer returns merchandise for a full refund. A sales allowance occurs when a customer keeps the merchandise and is issued a partial refund.
5. Advantages could include real-time data and more robust information. Disadvantages could include fewer inventory counts with opportunity for mismanagement of inventory. It is also costly, and time consuming.
7.

Oct 18	Accounts Receivable	130	
	Sales		130
	To recognize sale under periodic inventory system		
Note: No cost of sale entry is required currently, only at the end of the period under periodic.			

Table 6.3.

9. Cash would be remitted to a retainer if the retailer returns merchandise to a manufacturer after payment, or if the retailer receives an allowance for damaged merchandise after payment.
11. $110; $1,100 × 50% = $550, $550 × 20% = $110
13. $6.15; $205 × 3%
15. With FOB Destination, the seller is responsible for goods in transit, the seller pays for shipping, and the point of transfer is when the goods reach the buyer's place of business. With FOB Shipping Point, the buyer is responsible for goods in transit, the buyer pays for shipping, and the point of transfer is when the goods leave the seller's place of business.
17.

Accounts Receivable	800	
Sales		800
To recognize sale on credit, 2/10, n/30, FOB Destination		
COGS	300	
Merchandise Inventory		300
To recognize cost of sale		
Delivery Expense	100	
Cash		100
To recognize shipping charge, FOB Destination		

Table 6.25.

19. 32% or $.32; ($176,750 – 120,470) / $176,750
21. The gross profit margin ratio shows the company's margin over costs of sales to cover operating expenses and profit. If margin continue to increase over time, an investor or lender might consider the financial contribution less risky. If the ratio decreases, the stakeholder may perceive an increased risk that the company may not have enough revenue to service debt.
23. $14.70; $490 × 3%
25. Recognizing the return of merchandise to inventory occurs under the perpetual inventory system but not under the periodic inventory system.

Chapter 9

Multiple Choice

1. C
3. B
5. C
7. B
9. C
11. A
13. A
15. D
17. B
19. B

21. A
23. B

Questions

1. The matching principle states that expenses must be matched to revenues in the period in which they were incurred.
3. Nothing will be recognized as revenue, since the flower shop will not provide flowers until June. Until then, all revenue is considered unearned.
5. Allowance for Doubtful Accounts
7. $22,008.88; $323,660 × 6.8%
9. $11,393.10; ($22,480 × 6%) + ($36,540 × 17%) + ($15,330 × 25%)
11. The receivables cycle takes a while to convert into cash, which means that cash is tied up and cannot be used for other business investments. This could also mean that the company has to borrow money from a lender to meet its cash flow demands, or that credit extensions are too tight, and good credit candidates are lost to competitors.
13. Accounts receivable turnover ratio and number of days' sales in receivables ratio; these ratios can tell a stakeholder how credit extension policies affect sales, and how quickly current debt is collected
15. A decrease to bad debt expense increases net income, which can show a higher income level and improve opportunities for borrowing.
17. A higher bad debt expense figure reduces net income, which could have a positive impact on reducing business income and other taxes.
19. The installment method takes into account risk associated with long-term periodic payments, and it distributes revenue based on a gross profit percentage over the life of the contract.
21. The completed contract method is used in contracts and delays reporting of both revenues and expenses until the entire contract is complete
23.

Accounts Receivable	215,465	
	Notes Receivable	215,000
	Interest Revenue	465

Table 9.15.

25. The principal of a note is the initial borrowed amount, not including interest, requested by the customer.
27. Accounts receivable is an informal, short-term payment and usually no interest, whereas notes receivable is a legal contract, long-term payment, and usually has interest.

Chapter 10

Multiple Choice

1. D
3. A
5. A
7. A
9. B
11. A
13. C

Questions

1. Gross margin refers to the net profit from sale of goods. It is calculated by subtracting cost of goods sold from sales revenue.
3. Consigned goods are owned by the consignor, but the goods are physically present in the business of the consignee. Care must be taken not to count goods held on consignment in the company's physical inventory tally.
5. Specific identification works best for highly differentiated goods, large ticket items, customization, and small lot sizes. In all these cases, it is reasonably easy to keep track of the actual cost of each item, to be used to offset the sales price, when the goods are sold.
7. LCM sets out to record a conservative value for inventory by ensuring that goods that have decreased in value since their purchase can be revalued to match their current replacement market value.
9. The FIFO method assumes the first units acquired are sold first. On a periodic basis, that means that ending inventory can be determined by calculating the number of units remaining, and assuming that the cost of

those units is the amount paid for the latest purchase; cost of goods sold is all inventory cost that is not in the ending inventory. For perpetual, inventory held at the time of each sale is evaluated and units acquired earliest are costed out against that particular sale.

11. The weighted-average method requires that the average cost be computed for all units that are available for sale. For periodic weighted average, the total dollar amount of goods available for sale should be divided by the total number of units available for sale, to obtain the average cost for the entire period. For perpetual, the average cost would be recalculated each time the total number of units changes, using the same strategy as described for periodic, but using the cost and number of units that are available at the time of sale.

13. Causes of inventory errors might be related to consigned goods, goods delivered before or after the title transfers, sloppy inventory counts, lost records, calculation errors, and any other circumstance that causes inaccuracy in the counts.

15. The inventory turnover ratio reveals the liquidity of the inventory by highlighting how many times during the year the entire inventory cycle could be rotated, based on the cost of the inventory sold, compared to the average cost of the unsold inventory. Days' sales in inventory reveals how many days it typically takes to turn inventory around, from date of purchase to date of sale.

Chapter 12

Multiple Choice

1. C
3. D
5. B
7. C
9. B
11. A
13. D
15. A
17. F
19. A

Questions

1. Accounts Payable can be set up as a line of credit between a purchaser and a supplier. The terms of the invoice usually state that payment is due within a year, or a shorter time frame. Since accounts payable amounts are due within a company's operating cycle, this account type would be considered a current liability.
3. A noncurrent liability is due in more than one year or outside a standard company operating period. A current liability is payable within a company's operating period, or less than a year.
5. $12,500
7. Accounts Payable and Equipment
9. The likelihood of occurrence and the measurement requirement are the FASB required conditions. A contingent liability must be recognized and disclosed if there is a probable liability determination before the preparation of financial statements has occurred, and the company can reasonably estimate the amount of loss.
11. They are probable and estimable, probable and inestimable, reasonably possible, and remote.
13. A short-term notes payable does not have any long-term characteristics and is meant to be paid in full within the company's operating period (less than a year). The current portion of a noncurrent note payable is based off of a long-term debt but is only recognized as a current liability when a portion of the long-term note payable is due. The remainder stays a long-term liability.
15. A business borrows money from a bank, and the bank makes the note payable within a year, with interest. For example, this could come from a capital expenditure need or when expenses exceed revenues.
17. Examples include FICA Social Security, FICA Medicare, Federal Unemployment Compensation Tax (FUTA), State Unemployment Compensation Tax (SUTA), federal income tax, state income tax, Additional Medicare Tax,

and local income tax.
19. FUTA and SUTA are the acronyms for the Federal Unemployment Tax Act and the State Unemployment Tax Act. They are unemployment insurance systems that collect funds from employers to cover employees in case of job disruption beyond their control. The FUTA tax rate is 6% but can be reduced by paying on time to the state unemployment system. This rate can be reduced down to as low as 0.6%.

Chapter 16

Multiple Choice

1. C
3. B
5. B
7. B
9. A
11. A
13. D
15. C

Questions

1. The statement of cash flow serves as a bridge between the cash basis bank transactions and the accrual basis financial statements (balance sheet, income statement, and retained earnings statement). It reveals where the cash came from, and where it went.
3. Operating, Investing, Financing (always in this order).
5. Any transaction that is related to acquiring or disposing of long-term assets like land, buildings, equipment, stocks, bonds, or other investments. Can be cash spent for purchase of long-term assets, or cash collected from sale of long-term assets.
7. The indirect method begins with net income and adjusts for items that affect cash differently than they affect net income, whereas the direct method requires that each revenue and expense item be converted to reflect the cash impact from that item. The net cash flow result is the same, no matter which of the two methods is used.
9. Gains and losses must be removed from the operating section. To accomplish this, reverse the effect of gains or losses; if a gain has been added to net income, it should be subtracted in the operating section; if a loss has been deducted to arrive at net income, it should be added back in the operating section. Why? First, gains and losses relate to long-term assets, which fall under investing activities, not operating activities. Second, the gain/(loss) on the sale of long-term assets represents the excess/(deficiency) computed when the asset’s cost basis is subtracted from sales proceeds, so the number does not accurately represent the cash flow relating to the transaction.
11. Not necessarily. Only the principal balance repayment should be included in the financing section; the interest component of the note payment is an operating activity.
13. Yes. Some investing and/or financing transactions do not have a cash impact initially. Examples include purchases of long-term assets that are paid for with long-term debt financing, acquisitions of long-term assets in exchange for corporate stock, and repayment of long-term debt using noncash assets. These noncash investing/financing activities would be reported in the notes to the financial statements, or as a notation on the bottom of the statement of cash flows, but not considered an integral part of the statement.
15. Using the direct method to prepare the operating section requires that revenue and expense items be converted to the cash basis of accounting, since these items are recorded in company records using the accrual basis of accounting. The balance sheet, income statement, and retained earnings statement use the accrual basis balances that are maintained in the company accounting records, and thus can be obtained directly from the adjusted trial balance, without modifications.

Index

Symbols

A

B

C

D

E

F