# ACCT 150: PRINCIPLES OF FINANCIAL ACCOUNTING I

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HACC, Central Pennsylvania's Community College



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This text was compiled on 03/07/2025



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# Licensing

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# **CHAPTER OVERVIEW**

# 1: Why Is Financial Accounting Important?

- 1.1: Making Good Financial Decisions about an Organization
- 1.2: Incorporation and the Trading of Capital Shares
- 1.3: Selecting a Legal Form for a Business
- 1.4: Using Financial Accounting for Wise Decision Making
- 1.5: End-of-Chapter Exercises

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# 1.1: Making Good Financial Decisions about an Organization

#### **Learning Objectives**

At the end of this section, students should be able to meet the following objectives:

- 1. Define "financial accounting."
- 2. Understand the connection between financial accounting and the communication of information.
- 3. Explain the importance of learning to understand financial accounting.
- 4. List decisions that an individual might make about an organization.
- 5. Differentiate between financial accounting and managerial accounting.
- 6. Provide reasons for individuals to be interested in the financial accounting information supplied by their employers.

Question: This textbook professes to be an introduction to financial accounting. A logical place to begin such an exploration is to ask the obvious question: What is financial accounting?

Answer: In simplest terms, **financial accounting** is the communication of information about a business or other type of organization (such as a charity or government) so that individuals can assess its financial health and prospects. Probably no single word is more relevant to **financial accounting** than "information." Whether it is gathering financial information about a specific organization, putting that information into a structure designed to enhance communication, or working to understand the information being conveyed, **financial accounting** is intertwined with information.

In today's world, information is king. Financial accounting provides the rules and structure for the conveyance of financial information about businesses (and other organizations). At any point in time, some businesses are poised to prosper while others teeter on the verge of failure. Many people are seriously interested in evaluating the degree of success achieved by a particular organization as well as its prospects for the future. They seek information needed for evaluation. Financial accounting provides information that these individuals need and want.

# Organization → Reports information based on the principles of financial accounting → Individuals assess financial health

Question: Every semester, most college students are enrolled in several courses as well as participate in numerous outside activities. All of these compete for the hours in each person's day. Why should a student invest valuable time to learn the principles of financial accounting? Why should anyone be concerned with the information communicated about an organization? More concisely, what makes financial accounting important?

Answer: Many possible benefits can be gained from acquiring a strong knowledge of financial accounting and the means by which information is communicated about an organization. In this book, justification for the serious study that is required to master the subject matter is simple and straightforward: obtaining a working knowledge of financial accounting and its underlying principles enables a person to understand the information conveyed about an organization so that **better** decisions can be made.

Around the world, millions of individuals make critical judgments each day about the businesses and other organizations they encounter. Developing the ability to analyze financial information and then using that knowledge to arrive at sound decisions can be critically important. Whether an organization is as gigantic as Wal-Mart or as tiny as a local convenience store, a person could have many, varied reasons for making an assessment. As just a single example, a recent college graduate looking at full-time employment opportunities might want to determine the probability that Company A will have a brighter economic future than Company B. Although such forecasts can never be correct 100 percent of the time, knowledge of financial accounting and the information being communicated greatly increases the likelihood of success. As Kofi Annan, former secretary-general of the United Nations, has said, "Knowledge is power. Information is liberating<sup>1</sup>."

Thus, the ultimate purpose of this book is to provide students with a rich understanding of the rules and nuances of financial accounting so they can evaluate available information and then make good choices about those organizations. In the world of business, most successful individuals have developed this skill and are able to use it to achieve their investing and career objectives.



Question: Knowledge of financial accounting assists individuals in making informed decisions about businesses and other organizations. What kinds of evaluations are typically made? For example, assume that a former student—one who recently graduated from college—has been assigned the task of analyzing financial data provided by Company C. What real-life decisions could a person be facing where an understanding of financial accounting is beneficial?

Answer: The number of possible judgments that an individual might need to make about a business or other organization is close to unlimited. However, many decisions deal with current financial health and the prospects for future success. In making assessments of available data, a working knowledge of financial accounting is invaluable. The more in-depth the understanding is of those principles, the more likely the person will be able to use the available information to arrive at the best possible choice. Common examples include the following:

- The college graduate might be employed by a bank to work in its corporate lending department. Company C is a local business that has applied to the bank for a large loan. The graduate has been asked by bank management to prepare an assessment of Company C to determine if it is likely to be financially healthy in the future so that it will be able to repay the money when due along with interest. A correct decision to lend the money eventually earns the bank profit because Company C (the debtor) will be required to pay an extra amount (known as interest) on the money borrowed. Conversely, an incorrect analysis of the information could lead to a substantial loss if the loan is granted and Company C is unable to fulfill its obligation. Bank officials must weigh the potential for profit against the risk of loss. That is a daily challenge in virtually all businesses. The former student's career with the bank might depend on the ability to analyze financial accounting data and then make appropriate choices about the actions to be taken. Should a loan be made to this company?
- The college graduate might hold a job as a credit analyst for a manufacturing company that sells its products to retail stores. Company C is a relatively new retailer that wants to buy goods (inventory) for its stores on credit from this manufacturer. The former student must judge whether it is wise to permit Company C to buy goods now but wait until later to remit the money. If payments are received on a timely basis, the manufacturer will have found a new customer for its merchandise. Profits will likely increase. Unfortunately, another possibility also exists. Company C could make expensive purchases but then be unable to make payment, creating significant losses for the manufacturer. Should credit be extended to this company?
- The college graduate might be employed by an investment firm that provides financial advice to its clients. The firm is presently considering whether to recommend acquisition of the ownership shares of Company C as a good investment strategy. The former student has been assigned to gather and evaluate relevant financial information as a basis for this decision. If Company C is poised to become stronger and more profitable, its ownership shares will likely rise in value over time, earning money for the firm's clients. Conversely, if the prospects for Company C appear to be less bright, the value of these shares might be expected to drop (possibly precipitously) so that the investment firm should avoid suggesting the purchase of an ownership interest in Company C. Should shares of this company be recommended for acquisition?

Success in life—especially in business—frequently results from making appropriate decisions. Many economic choices, such as those described above, depend on the ability to understand and make use of the financial information that is produced and presented about an organization in accordance with the rules and principles underlying financial accounting.

#### **Check Yourself**

Which of the following would NOT be an example of a situation where financial information may be important in making the best possible decision?

- A. A large company in the United States is looking at purchasing stock in a small company in India as a way to help them better sell products in the growing market in India.
- B. An entrepreneur wants to purchase a franchise and open a McDonalds along a busy freeway and has applied to the bank for a loan to build the building.
- C. Sylvia inherited from her grandfather shares in IBM stock when he passed away and is wondering if she should sell the stock or hold on to it for several years.
- D. All of the above are examples of situations where financial information would be important.

The answer is D. Any kind of investment scenario whether it is to make a new investment or stick with an old is based on the prospects of making a return on that investment. Looking at past returns and measures of financial success will help project future success even though it does not guarantee it.



Question: A great number of possible decisions could be addressed in connection with an organization. Is an understanding of financial accounting relevant to all business decisions? What about the following?

- Should a business buy a building to serve as its new headquarters or rent a facility instead?
- What price should a data processing company charge customers for its services?
- Should videos to alert the public about a new product be posted on Facebook or on YouTube?

Answer: Organizational decisions such as these are extremely important for success. However, these examples are not made about the reporting organization. Rather, they are made within the organization in connection with some element of its operations.

The general term "accounting" refers to the communication of financial information for decision-making purposes. Accounting is then further subdivided into (a) financial accounting and (b) managerial accounting. Financial accounting is the subject explored in this textbook. It focuses on conveying relevant data (primarily to external parties) so that decisions can be made about an organization (such as Harley Davidson or Starbucks) as a whole. Thus, questions such as the following all fall within the discussion of financial accounting:

- Do we loan money to Harley Davidson?
- Do we sell on credit to Starbucks?
- Do we recommend that our clients buy the ownership shares of Starbucks?

They relate to evaluating the financial health and prospects of Harley or Starbucks as a whole.

Managerial accounting is the subject of other books and other courses. This second branch of accounting refers to the communication of information within an organization so that internal decisions (such as whether to buy or rent a building) can be made in an appropriate manner. Individuals studying an organization as a whole have different goals than do internal parties making operational decisions. Thus, many unique characteristics have developed in connection with each of these two branches of accounting. Financial accounting and managerial accounting have evolved independently over the decades to address the specific needs of the users being served and the decisions being made. This textbook is designed to explain those attributes that are fundamental to attaining a usable understanding of financial accounting.

It is not that one of these areas of accounting is better, more useful, or more important than the other. Financial accounting and managerial accounting have simply been created to achieve different objectives. They both do their jobs well; they just do not have the same jobs.

#### Thinking it over

While financial and managerial accounting have a different focus, they are very much related. For example, a Burger King franchise may be trying to decide whether or not to offer breakfast at one of its restaurants. Looking at the costs to add needed equipment and keeping the store open longer would all be the kind of information they would look at internally to make that decision. However, the decision to open for breakfast will also increase sales and maybe profits as reported to outside investors which will then influence the franchise manager's decision. So it kind of like a circle with the information desired by outside investors influencing very much what kind of information internal managers are interested in and tracking.

Question: Financial accounting refers to the conveyance of information about an organization as a whole and is most frequently directed to assisting outside decision makers. Is there any reason for a person who is employed by a company to care about the financial accounting data reported about that organization? Why should an employee in the marketing or personnel department of Company C be interested in the financial information that it distributes?

Answer: As indicated, financial accounting is designed to portray the overall financial condition and prospects of an organization. Every employee should be quite interested in assessing that information to judge future employment prospects. A company that is doing well will possibly award larger pay raises or perhaps significant end-of-year cash bonuses. A financially healthy organization can afford to hire new employees, buy additional equipment, or pursue major new initiatives. Conversely, when a company is struggling and prospects are dim, employees might anticipate layoffs, pay cuts, or reductions in resources.

Thus, although financial accounting information is often directed to outside decision makers, employees should be vitally interested in the financial health of their own organization. No one wants to be clueless as to whether their employer is headed for prosperity or bankruptcy. In reality, employees are often the most avid readers of the financial accounting information distributed by their employers because the results can have such an immediate and direct impact on their jobs and, hence, their lives.



#### Key Takeaway

Financial accounting encompasses the rules and procedures to convey financial information about an organization. Individuals who attain a proper level of knowledge of financial accounting can utilize this information to make decisions based on the organization's perceived financial health and outlook. Such decisions might include assessing employment potential, lending money, granting credit, and buying or selling ownership shares. However, financial accounting does not address issues that are purely of an internal nature, such as whether an organization should buy or lease equipment or the level of pay raises. Information to guide such internal decisions is generated according to managerial accounting rules and procedures that are introduced in other books and courses. Despite not being directed toward the inner workings of an organization, employees are interested in financial accounting because it helps them assess the future financial prospects of their employer.

<sup>1</sup>See http://www.deepsky.com/~madmagic/kofi.html.

Tax accounting serves as another distinct branch of accounting. It is less focused on decision making and more on providing the information needed to comply with all government rules and regulations. Even in tax accounting, though, decision making is important as companies seek to take all possible legal actions to minimize tax payments.

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# 1.2: Incorporation and the Trading of Capital Shares

#### **Learning Objectives**

At the end of this section, students should be able to meet the following objectives:

- 1. Define "incorporation."
- 2. Explain the popularity of investing in the capital stock of a corporation.
- 3. Discuss the necessity and purpose of a board of directors.
- 4. List the potential benefits gained from acquiring capital stock.

Question: Above, in discussing the possible decisions that could be made about an organization, ownership shares were mentioned. Occasionally, on television, in newspapers, or on the Internet, mention is made that the shares of one company or another have gone up or down in price during that day because of trading on one of the stock markets. Why does a person or an organization acquire ownership shares of a business such as Capital One or Intel?

Answer: In the United States, as well as in many other countries, owners of a business or other type of organization can apply to the state government to have it identified as an entity legally separate from its owners. This process is referred to as **incorporation**. Therefore, a **corporation** is an organization that has been formally recognized by the government as a legal entity. A business that has not been incorporated is legally either a sole proprietorship (one owner) or a partnership (more than one owner).

As will be discussed in detail in the next section, several advantages can be gained from incorporation. For one, a corporation has the ability to issue (sell) shares to obtain monetary resources and allow investors to become owners (also known as stockholders or shareholders). The Walt Disney Company and General Electric, as just two examples, are corporations. They exist as legal entities completely distinct from the multitude of individuals and organizations that possess their ownership shares (also known as equity or capital stock).

Any investor who acquires one or more capital shares of a corporation is an owner and has rights that are specified by the state government or on the stock certificate. The number of shares and owners can be staggering. At the end of 2022, owners held over 9.3 million shares of The Coca-Cola Company. Thus, possession of one share of The Coca-Cola Company at that time gave a person approximately a 1/9,300,000th part of the ownership<sup>1</sup>.

If traded on a stock exchange, shares of the capital stock of a corporation continually go up and down in value based on myriad factors, including the perceived financial health and prospects of the organization. As an example, during trading on May 8, 2023, the price of an ownership share of Carnival Cruise Lines rose by \$.60 to \$10.61, while a share of Adobe went down about \$4.50 to 343.89.

For countless individuals and groups around the world, the most popular method of investment is through the purchase and sell of these shares of corporate ownership. Although a number of other types of investment opportunities are available (such as the acquisition of gold or land), few evoke the level of interest of capital stock<sup>2</sup>. On the New York Stock Exchange alone, billions of shares are bought and sold every business day at a wide range of prices. As of May 8, 2023, an ownership share of Ford Motor Company was trading for \$12.01, while a single share of Berkshire Hathaway A sold for over 497,000 dollars.

# Check yourself

Which of the following is a term used to denote the ownership of a corporation?

- A. Assets
- B. Proprietorship
- C. Capital stock
- D. Stock exchange

The correct answer is C. Investors purchase shares of capital stock that represents their share of ownership in the corporation. They do this to earn a return on their investment and are referred to as either stockholders or shareholders (mean the same thing)

Question: In most cases, the owners of a small corporation should be able to operate the business effectively. For example, one person might hold one hundred shares of capital stock while another owns two hundred. Those two individuals must learn to work



together to manage the business on a day-to-day basis. Large corporations offer a significantly different challenge. How could millions of investors possessing billions of capital shares of a single corporation ever serve in any reasonable capacity as the management of that organization?

Answer: Obviously, a great many companies like The Coca-Cola Company have an enormous quantity of capital shares outstanding. Virtually none of these owners can expect to have any impact on the daily operations of the corporation. In a vast number of such businesses, stockholders simply vote to elect a representative group to oversee the company for them. This body—called the **board of directors** – is a group that oversees the management of a corporation; the members are voted to this position by stockholders; it hires the management to run the company on a daily basis and then meets periodically to review operating and financing results and also approve policy and strategy<sup>3</sup>.—is made up of approximately ten to twenty-five knowledgeable individuals. As shown in Figure 1.1 "Company Operational Structure", the board of directors hires the members of management to run the company on a daily basis and then meets periodically (often quarterly) to review operating and financing results as well as to approve strategic policy initiatives.

Figure 1.1 Company Operational Structure



Occasionally, the original founders of a business (or their descendants) continue to hold enough shares to influence or actually control its operating and financial decisions. Or wealthy outside investors may acquire enough shares to gain this same level of power. Such owners have genuine authority within the corporation. Because these cases are less common, the specific financial accounting issues involved with this degree of ownership will be deferred until a later accounting class. In most cases, the hierarchy of owners, board of directors, management, and employees remains intact. Thus, stockholders are usually quite removed from the operations of any large corporation.

Question: The acquisition of capital shares is an extremely popular investment strategy across a wide range of the population. A buyer becomes one of the owners of the corporation. Why spend money in this way especially since very few stockholders can ever hope to hold enough shares to participate in managing or influencing the operations? Ownership shares sometimes cost small amounts but can also require hundreds if not thousands of dollars. What is the potential benefit of buying capital stock issued by a business organization?

Answer: Capital shares of thousands of corporations trade each day on markets around the world, such as the New York Stock Exchange or NASDAQ (National Association of Securities Dealers Automated Quotation Service). One party is looking to sell shares whereas another is seeking shares to buy. Stock markets match up these buyers and sellers so that a mutually agreed-upon price can be negotiated. This bargaining process allows the ownership interest of all these companies to change hands with relative ease.

When investors believe a company is financially healthy and its future is bright, they expect prosperity and growth. If that happens, the negotiated price for this company's capital stock should rise over time. Everyone attempts to anticipate such movements in order to buy the stock at a low price and sell it later at a higher one. Conversely, if predictions are not optimistic, then the share price is likely to drop and owners face the possibility of incurring losses in the value of their investments. Many factors affect the movement of stock prices such as the perceived quality of the management, historical trends in profitability, the viability of the industry in which it operates, and the health of the economy as a whole.



Financial accounting information plays an invaluable role in this market process as millions of investors attempt each day to assess the financial condition and prospects of corporate organizations. Being able to understand and make use of reported financial data helps improve the investor's knowledge of a company and, thus, the chance of making wise decisions that will generate profits from buying and selling capital shares. Ignorance can lead to poor decisions and much less lucrative outcomes.

In the United States, such investment gains—if successfully generated—are especially appealing to individuals if the shares are held for over twelve months before being sold. For income tax purposes, the difference between the buy and sale prices for such investments is referred to as a **long-term capital gain**; a favorable tax treatment can result when gains are earned. Under certain circumstances, significant tax reductions are allowed in connection with long-term capital gains<sup>4</sup>. Congress created this tax incentive to encourage investment so that businesses could more easily obtain money for growth purposes.

#### Check yourself

A key strategy for investors is to purchase stock in a company with a bright future because:

- A. Future financial success for the company will result in a higher price for that company's stock.
- B. Increases in the company stock would result in selling the stock at a loss and a tax deduction.
- C. Employees will demand additional dividends from the corporation that will lead to better cash flow.
- D. Banks will refuse to lend to successful companies and thus keep debt payments low.

A. is the correct answer. While not guaranteed, past success for a business can help predict the future success and that success as shown by financial information. This financial information can help investors predict the ability to be successful in the future thus making the stock price increase so that the investor can sell it for more than they paid for it.

Question: Investors acquire ownership shares of selected corporations hoping that the stock values will rise over time. This investment strategy is especially tempting because net long-term capital gains are taxed at a relatively low rate. Is the possibility for appreciation of stock prices the only reason that investors choose to acquire capital shares?

Answer: Many corporations—although certainly not all—also pay cash **dividends**. **Dividends** are distributions made by a corporation to its shareholders as a payout when income has been earned. Since the shareholder owns a piece of the corporation, they also own a piece of the profit made by the corporation. A dividend is payment of the piece of the profit owned by the shareholder. It is not a required payment; it is a sharing of profits with the stockholders as determined by the board of directors. As an example, for 2020, Duke Energy reported earning profits (net income) of \$1,082 million. During that same period, the corporation distributed a total cash dividend of approximately \$2,882 million to the owners of its capital stock - this represents all of the current profit and some that had been earned in previous years<sup>5</sup>.

The board of directors determines whether to pay dividends. Some boards prefer to leave money within the business to stimulate future growth and additional profits. For example, Netflix, Inc. reported profits (net income) for 2022 of nearly \$4.5 billion but paid no dividends to its stockholders.

Not surprisingly, a variety of investing strategies abound. Some investors acquire ownership shares almost exclusively in hopes of benefiting from the potential for significant appreciation of stock prices. Another large segment of the investing public is more interested in the possibility of dividend payments. Unless an owner has the chance to influence or control operations, only these two possible benefits can accrue: appreciation in the value of the stock price and cash dividends.

Question: An investor can put money into a savings account at a bank and earn a small but relatively risk free profit. For example, \$100 could be invested on January 1 and then be worth \$104 at the end of the year because interest is added. The extra \$4 means that the investor is earning an annual return of 4 percent (\$4 increase/\$100 investment). How is the annual return computed when the capital stock of a corporation is acquired?

Answer: Capital stock investments are certainly not risk free. Profits can be high, but losses are also always a possibility. Assume that on January 1, Year One, an investor spends \$100 for one ownership share of Company A and another \$100 for a share of Company B. During the year, Company A distributes a dividend of \$1.00 per share to its owners while Company B pays \$5.00 per share. On December 31, the stock of Company A is selling on the stock market for \$108 per share whereas the stock of Company B is selling for \$91 per share.

The investor now holds a total value of \$109 as a result of the purchase of the share of Company A: the cash dividend of \$1 and a share of stock worth \$108. Total value has gone up \$9 (\$109 less \$100) so that the annual return for the year was 9 percent (\$9 increase/\$100 investment).



The shares of Company B have not performed as well. Total value is now only \$96: the cash dividend of \$5 plus one share of stock worth \$91. That is a drop of \$4 during the year (\$96 less \$100). The annual return on this investment is a negative 4 percent (\$4 decrease/\$100 investment).

Clearly, investors want to have all the information they need in hopes of maximizing their potential profits each year. A careful analysis of the available data might have helped this investor choose Company A rather than Company B.

#### **Key Takeaway**

Incorporation allows an organization to be viewed as a separate entity apart from its ownership. As a corporation, shares of capital stock can be issued that give the holder an ownership right. If the organization is financially healthy and prospering, these shares can increase in value—possibly by a significant amount. In addition, a profitable organization may well share its good fortune with the ownership through the distribution of cash dividends. In most large organizations, few owners want to be involved in the operational decision making. Instead, these stockholders elect a board of directors to oversee the company and direct the work of management.

<sup>1</sup>Sole proprietorships and partnerships rarely sell capital shares. Without the legal authority of incorporation, a clear distinction between owner and business often does not exist. For example, debts incurred by the business may ultimately have to be satisfied by the owner personally. Thus, individuals tend to avoid making investments in unincorporated businesses unless they can be involved directly in the management. For that reason, active trading of partnership and proprietorship ownership interests is usually limited or nonexistent. One of the great advantages of incorporation is the ease by which capital stock can usually be exchanged. Investors frequently buy or sell such shares on stock exchanges in a matter of moments. However, partnerships and sole proprietorships still remain popular because they are easy to create and offer possible income tax benefits as will be discussed in a future chapter.

<sup>2</sup>The most prevalent form of capital stock is common stock so that these two terms have come to be used somewhat interchangeably. As will be discussed in a later chapter, the capital stock of some corporations is made up of both common stock and preferred stock.

<sup>3</sup>A story produced by National Public Radio on the roles played by a board of directors can be found at <a href="http://www.npr.org/templates/story/story.php?storyId=105576374">http://www.npr.org/templates/story/story.php?storyId=105576374</a>.

<sup>4</sup>This same tax benefit is not available to corporate taxpayers, only individuals.

<sup>5</sup>The receipt of cash dividends is additionally appealing to stockholders because, in most cases, they are taxed at the same reduced rates as are applied to net long-term capital gains.

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# 1.3: Selecting a Legal Form for a Business

#### **Learning Objectives**

At the end of this section, students should be able to meet the following objectives:

- 1. Describe the three primary legal forms available for a business.
- 2. List and discuss the advantages and disadvantages of incorporating a business rather than maintaining a sole proprietorship or partnership.
- 3. Explain the double taxation that is inherent in operating a corporate organization.
- 4. Describe the impact that the possibility of issuing capital stock has on a corporation.

Question: In the United States, businesses and other organizations must operate under one of three legal forms<sup>1</sup>. A **proprietorship** is created by a single owner whereas a **partnership** is started and owned by two or more parties. Establishing ownership is often quite informal. In contrast, a **corporation** comes into existence by means of a formal request made to the state government. The number of owners is usually not relevant in creating a corporation. Because corporations are the dominant legal form (at least monetarily) in the world, they have been the primary emphasis throughout this text. Numerically, more proprietorships and partnerships do exist but virtually every business of any size operates as a corporation. How is a corporation established, and what characteristics make it attractive?

Answer: Incorporation of an entity is only required in one state regardless of its size. To start this process, the original owners submit articles of incorporation to that government<sup>2</sup>. Rules, regulations, and requirements vary significantly so that these procedures are more complicated in some states than others. For example, many well-known businesses are incorporated in Delaware because of the ease of complying with the laws in that state.

After all documents have been filed and all other requirements met, the state government issues a corporate charter that recognizes the organization as a legal entity separate from its ownership. This separation of the ownership is what differentiates a corporation from a partnership or proprietorship. Following incorporation in one state, the entity is then allowed to operate in any other state.

As mentioned in a previous section, ownership of a corporation is divided into shares of stock that are issued to raise funds. In general, these shares are referred to as capital stock and the owners as shareholders or stockholders. For example, at December 31, 2022, the stockholders of Tesla Company held approximately 3,164 million of these shares. Unless restricted contractually, capital stock can be exchanged freely. Once issued by a corporation, shares can be resold dozens or even hundreds of times. Operations are usually unaffected by these ownership changes. Information about the current market price of most stocks as well as a considerable amount of other information can be found at <a href="http://www.google.com/finance">http://www.google.com/finance</a> and <a href="http://www.yahoo.com/finance">http://www.yahoo.com/finance</a>.

Thus, a corporation is able to continue in existence even after owners die or decide to switch to other investments. In partnerships and proprietorships, capital stock does not exist. Consequently, the transfer of an ownership interest is much more complicated. Partnerships and proprietorships often operate only for as long as the original owners are willing and able to continue being actively involved.

As a result of the legal separation of ownership and business, shareholders have no personal liability for the debts of the corporation<sup>3</sup>. An owner of a share of Tesla is not responsible for any of the liabilities of that company. The maximum loss a shareholder can suffer is the amount contributed to the business (or paid to a previous owner) in acquiring capital stock.

In contrast, the owners of a partnership or proprietorship are personally liable for all business debts. No separation exists between the business and the ownership. A partner or proprietor could invest \$1,000 but wind up losing almost any amount if funds are borrowed by the business that cannot be repaid. Such potential losses are especially worrisome in a partnership where each partner serves as an agent for the entire organization. Under the concept of **mutual agency**, any partner can obligate the partnership and, if the debt is not paid when due, the creditor can seek redress from any other partner. The **limited liability** offered by a corporation is one of the primary reasons for its popularity. Investors have a strong preference for being able to limit the amount of money at risk.

Question: Ownership shares of most corporations can be transferred. Thus, the life of a corporation can extend indefinitely. Caswell-Massey Co., a "purveyor of luxury personal care products," was incorporated in 1752 in Rhode Island and continues to do business today.



Investors are able to move into and out of these investments quickly. In addition, the availability of limited liability restricts potential losses to the amounts invested. These characteristics help explain the immense popularity of the corporate form. However, a significant number of partnerships and proprietorships still come into existence each year. If no problems were possible, incorporation would be the only practical option. What disadvantages are associated with corporations?

Answer: Incorporation is often a time consuming and costly legal process. However, in most states, proprietorships and partnerships can be created informally with little effort. Owners of many small businesses feel that the creation of a corporation is more trouble than it is worth. Furthermore, corporations are often more susceptible to a plethora of government regulations.

The most obvious problem associated with corporations is the **double taxation** of income. As noted, proprietorships and partnerships are not deemed to be entities separate from their owners. Therefore, income is taxed only one time. Owners pay that tax when the income is earned by their business. For a proprietorship, Schedule C is an income statement attached to the owner's individual Form 1040 income tax return to include the business's profit or loss. A partnership does file its own return on Form 1065 but that is merely for information purposes; no income tax is paid. Instead, the various business revenues and expenses are assigned to the partners for inclusion on their individual tax returns. Any eventual conveyance of this income from business to owner does not create a second tax.

In contrast, corporations are separate legal entities that pay their own taxes by filing Form 1120 to report all taxable income that has been earned<sup>4</sup>. However, when any dividends are eventually distributed from those earnings to the stockholders, this transfer is also viewed as taxable income to the owner. Income is taxed once when earned by the corporation and again when distributed to the owners. Critics have long argued that the collection of the dividend is not a new earning process. To mitigate the impact of this second tax, the United States Congress has established a maximum tax rate of 20 percent on much of the dividend income collected by individuals. This rate is considerably lower than that applied to most other types of income.

To illustrate, assume that income tax rates are 30 percent except for the 20 percent tax on dividends. A proprietorship (or partnership) earns a profit of \$100. In this type business, the \$100 is only taxable to the owner or owners when earned. Payment of the resulting \$30 income tax ( $$100 \times 30$  percent) leaves \$70. This is the remaining disposal income. Any distribution of this money has no impact on taxes.

If a corporation reports this same amount of income, a tax of \$30 is assessed to the business so that only \$70 remains. This income can then be conveyed as a dividend. However, another tax must be paid, this time by the stockholder. The second income tax is  $$10.50 ($70 \times 15 \text{ percent})$ . The owner is left with only \$59.50 (\$70.00 less \$10.50) in disposal income. The increase in the amount taken by the government (\$40.50 versus \$30.00 on \$100 of taxable income) is significant enough to reduce the inclination of many owners to incorporate their businesses.

#### **Check Yourself**

Which of the following is an important difference between a partnership and a corporation?

- A. Partnerships can have multiple owners but a corporation cannot.
- B. Partners are liable for the obligations of the partnerships while shareholders in the corporation are not liable for the debts of the corporation
- C. Corporation shareholders cannot legally sell their shares to others but partners can sell their partnership interests to others.
- D. Partners in a partnership are subject to double taxation on the earnings while shareholders in a corporation are not.

Correct answer is B. Keeping the shareholders legally separate and thus not liable for the debts of a corporation is the primary reason for adopting the corporate form of business ownership. It is important to remember that the separation is only enforceable in court if the corporation follows the rules of corporations and keeps the shareholders financial separate in day to day operations.

#### Key Takeaway

Businesses can exist as corporations, partnerships, or sole proprietorships. A corporation differs from the other two forms because it is an entity legally separate from its ownership. Thus, the liability of owners is limited to the amount of their investments. Corporations are formed according to individual state laws. Shares of the ownership of a corporation (capital stock) are issued to raise money for operations and growth. In many cases, these shares can be readily sold by one owner to the next, often on a stock exchange. The ability to buy and sell capital shares enables a corporation to raise funds and have a continuous life. Disadvantages associated with the corporate form include the cost and difficulty of incorporation and government regulation. The double taxation of corporate income (which is not found with partnerships and sole proprietorships) is often the biggest drawback to incorporation.



<sup>1</sup>In recent decades, a number of variations of these legal forms have been allowed, each with its own particular characteristics. For example, limited liability companies (LLCs) and limited liability partnerships (LLPs) are hybrids that exhibit characteristics of both partnerships and corporations and are permitted to exist in certain states.

<sup>2</sup>A list of the typical contents of the articles of incorporation can be found at "Articles of Incorporation," http://en.wikipedia.org/wiki/Articles\_of\_Incorporation.

<sup>3</sup>When money is loaned to a corporation, especially one that is either new or small, the lender might require the owners to personally guarantee the debt. However, unless such a guarantee is made, the debt is that of the corporation and not the members of the ownership.

<sup>4</sup>Tax rules do allow smaller corporations to file their income taxes as S corporations if certain guidelines are met. S corporations follow virtually the same tax rules as partnerships so that income is only taxed one time when initially earned.

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# 1.4: Using Financial Accounting for Wise Decision Making

#### **Learning Objectives**

At the end of this section, students should be able to meet the following objectives:

- 1. List the predictions that investors and potential investors want to make.
- 2. List the predictions that creditors and potential creditors want to make.
- 3. Distinguish financial accounting information from other types of data about a business organization.
- 4. Explain how financial accounting information is enhanced and clarified by verbal explanations.

Question: Investors are interested (sometimes almost obsessively interested) in the financial information that is produced by a company based on the rules and principles of financial accounting. They want to use this information to make wise investing decisions. What do investors actually hope to learn about a company from this financial information?

Answer: The information reported by financial accounting is similar to a giant, complex portrait painted of the organization. There are probably hundreds, if not thousands, of aspects that can be examined, analyzed, and evaluated in assessing the financial health and future prospects of the model. Theories abound as to which pieces of information are best to use when studying a business. One investor might prefer to focus on a particular portion of the data almost exclusively (such as profitability) while another may believe that entirely different information is most significant (such as the sources and uses of cash during the period).

Ultimately, in connection with the buying and selling of capital stock, all investors are trying to arrive at the same two insights. They are attempting to use the provided data to estimate (1) the price of the corporation's stock in the future and (2) the amount of cash dividends that will be paid over time. Despite the complexity of the information, these two goals are rather simplistic. If an investor owns capital shares of a company and feels that the current accounting information signals either a rise in stock prices or strong dividend payments, holding the investment or even buying more shares is probably warranted. Conversely, if careful analysis indicates a possible drop in stock price or a reduction in dividend payments, sale of the stock is likely to be the appropriate action.

Interestingly, by the nature of the market, any exchange of ownership shares means that the buyer has studied available information and believes the future to be relatively optimistic for the business in question. In contrast, the seller has looked at similar data and arrived at a pessimistic outlook.

#### **Check Yourself**

When reading financial information about a company, which of the following is true:

- A. Two investors looking at the same financial information will come to the same conclusion about a company.
- B. Every investor is looking for the same details in the financial information reported by a company.
- C. The goal of investors in analyzing financial information is complex and requires high level mathematics.
- D. Careful analysis that indicates a probable drop in the price of a stock would lead an investor to sell that stock.

The correct answer is D. If careful analysis of a company indicates that the future will bring less profits and less dividends then the price of that stock will probably drop and selling it now is the preferred strategy. When looking at financial information, investors will focus on different details or pieces of information and thus may come to a different conclusion. That is why one investor could agree to buy a stock thinking it will go up in value while another looking at the same company could decide to sell it. Both are looking at two fairly simple predictions — is the price going to go up and are dividends going to be paid in the future.

Question: Are there reasons to analyze the financial accounting information produced by a particular business other than to help investors predict stock prices and cash dividend payments?

Answer: The desire to analyze a company's financial situation is not limited to investors in the stock market. For example, as discussed previously, a loan might be requested from a bank or one company could be considering the sale of its merchandise to another on credit. Such obligations eventually require payment. Therefore, a sizeable portion of the parties that study the financial information reported by an organization is probably most interested in the likelihood that money will be available to pay its debts. Future stock prices and cash dividend distributions are much less significant speculations for a creditor.



The same financial data utilized by investors buying or selling stock will also be of benefit to current and potential creditors. However, this second group is likely to focus its attention on particular elements of the information such as the amount of the company's debt, when that debt is scheduled to come due, and the perceived ability to generate cash to meet those demands in a timely fashion. Ultimately, creditors attempt to anticipate the organization's cash flows to measure the risk that debt principal and interest payments might not be forthcoming when due<sup>1</sup>.

Therefore, millions of individuals use reported financial information to assess various business organizations in order to make three predictions:

- · Future stock market prices for the capital shares issued by the company
- Future cash dividend distributions
- Future ability to generate sufficient cash to meet debts as they mature

The first two relate to investors in the capital stock of the company; the last is of more significance to a creditor.

Question: The term "financial information" comes up frequently in these discussions. What is meant by financial information?

Answer: The financial information reported by and about an organization consists of data that can be measured in monetary terms. For example, if a building cost \$4 million to acquire, that is financial information as is the assertion that a company owes a debt of \$700,000 to a bank. In both cases, relevant information is communicated to decision makers as a monetary balance. However, if a company has eight thousand employees, that number might be interesting but it is not financial information. The figure is not a dollar amount; it is not stated in the form that is easily used for financial decision-making purposes. Assuming that those workers were paid a total of \$500 million during the current year, then that number is financial information because it is stated in terms of the money spent.

Likewise, a men's clothing store does not include in its financial information that it holds ten thousand shirts to be sold. Instead, the company reports that it currently owns shirts for sale (**inventory**) with a cost of, perhaps, \$300,000. Or, after having sold these items to customers, the company could explain that it had made sales during the period for a total of \$500,000 (the inventory that cost 300,000 was sold to customers for 500,000).

Question: The value of reported data seems somewhat restricted if it only includes dollar amounts. Is financial information limited solely to figures that can be stated in monetary terms?

Answer: Although financial accounting starts by reporting balances as monetary amounts, the communication process does not stop there. Verbal explanations as well as additional numerical data are also provided to clarify or expand the information where necessary. To illustrate, assume that an organization is the subject of a lawsuit and estimates an eventual loss of \$750,000. This is financial information to be reported based on the rules of financial accounting. However, the organization must also communicate other non-financial information such as the cause of the lawsuit and the likelihood that the loss will actually occur. Thus, accounting actually communicates to decision makers in two distinct steps:

- 1. Financial information is provided in monetary terms
- 2. Further explanation is given to clarify and expand on those monetary balances

#### **Key Takeaway**

Throughout the world, investors buy and sell the capital stock of thousands of businesses. Others choose to loan money to these same organizations. Such decisions are based on assessing potential risks and rewards. Financial accounting provides information to these interested parties to help them evaluate the possibility of stock value appreciation, cash dividend distributions, and the ability to generate cash to meet obligations as they come due. This information is financial in nature, meaning that it is stated in monetary terms. However, such numerical information alone is too limited. Thus, financial accounting provides financial information as well as clarifying verbal explanations to assist users in evaluating the financial health and potential of a particular organization.

#### Talking with a Real Investing Pro

Kevin G. Burns is a partner in his own registered investment advisory firm, LLBH Private Wealth Management, an organization that specializes in asset management, concentrated stock strategies, and wealth transfer. LLBH consults on investing strategies for assets of nearly \$1 billion. Before starting his own firm in October 2008, he was first vice president of Merrill Lynch Private Banking and Investment Group. Burns began his career on Wall Street in 1981 at Paine Webber. He has also worked at



Oppenheimer & Co. and Smith Barney. Burns has appeared several times on the CBS Evening News. He has been kind enough to agree to be interviewed about his opinions and experiences in using accounting information.

*Question*: You majored in accounting in college but you never worked in the accounting field. Instead, you became an investment advisor. If you never planned to become an accountant, why did you major in that subject?

*Kevin Burns*: In my view, accounting is the backbone of any business major in college. Being able to translate the information that a company provides, prepare a budget, understand the concept of revenues and expenses, and the like has been enormously helpful in my investment management business. Anyone majoring in any aspect of business needs that knowledge. I also liked being able to know I had the right answers on the tests that my accounting professors gave me when all the numbers added up properly.

*Question*: Why do you prefer to invest in the capital stock of a business rather than put your client's money in other forms of investment such as gold or real estate?

*KB*: I think it is very important to diversify investments. In my world, that includes stocks as well as other types of investments. Of course, there is a place for investments in real estate, commodities, and the like. My personal preference is to invest only in very liquid assets; those—such as stocks—that can be turned into cash quickly. I like to know, even if I am investing for the long term, that I can sell my investments five minutes after I buy them should I change my mind. I simply prefer liquid investments. Real estate is not very liquid. Gold, of course, is liquid. However, while it has appreciated lately, it was around \$1,800 an ounce 10 years ago and is now about \$1,810 an ounce. If my clients earned a total return of 1 percent on their money over 10 years, they would fire me.

<sup>1</sup>Cash flows also influence stock prices and dividend payments and would, thus, be information useful for potential investors in the capital stock of a company as well as its creditors.

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## 1.5: End-of-Chapter Exercises

#### Questions

- 1. What is financial accounting?
- 2. How does financial accounting differ from managerial accounting?
- 3. List the potential users of the information provided by financial accounting.
- 4. What is a corporation?
- 5. How does a business become a corporation?
- 6. Why would a business want to become a corporation?
- 7. What is the board of directors of a corporation?
- 8. Why do individuals or entities choose to invest in the capital stock of corporations?
- 9. How does an investor differ from a creditor?
- 10. What is financial information?

#### True or False

- 1. Financial accounting helps with decisions made inside an organization. 2. \_\_\_\_ Typically, a sole proprietor will be able to raise money easier than a corporation. 3. \_\_\_\_ Employees are not users of the information provided by financial accounting. 4. The board of directors of a corporation is elected by its shareholders. Investors who hold investments in a stock longer than a year may enjoy a tax benefit. 6. \_\_\_\_ Corporations are required by law to pay dividends to their shareholders. 7. Purchasing stock is typically a riskier investment than opening a savings account.
- 8. \_\_\_\_ Financial information is communicated in monetary terms but may be explained verbally.
- 9. \_\_\_\_ Accountants are the only users of the information provided by financial accounting.
- 10. An entity that loans a company money is referred to as a "shareholder."

#### Multiple Choice

- 1. Ramon Sanchez is a loan officer at Washington Bank. He must decide whether or not to loan money to Medlock Corporation. Which of the following would Ramon most likely consider when making this decision?
  - 1. Medlock had positive cash flows last year.
  - 2. Medlock paid dividends last year.
  - 3. Medlock's stock price increased last year.
  - 4. The number of stockholders in Medlock increased last year.
- 2. Which of the following is not a reason an investor would purchase stock in a corporation?
  - 1. To receive dividend payments
  - 2. To sell the stock for a gain if the share price increases
  - 3. To earn a return on their investment
  - 4. To participate in the day-to-day operations of the business
- 3. Which of the following would not be considered an example of a decision made using financial accounting information?
  - 1. An investor decided to invest in the stock of Rayburn Corporation.
  - 2. A credit analyst at Mayfield Corporation rejected a request for credit from Rayburn Corporation.
  - 3. A Rayburn Corporation manager decided to increase production of widgets.
  - 4. A loan officer at Fairburn Bank chose to grant a loan request made by Rayburn Corporation.
- 4. Which of the following is most likely to have a say in the policy decision of a large corporation?
  - 1. A stockholder
  - 2. A member of the board of directors
  - 3. An employee
  - 4. A creditor



- 5. Leon Williams is an investor in Springfield Corporation. On September 1, Year One, he purchased 150 shares of stock at a price of \$45 per share. On October 15, Year One, Springfield distributed dividends of \$1.50 per share. On December 31, Year One, Springfield's stock is selling for \$47 per share. Which of the following is the value of Leon's investment on December 31, Year One?
  - 1. \$6,750
  - 2. \$6,975
  - 3. \$7,050
  - 4. \$7,275

#### **Problems**

- 1. Explain how each of the following might use the information provided by through financial accounting about Neptune Company.
  - 1. Bank loan officer considering loaning money to Neptune Company
  - 2. Potential employee of Neptune Company
  - 3. Current employee of Neptune Company
  - 4. A credit analyst of company wanting to sell inventory to Neptune Company
  - 5. Current investor in Neptune Company
  - 6. Potential investor in Neptune Company
- 2. Mark each of the following with an (F) to indicate if it is financial information or an (N) to indicate if it is nonfinancial information.

Metro Corporation has:

- 1. Cash of \$5,500,000
- 2. \_\_\_\_ A piece of land that cost \$15,000,000
- 3. 200 locations
- 4. Inventory costing \$14,300,000
- 5. \_\_\_\_ 5,000 shares of capital stock
- 6. \_\_\_\_ 1,400 machines
- 7. \_\_\_\_ Sales of \$45 billion

#### Research

- 1. The chapter introduced several forms of business, including a corporation, sole proprietorship, and partnership. Other forms of business exist as well. Do research to compare and contrast the following business forms:
  - Sole proprietorship
  - Partnership
  - Limited partnership
  - C corporation
  - S corporation
  - Limited liability company (LLC)

Examine the following areas for each form of business: ease of organization and maintenance of form, number of people involved, government involvement, liability to owners, ease of exit, taxation, day-to-day management, and funding sources.

- Corporations usually provide a good amount of financial information on their Web sites. Visit <a href="http://www.starbucks.com">http://www.starbucks.com</a> to access information about Starbucks. You will need to scroll down to the "about us" section and then choose "investor relations" on the left.
  - 1. For what amount is Starbucks stock currently selling?
  - 2. Give the year for the most current annual report listed under the Financial Data drop down menu
  - 3. Name three members of Starbucks' board of directors as given in the Corporate governance drop down menu.
  - 4. Find the latest financial release under Press releases. What was the date of the latest release? What was the summary of what was reported in the press release?



- 3. Go the U.S. Department of Labor Web site at <a href="https://www.bls.gov/ooh/business-and-financial/accountants-and-auditors.htm">https://www.bls.gov/ooh/business-and-financial/accountants-and-auditors.htm</a> Here you can learn about the profession of accounting.
  - 1. In general, what functions do accountants perform?
  - 2. Briefly list the different types of accountants and what they do.
  - 3. What education is required?
  - 4. What is a CPA?
  - 5. What are the typical requirements to become a CPA?
  - 6. What other certifications are available for accountants?
  - 7. What is the current job outlook for the accounting profession?

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# **CHAPTER OVERVIEW**

# 2: What Should Decision-makers Know So That Good Decisions Can Be Made about an Organization?

- 2.1: Creating a Portrait of an Organization That Can Be Used by Decision Makers
- 2.2: Dealing with Uncertainty
- 2.3: The Need for Generally Accepted Accounting Principles
- 2.4: What principles does the FASB follow in setting accounting standards?
- 2.5: Four Basic Terms Found in Financial Accounting
- 2.6: End-of-Chapter Exercises

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# 2.1: Creating a Portrait of an Organization That Can Be Used by Decision Makers

#### **Learning Objectives**

At the end of this section, students should be able to meet the following objectives:

- 1. Explain the comparison of financial accounting to the painting of a portrait.
- 2. Understand the reasons why financial accounting information does not need to be exact.
- 3. Define the term "material" and describe its fundamental role in financial accounting.
- 4. Define the term "misstatement" and differentiate between the two types of misstatements.

Question: In Chapter 1 "Why Is Financial Accounting Important?", mention was made that financial accounting is somewhat analogous to the painting of a giant, complex portrait. How could financial accounting possibly be compared to an artistic endeavor such as the creation of a painting?

Answer: The purpose of a portrait—as might have been painted by Rembrandt, van Gogh, or even Picasso—is to capture a likeness of the artist's model. In a somewhat parallel fashion, financial accounting attempts to present a likeness of an organization that can be used by interested parties to assess its financial health and anticipate future stock prices, dividend payments, and cash flows. Accounting terms such as **representational faithfulness** and **presents fairly** are commonly used to indicate that reported financial information successfully provides a reasonable picture of the financial position, operations, cash flows, and overall economic vitality of a reporting organization.

In accounting, this portrait is created and communicated in the form of **financial statements**. These statements provide the form and structure for the conveyance of financial information to describe a particular organization. This textbook is about the preparation of those financial statements and the meaning of their contents.

A human portrait, even by a master such as Rembrandt, is not terribly precise. The shape of the person's chin or the turn of the neck may be off slightly; the color of the eyes and hair cannot possibly be a perfect replica of life. It is a painted portrait, not a photograph (which is much more mechanically accurate). However, absolute exactness is not a necessary element for capturing a proper likeness. Success is achieved when a viewer exclaims, "I know that person!" Exact precision is not required to meet that objective.

Despite public perception, financial accounting information is rarely exact. For example, the reported cost of constructing a building may be off slightly because of the sheer volume of money being spent on the many different aspects of the project. No one expects the reported cost of a \$50 million manufacturing plant to be accurate to the penny. As with the painted portrait, that does not necessarily reduce the usefulness of the data. If financial information is a fair representation, an interested party should be able to make use of it to arrive at the desired projections. A potential investor or creditor does not need numbers that are absolutely accurate in order to assert, "Based on the available financial information, I understand enough about this company to make informed decisions. Even if I could obtain figures that were precise, I believe that I would still take the same actions."

An artist applies oil paints, pastels, or watercolors to a canvas to capture the essence of a subject. An accountant does something quite similar by using numbers and words. The goal is much the same: to capture a likeness that truly reflects the essence of the model.

#### Test Yourself

Financial statements can be likened to a work of art because both are not exact replicas of the picture or company. This can still work as long as the painting or the financial statements are:

- A. Are close enough that an observer can recognize the underlying model or business
- B. Give sufficient detail and accuracy that decision makers would not change their decision with further detail or accuracy.
- C. Accountants are too lazy or dishonest to get the financial statements exactly right
- D. Both A and B.

The answer is D – financial statements work even though they are not exact as long as they are close enough for investors to get a picture of the business and with any additional accuracy the investor would not change their decisions



Question: This is a surprising, possibly shocking, revelation. Financial accounting information has universally been branded as exhibiting rigid exactness. In fact, accountants are often referred to as "bean counters" because of their perceived need to count every bean in the bowl to arrive at obsessively accurate numbers. Here, though, the assertion is made that accounting information is not a precise picture but merely a fair representation of an organization's financial health and prospects. How correct or exact is the financial information that is reported by a business or other organization?

Answer: In accounting, **materiality** has long been the underlying benchmark in the reporting of information. This concept requires that data presented by an organization to decision makers should never contain any **material misstatements**. For financial accounting information, this is the basic standard for the required level of accuracy. Decision makers want financial statements—such as those prepared by Starbucks or Intel—to contain no material misstatements. Because of their central role in this reporting process, understanding the terms "misstatement" and "material" is essential for any student seeking to understand financial accounting.

A misstatement is an **error** (made accidentally) or **fraud** (done intentionally) where reported figures or words actually differ from the underlying reality. For example, a company official could erroneously record a \$100,000 expenditure that was made to acquire a new building as actually pertaining to the purchase of land. Consequently, the building's cost might be reported as \$2.3 million when it was actually \$2.4 million. This financial information is misstated. The balance presented for the building contains a \$100,000 misstatement, as does the figure shown for land.

A misstatement is judged to be material if it is so significant that its presence would impact a decision made by an interested party. Using the above illustration, assume the accidental \$100,000 reduction in the reported cost of this building leads an outside decision maker to alter a choice being made (such as whether to buy or sell capital stock, the price to exchange for such shares, or whether to grant a loan). Because of that outcome, the misstatement is material by definition. Financial information can (and almost always does) contain misstatements. However, the reporting entity must take adequate precautions to ensure that the information holds *no material misstatements* for the simple reason that the data can no longer be considered fairly presented. The portrait of the company does not properly look like the model if it contains any material misstatements. The decision maker is being misled.

The concept of materiality can seem rather nebulous. For a small convenience store, a \$10 milstatement is clearly not material whereas a \$10 million one certainly is. For a company with real estate holdings of \$30 billion, even a \$10 million misstatement is probably not material. The problem for the accountant is determining where to draw the line for each organization. That is one of the most difficult decisions for any financial accountant. An exact dollar amount for materiality is virtually impossible to identify because it is a measure of the effect on an external party's judgment. Other than sheer magnitude, the cause of the problem must also be taken into consideration. An accidental mistake of \$100,000 is probably less likely to be material than one of \$100,000 that resulted from a fraudulent act (like actual theft). As an example consider your how your reaction may differ if you knew a friend lost accidentally something of yours worth \$100 compared to knowing that they actually took \$100 out of your wallet. **Both the size and cause** should be weighed in judging whether the presence of a misstatement has the ability to impact a decision maker's actions.

Therefore, a financial accountant never claims that reported information is correct, accurate, or exact. Such precision is rarely possible and not needed when decision makers are analyzing the financial health and prospects of an organization. However, the accountant must take all precautions necessary to ensure that the data contain no material misstatements. Thus, financial figures are never released without reasonable assurance being obtained that no errors or other mistakes are present that could impact the decisions that will be made. All parties need to believe that reported information can be used with confidence in order to evaluate the financial condition and prospects of the organization as a whole.

When a company reports that a building was constructed at a cost of \$2.3 million, the real message is that the cost was not materially different from \$2.3 million. This figure is a fair representation of the amount spent, one that can be used in making decisions about the organization's current financial situation as well as its future prospects.

## Check yourself

Materiality in accounting is:

- A. Always the same amount no matter what the size and cause of a misstatement.
- B. A way for accountants to take some of the company's money without getting caught.
- C. An amount that is large enough to change the financial decision of a careful observer of information.
- D. The opposite of accurate or fairly stated.



The answer is C – an amount that is material is large enough that it would influence the decision of investors. It would vary in amount based on the size of the company and what caused the misstatement.

Question: Does this mean that all the amounts recorded in the accounting records are not exact and that accountants are not concerned with being accurate?

While accountants understand that it is not possible to get every amount - especially those representing the summary of many events and involving many transactions - to be without misstatement, this does not mean that reasonable effort is not made to achieve accuracy. Accountants do want to communicate information that is as accurate as possible. In many areas, even small, immaterial errors with some reported amounts could cause concern for those using the information. The amount deposited in the bank account should be very accurate as would our calculation of the paychecks for employees based on the application of several payroll tax laws. Even immaterial differences from reality would cause a lack of confidence on the part of those who use this information. Fortunately, computer software has been developed that completes many of the calculations and helps accounting personnel to eliminate many of the small errors that may sneak into the financial information. It is also true that many immaterial errors can add up to be a material error that is big enough to make a difference to decision makers so accuracy is still an important even if elusive goal.

The other misconception of accounting's approach to materiality is that if an amount is too small to matter, accountants will ignore recording it all together. This is almost never the case - accountants may summarize it with other amounts, wait to record or not be as particular about where it is recorded but it is **not good accounting** to completely ignore any completed transaction no matter how small.

#### **Key Takeaway**

Financial accounting does not attempt to provide exact numbers because such accuracy is often impossible to achieve and not really required by decision makers. Instead, reported accounting information is intended to provide a likeness of an organization and its operations—a type of portrait. To achieve this goal, the balances and other data cannot contain any material misstatements. A misstatement is inaccurate information reported by accident (an error) or intentionally (fraud). Materiality refers to the point at which the size or the nature of such misstatements would cause a change in the decisions made by an individual using that information. If all material misstatements can be eliminated, interested parties should be able to use the information to make considered decisions.

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# 2.2: Dealing with Uncertainty

#### **Learning Objectives**

At the end of this section, students should be able to meet the following objectives:

- 1. Discuss the challenge created for financial accountants by the presence of uncertainty.
- 2. List examples of uncertainty that a financial accountant might face in reporting financial information.
- 3. Explain how financial accounting resembles a language.

Question: Absolute accuracy is not necessary in order to estimate future stock prices, cash dividend payments, and cash flows. Thus, the concept of materiality as a standard guideline in reporting information is obviously quite important. However, financial accounting figures can still be exact. If a cash register is bought for \$830.00, the cost is exactly \$830.00. Even if not necessary, what prevents reported financial information from being precise?

Answer: In truth, a reasonable percentage of the numbers reported in financial accounting are exact. Materiality is not an issue in such cases. The cash register mentioned here will have a reported cost of \$830.00—a precise measure of the amount paid. Likewise, a cash balance shown as \$785.16 is exact to the penny. These types of transactions can and should be reported exactly. However, many of the other occurrences that must be reported by an organization do not lend themselves to such accuracy. The financial statements summarize the entire financial picture of the company that includes both the results of exact transactions like those above and situations that cannot be measured so precisely.

The primary reason that precision is not a goal—or often not even a possibility—in financial accounting can be summed up in a single word: **uncertainty**. Many of the events encountered every day by an organization contain some degree of uncertainty. Unfortunately, no technique exists to report uncertain events in precise terms.

When first introduced to financial accounting, many students assume that it is little more than the listing of cash receipts and disbursements in much the same way that elementary school children report how they spent their weekly allowances. That is a misconception. Financial accounting attempts to paint a fairly presented portrait of a company's overall operations, financial condition, and cash flows. This objective includes the reporting of events where a final resolution might not occur for years. Here are just a few examples of the kinds of uncertainty that virtually every business (and financial accountant) faces in reporting financial information.

- A company is the subject of a lawsuit. Perhaps a customer has filed this legal action claiming damage as a result of one of the company's products. Such legal proceedings are exceedingly common and can drag on in the courts for an extended period of time before a settlement is reached. The actual amount won or lost (if either occurs) might not be known for years. What should the company report now? What would investors want to know? Would they prefer an estimate now or no information until the exact amount is known?
- A sale of merchandise is made today for \$30,000 with the money to be collected from the customer in several months. Until the cash is received, the organization cannot be sure of the exact amount that will be collected. There is a possibility that the customer will not pay in full or pay at all. What should the company report *now?*
- An employee is promised a cash bonus next year that will be calculated based on any rise in the market price of the company's capital stock. Until the time passes and the actual increase (if any) is determined, the amount of this bonus remains a mystery. What should the company report *now?*
- A retail store sells a microwave oven today with a warranty. If the appliance breaks at any time during the next three years, the
  store has to pay for the repairs. No one knows whether the microwave will need to be fixed during this period. What should the
  company report now?

Any comprehensive list of the uncertainties faced regularly by most organizations would require pages to enumerate. Because of the quantity and variety of such unknowns, exact precision simply cannot be the only objective of financial reporting. For many accountants, dealing with so much uncertainty is the most interesting aspect of their job. Whenever the organization encounters a situation of this type, the accountant must first come to understand what has taken place and then determine a logical method to communicate a fair representation of that information within the appropriate framework provided by financial accounting. This is surely one of the major challenges of being a financial accountant.



Question: Accounting is sometimes referred to as the "language of business." However, the goal of financial accounting has already been identified as the painting of a fairly presented portrait of an organization. Given the references throughout this chapter to painting, is accounting really a type of language? Is it possible for accounting to paint portraits and be a language?

Answer: The simple answer to this question is that accounting is a language, one that enables an organization to communicate a portrait of its financial health and future prospects to interested parties by using words and numbers rather than oils or watercolors. That language becomes especially helpful when an organization faces the task of reporting complex uncertainties.

Any language, whether it is English, Spanish, Japanese, or the like, has been developed through much use to allow for the effective transfer of information between two or more parties. If a sentence such as "I drive a red car" is spoken, communication occurs but only if both the speaker and the listener have an adequate understanding of the English language. Based solely on these five words, information can be passed from one person to the other. This process succeeds because English (as well as other languages) relies on relatively standardized terminology. Words like "red," "car," and "drive" have defined meanings that the speaker and the listener can each comprehend with a degree of certainty. In addition, grammar rules such as syntax and punctuation are utilized to provide a framework for the communication. Thus, effective communication is possible in a language when (1) set terminology exists and (2) structural rules and principles are applied.

As will be gradually introduced throughout this textbook, financial accounting has its own terminology. Many words and terms (such as "LIFO" and "accumulated depreciation") have very specific meanings. In addition, a comprehensive set of rules and principles has been established over the decades to provide structure and standardization. They guide the reporting process so that the resulting information will be fairly presented and can be readily understood by all interested parties, both inside and outside the organization.

Some students who read this textbook will eventually become accountants. Those individuals must learn the terminology, rules, and principles in order to communicate financial information about an organization that is fairly presented. Other students will become external decision makers. They will make loans, buy stock, grant credit, make employment decisions, provide investment advice, and the like. They will not present financial information with all of its uncertainties but rather make use of it. The more such individuals know about financial accounting terminology, rules, and principles, the more likely it is that they will make appropriate decisions.

To communicate a portrait properly in any language, both the speaker and the hearer must understand the terminology as well as the structural rules and principles. That holds even if the language is financial accounting.

#### Key Takeaway

At any point in time, organizations face numerous uncertain outcomes, such as the settlement of litigation or the collection of a receivable. The conveyance of useful information about uncertain situations goes beyond the simple reporting of exact numbers. To convey a reasonable understanding of such uncertainty, financial accounting must serve as a language. Thus, it will have set terminology and structural rules much like that of any language.

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# 2.3: The Need for Generally Accepted Accounting Principles

#### **Learning Objectives**

At the end of this section, students should be able to meet the following objectives:

- 1. Describe the purpose of U.S. generally accepted accounting principles (U.S. GAAP) and the benefits that these rules provide.
- 2. Explain the importance of U.S. GAAP to the development of a capitalistic economy.
- 3. Understand the role played by the Financial Accounting Standards Board (FASB) in the ongoing evolution of U.S. GAAP.
- 4. Discuss the advantages and the possibility of switching from U.S. GAAP to International Financial Reporting Standards (IFRS).

Question: Rules and principles exist within financial accounting that must be followed. They provide the standard guidance necessary for achieving effective communication. For example, assume that a reporting organization encounters an uncertainty (such as a lawsuit) and is now preparing financial information to portray the reality of that event. When faced with complexity, how does the financial accountant know what reporting guidelines to follow? How does a decision maker looking at reported information know what reporting guidelines have been followed?

Answer: A significant body of generally accepted accounting principles (frequently referred to as **U.S. GAAP**) has been created in the United States over many decades to provide authoritative guidance and standardization for financial accounting. When faced with a reporting issue, such as a lawsuit, the accountant consults U.S. GAAP to arrive at an appropriate resolution, one that results in fair presentation. If both the accountant and the decision maker understand U.S. GAAP, even the most complex financial information can be conveyed successfully. A proper likeness can be portrayed and communicated.

Thus, the financial information to be distributed by an organization in the form of financial statements is structured according to U.S. GAAP. This textbook is an exploration of those accounting principles that serve as the foundation for financial accounting in this country<sup>1</sup>.

Based on coverage here, students who seek to become accountants can learn to report financial information that is fairly presented. That means that it is reported according to U.S. GAAP so that it contains no material misstatements. Students who want to evaluate specific organizations in order to make decisions about them should learn U.S. GAAP in order to understand the data being reported.

Although some elements of U.S. GAAP have been in use almost throughout history, many of these rules and principles are relatively new—often developed within the last 30 to 40 years. Accounting principles evolve quite quickly as the nature of business changes and new issues, problems, and resolutions arise. Fairly important changes in U.S. GAAP occur virtually every year.

The existence of U.S. GAAP means that a business in Seattle, Washington, and a business in Atlanta, Georgia, will account for information in much the same manner<sup>2</sup>. Because of this standardization, any decision maker with an adequate knowledge of financial accounting—whether located in Phoenix, Arizona, or in Portland, Maine—should be able to understand the fairly presented financial information conveyed by a wide variety of companies. They all speak the same language. Put simply, U.S. GAAP enables organizations and other parties to communicate successfully.

#### **Test Yourself**

The acronym GAAP stands for which of the following?

- A. General Automatic Accounting Procedures.
- B. Generally Accepted Accounting Principles.
- C. General American Accounting Processes
- D. Generally Agreed Accountant Practices

The correct answer is B and as the name implies these are rules that have received broad acceptance in the accounting world and are used to guide how financial information is communicated to users.

Question: An article in the Wall Street Journal contained the following comment about U.S. GAAP: "When the intellectual achievements of the 20th century are tallied, GAAP should be on everyone's Top 10 list. The idea of GAAP—so simple yet so radical—is that there should be a standard way of accounting for profit and loss in public businesses, allowing investors to see how



a public company manages its money. This transparency is what allows investors to compare businesses as different as McDonald's, IBM and Tupperware, and it makes U.S. markets the envy of the world" (Shirky, 2001).

Could U.S. GAAP be so very important? Can the development of U.S. GAAP possibly be one of the ten most important intellectual achievements of the entire twentieth century? A list of other accomplishments during this period would include air travel, creation of computers, landing on the moon, and the development of penicillin. With that level of competition, U.S. GAAP does not seem an obvious choice to be in the top ten. How can it be so important?

Answer: The United States has a capitalistic economy, which means that businesses are (for the most part) owned by private citizens and groups rather than by the government. To operate and grow, these companies must convince investors and creditors to contribute huge amounts of their own money voluntarily. Not surprisingly, such financing is only forthcoming if the possible risks and rewards can be assessed and then evaluated with sufficient reliability. Before handing over thousands or even millions of dollars, investors and creditors must believe that they have the reliable data required to make reasonable estimations of future stock prices, cash dividends, and cash flows. Otherwise, buying stocks and granting credit is no more than gambling. As this quote asserts, U.S. GAAP enables these outside parties to obtain the information they need to manage their perceived risk to acceptable levels.

Without U.S. GAAP, investors and creditors would encounter significant difficulties in evaluating the financial health and future prospects of an organization. They would face even greater uncertainty and be likely to hold on to their money or invest only in other, safer options. Consequently, if U.S. GAAP did not exist, the development and expansion of thousands of the businesses that have become a central part of today's society would be limited or impossible simply because of the lack of available resources.

By any standard, the explosive development of the U.S. economy during the twentieth and twenty-first century (especially following World War II) has been spectacular, close to unbelievable. This growth has been fueled by massive amounts of money flowing from inside and outside the United States into the country's businesses. Much of the vitality of the U.S. economy results from the willingness of people to risk their money by buying capital stock or making loans to such companies as McDonald's, IBM, and Nintendo. Without those resources, most businesses would be small or nonexistent and the United States would surely be a radically different country.

Question: If U.S. GAAP is so very important, who creates it?If U.S. GAAP is constantly evolving, how does that occur?

Answer: Since 1973, the primary authoritative body in charge of producing U.S. GAAP has been the Financial Accounting Standards Board (frequently referred to as FASB) <sup>3</sup>. FASB is an independent group supported by the U.S. government, various accounting organizations, and private businesses. It is charged with establishing and improving the standards by which businesses and not-for-profit organizations (such as charities) produce the financial information that they distribute to decision makers.

Typically, accounting problems arise over time within various areas of financial reporting. New types of financial events can be created, for example, that are not covered by U.S. GAAP or, perhaps, weaknesses in earlier rules start to become evident. If such concerns grow to be serious, FASB will step in and study the issues and alternatives and possibly pass new rules or make amendments to previous ones. FASB is methodical in its deliberations and the entire process can take years. Changes, additions, and deletions to U.S. GAAP are not made without proper consideration.

Several other bodies also play important roles in the creation of U.S. GAAP. They are normally discussed in detail in upper-level accounting textbooks. However, the major authority for the ongoing evolution of U.S. GAAP lies with FASB and its seven-member board. It released approximately 170 official statements during its first thirty-six years of existence. The impact that those rulings —and other types of FASB pronouncements—has had on U.S. GAAP and the financial reporting process is almost impossible to overemphasize. In 2009, FASB combined all authoritative accounting literature into a single source for U.S. GAAP, which is known as the *Accounting Standards Codification*. By bringing together hundreds of official documents, FASB has made U.S. GAAP both more understandable and easier to access. Multiple sources have been woven together in a logical fashion so that all rules on each topic are in one location. Now that all the rules are in one place (electronic database) all changes to the rules are referred to as updates rather than official statements. In 2021, FASB released 10 accounting standards updates (ASU) that affected rules on a variety of topics from leases to intangible assets. These updates are then incorporated into the codification for reference purposes.

As just one example, FASB recently made a number of critical changes in the accounting for leases of real estate and equipment. Previous rules had been the subject of much criticism by the investing community for failing to properly portray the financial impact of leasing arrangements. After years of deliberation and input from accountants and investors, the members of the board



came to believe that new rules were needed to improve the reporting of lease obligations to decision makers trying to predict stock prices, cash dividends, and cash flows.

#### Key Takeaway

No language can enable communication without some standardization and rules. In the United States, this structure is created by U.S. generally accepted accounting principles (U.S. GAAP). The availability of these authoritative guidelines has played a central role in the growth of the U.S. economy since the end of the Great Depression. U.S. GAAP is constantly evolving as accountants seek better methods of providing financial information in an ever-changing business world. The main authority for the development of U.S. GAAP lies with the Financial Accounting Standards Board (FASB).

<sup>1</sup>Many countries other than the United States have developed their own individual systems of generally accepted accounting principles. These alternatives are utilized in specific areas of the world. In addition, international accounting standards (created by the London-based International Accounting Standards Board) known formally as International Financial Reporting Standards, or IFRS, also exist and are now used in numerous countries. U.S. GAAP is by far the most sophisticated system in the world because a significant portion of the capital markets exist here. Unless noted otherwise, U.S. GAAP is being described in this textbook. However, in recent years, a strong push toward universal acceptance of IFRS has taken place. Therefore, their potential impact will be analyzed throughout this book in special discussions of relevant topics.

<sup>2</sup>As will be discussed later in this textbook, key points exist within financial accounting where more than one approach can be used for reporting purposes. Rigid standardization is found in many areas of financial reporting but not in all.

<sup>3</sup>Considerable information can be found about the Financial Accounting Standards Board by touring <a href="http://www.fasb.org">http://www.fasb.org</a>. The tab "About FASB" is especially informative.

<sup>4</sup>The role played in the U.S. economy by public accounting firms will be described in Chapter 4 "Why Should Decision Makers Trust Financial Statements?". Some of these organizations have grown to enormous size. According to its Web site as of June 30, 2020 (http://www.pwc.com), PricewaterhouseCoopers employs 284,258 individuals working in over 157 countries. During 2020, the firm received in excess of \$43 billion from customers for the services it rendered to them.

#### References

Shirky, C., "How Priceline Became a Real Business," Wall Street Journal, August 13, 2001, A-12.

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# 2.4: What principles does the FASB follow in setting accounting standards?

#### **Learning Objectives**

At the end of this section, students should be able to meet the following objectives

- · Identify the conceptual framework of accounting
- Explain how the conceptual framework informs the setting of standards in accounting
- Give examples of the application of principles contained in the conceptual framework

Question: What kind of framework does the FASB use to guide the setting of accounting standards in the United States?

Many of you are familiar with the concept that organizations or countries are governed by constitutions or general principles that guide leaders in those organizations or countries as they make important decisions. Those decisions include the laws that affect all the citizens or members of those organizations. The constitution provides overall guidance for the making of laws and regulations. To be consistent in the making of rules, the FASB has established a sort of constitution or **conceptual framework** that is to be used to help in deliberating what the accounting rules should look like in a world of ever changing business needs.

This conceptual framework helps to define the elements of accounting (which will be discussed in the next section) and describes additional principles that should help the FASB as they make important decisions. This framework includes broad principles rather than specific descriptions so that they can be adapted to the wide range of situations encountered in making accounting rules. Generally accepted accounting principles (GAAP) refers to both the broad principles (constitution) and the more specific rules as found in the codification mentioned earlier.

Question: What broad principles could be considered part of Generally Accepted Accounting Principles?

Answer: General principles about who the financial information is for and what they will look for in that information are as follows:

- The primary audience for financial information reported under these principles is **investors** those looking to make a return on their money by either loaning or buying stock in a company. While there are lots of other users of financial information (government, employees, etc) the most important is considered to be **investors**. Their needs tells us generally what should and should not be included in the financial statements.
- To be helpful, financial information must be understandable and useful for making decisions
- Useful information is both **relevant** to decisions that need to be made (future cash flows) and **reliable** (you can trust it when making those decisions)
- To be relevant, financial information must be **timely** (cannot be too old) and provide information needed to either **evaluate** past performance or **predict** future performance.
- To be reliable, financial statements and the amounts they show must be **verifiable**, free from error (at least close) and **neutral** (not favoring one decision over another).
- To summarize and report the information, the **cost** to find and calculate the information cannot be greater than the **benefit** of that information and amounts need to be material (as discussed earlier in this chapter)

To guide accountants in providing **relevant** and **reliable** information, the following more specific assumptions and principles are used in most situations:

#### 1. Business Entity Assumption

An understanding is needed of what business entity is providing the financial information to decision makers. This is so important because transactions that affect the separate owners of a business and not the business itself will be left out of our accounting for the business. Two businesses that may be closely related may need to be accounted for separately because they have different ownership. Other businesses may be combined for financial reporting because they have the same ownership – it depends on the business entity assumption that is being made.

#### 2. Monetary Unit Assumption

Economic activity is measured in U.S. dollars, and only transactions that can be expressed in U.S. dollars are recorded. This monetary unit will be different if we are operating in Denmark or Japan.

Because of this basic accounting principle, it is assumed that the dollar's purchasing power has not changed over time. As a result accountants ignore the effect of inflation on recorded amounts.



#### 3. Time Period Assumption

This accounting principle assumes that it is possible to report the complex and ongoing activities of a business in relatively short, distinct time intervals such as the five months ended May 31, 2023, or the 5 weeks ended May 1, 2023. The shorter the time interval, the more likely the need for the accountant to estimate amounts relevant to that period. Most typical accounting periods are one month, one quarter (three months) and one year (12 months).

It is *imperative* that the time interval (or period of time) be shown in the heading of each income statement, statement of stockholders' equity, and statement of cash flows. Labeling one of these **financial statements** with "December 31" is not good enough—the reader needs to know if the statement covers the *one week* ended December 31, 2023 the *month* ended December 31, 2023 the *three months* ended December 31, 2023 or the *year ended* December 31, 2023. This heading of the financial information helps the reader know how **timely** the financial information is.

#### 4. Objectivity Principle

The principle of objectivity backs up the idea that to be provide information that can be relied on by investors to make decisions, that information should be objective not subjectively based on the opinion of the accountant. The accountant should be able to point to information that can be **verified** to back up recorded amounts. There will be estimates but even in those cases there should be evidence that backs up the estimate and that could be verified by another person. To maintain objectivity, accountants record many financial statement items at their **cost** – what was actually paid. This is an amount that should be able to be easily verified by looking at evidence of the transaction like a cash payment or invoice.

So when purchasing an asset, typically to be objective the amount recorded in the financial information will be the amount paid (**cost**) because it is easily verified and reliable and not an opinion of how much the asset is worth which would be subjective.

#### **5. Full Disclosure Principle**

If certain information is important to an investor or lender using the financial statements, that information should be disclosed within the statement or in the notes to the statement. It is because of this basic accounting principle that numerous pages of "footnotes" are often attached to financial statements.

As an example, let's say a company is named in a lawsuit that demands a significant amount of money. When the financial statements are prepared it is not clear whether the company will be able to defend itself or whether it might lose the lawsuit. As a result of these conditions and because of the full disclosure principle the lawsuit will be described in the notes to the financial statements.

A company usually lists its significant accounting policies as the first note to its financial statements.

#### 6. Going Concern Assumption

This assumes that a company will continue to exist long enough to carry out its objectives and commitments and will not liquidate in the foreseeable future. If the company's financial situation is such that the accountant believes the company will *not* be able to continue on, the accountant is required to disclose this assessment.

Without the going concern assumption, the definition of an asset that we will look at later – resources that will bring future benefit would not have meaning since there is no future to benefit.

#### 7. Matching Principle

This accounting principle requires companies to use the **accrual basis of accounting**. The matching principle requires that expenses be matched with revenues. For example, sales commissions expense should be reported in the period when the sales were made (and not reported in the period when the commissions were paid). Wages to employees are reported as an expense in the week when the employees worked and not in the week when the employees are paid. If a company agrees to give its employees 1% of its 2022 revenues as a bonus on January 15, 2023, the company should report the bonus as an expense in 2022 and the amount unpaid at December 31, 2022 as a liability. (The expense is occurring as the sales are occurring.)

#### 8. Revenue Recognition Principle

Under the accrual basis of accounting, **revenues** are recognized as soon as a product has been sold or a service has been performed, regardless of when the money is actually received. Under this basic accounting principle, a company could earn and report \$20,000 of revenue in its first month of operation but receive \$0 in actual cash in that month.



For example, if ABC Consulting completes its service at an agreed price of \$1,000, ABC should recognize \$1,000 of revenue as soon as its work is done—it does not matter whether the client pays the \$1,000 immediately or in 30 days.

#### 9. Conservatism

If a situation arises where there are two acceptable alternatives for reporting an item, conservatism directs the accountant to choose the alternative that will result in less net income and/or lower asset amount. Conservatism helps the accountant to "break a tie." It does not direct accountants to be conservative. Accountants are expected to be unbiased and objective.

The basic accounting principle of conservatism leads accountants to anticipate or disclose losses, but it does not allow a similar action for gains. For example, *potential* losses from lawsuits will be reported on the financial statements or in the notes, but *potential* gains will not be reported. Also, an accountant may write inventory *down* to an amount that is lower than the original cost, but will not write inventory *up* to an amount higher than the original cost.

#### 10. Consistency

For information to be useful for decision makers, it is helpful to be able to use comparisons especially between the financial information from one accounting period and the financial information for a different accounting period. Thus when applying accounting rules, the accountant should be consistent from year to year. Where one assumption or application of the rules is made in 2022, the same should be made in 2023 so that comparisons can be made. If a change in those applications is justified, then careful disclosure of why the change was made and how it made the financial information different is needed.

#### **Examples**

How would an accountant apply the above described principles to the following business situations?

1. ABC Inc. purchases a used sophisticated mixing machine from a dealer in another state. ABC pays \$32,000 for the machine. The production manager tells the accounting department that he thinks a similar machine is worth \$40,000 from his experience. What amount should be used to record the machine and why?

In order to remain objective and to provide information that is reliable and verifiable, an accountant would use \$32,000 the cost paid for the machine rather than use the subjective opinion of the production manager. The **cost** could be easily **verified** by looking at the evidence of the cash being transferred to the dealer but it would be difficult to verify the opinion of the production manager.

2. Harley Davidson makes a change in the way it applies an accounting rule to its motorcycle inventory so that 2023 application will be different than previous year. They are wondering what needs to be done about this in their financial information.

Investors expect **consistency** in the application of the accounting rules because they will want to compare 2022 results with 2023 results. This is to evaluate 2023 performance against 2022 performance and try to predict future performance. Because the change in accounting application may hinder this comparison, Harley Davidson will need to disclose the impact of the change in a footnote to the financial statement explaining what happened and why.

3. The manager of a health club runs a special deal for new members. If they sign up and pay for 2 years of membership up front, the discount will be 30% off the regular price for this up front special. Many new members take advantage of the special and pay for 2 years during the month of January. The manager instructs the accountant to record the amount of the cash received as revenue. Does that sound correct to you?

According to the revenue recognition principle the relevant information that should be recorded as revenue is the amount earned. The membership payment received is not revenue until the health club provides the promised services over the next 2 years. Thus recording the amount received in January in payment for the next two years as revenue is a violation of the revenue recognition principle and would not provide investors with the information needed to evaluate the performance of the health club.

4. The Picadilly Company is owned by Jane and Michael as shareholders. Picadilly Company shares an office building and does much of its business with the FineLine Corporation that is owned by Hector and Anton. FineLine borrows a significant amount of money from the bank that it will use to make substantial upgrades to its part of the building. This could result in Picadilly's part of the building becoming worth more. Also, Michael purchases a boat that will be kept at his house but that might sometimes be used for Picadilly Company outings for employees. Who should record what?

The Picadilly Company and FineLine Corporation are owned and controlled by separate shareholders so they will be considered separate business entities under the business entity principle. FineLine will record the obligation to pay back the loan even though it may have an indirect impact on Picadilly. Because the business owners are also considered separate from the business entity, Michael's boat would not be recorded under the financial information for Picadilly. Neither the boat nor the loan would be



relevant to making decisions about Picadilly and thus would not be included. The significant amount of business done between Picadilly and FineLine might be enough that some description of the arrangement could be included in the footnotes explaining that if something negative happened to FineLine especially in light of their significant new loan, this could negatively impact Picadilly's business. This would be in keeping with the full disclosure principle.

5. Company Q has a lawsuit that they anticipate they will win and will pay them \$5 million dollars. Company Z has a lawsuit they anticipate losing and would probably result in them paying \$2 million. Company Z is going to record a loss for \$2 million but Company Q is not going to record anything for their lawsuit. Is this right?

The conservatism principle states that when losses are probable they should be recorded in the financial information. This information is considered more relevant to decision making and should meet the standard of full disclosure. Gains or any other positive information that is only probable will not be recorded as a way to be conservative. Full disclosure may allow some description of the situation in the footnotes, but actually showing an amount on the financial statements would not be in keeping with the accounting principles.

6. UWE has two pieces of information that it thinks might be relevant for investors about its business. The first is that some items they bought several years ago would cost 20% more today because of inflation in their area. They would like to increase the amount shown in the financial statements by 20%. The other is the hiring of a brilliant engineer who has substantial expertise not found anywhere else. UWE anticipates this new hire will result in new products worth several millions of dollars and would like to put this information in the financial report. What would the accounting principles say?

Not all relevant information can be included in the financial reports of a company. Only those that can be measured in a stable monetary unit like the dollar will be accounted for directly. Thus changes in the value of items based on inflation is not accounted for under the monetary unit assumption and neither is the speculative value of the new engineer. Good news could be shared with investors but until amounts are actually paid to or earned by our new employee that can be measured in dollars – they would not be included in the financial statements.

#### Test yourself

Which of the following examples is a good illustration of how different accounting principles trade off in helping accountants communicate financial information to investors?

- A. An estimated amount is considered more relevant even though it is not a reliable as the exact amount that can be determined later (less timely).
- B. A bonus that was earned by employees in 2020 is recorded in 2020 to match the expense to the time of the employee effort rather than in 2021 when it is objectively paid.
- C. A potential gain is described in the footnotes but the estimated amount is not included in the financial statements until received in order to be conservative.
- D. All of the above are correct illustrations of the conceptual framework application.

The correct answer is D. All of these are situations where general principles from the conceptual framework seem to be in conflict and judgment needs to be applied to determine what application will provide the most relevant information to investors.

#### Key Takeaway

The FASB has adopted a conceptual framework or general principles that are broad enough to guide not only the setting of specific accounting rules but also help guide accountants in recording, summarizing and communicating financial information. These include a focus on communicating with investors, consistency, revenue recognition, reliability among others.

<sup>2.4:</sup> What principles does the FASB follow in setting accounting standards? is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.



## 2.5: Four Basic Terms Found in Financial Accounting

#### **Learning Objectives**

At the end of this section, students should be able to meet the following objectives:

- 1. Define "asset" and provide examples in financial reporting.
- 2. Define "liability" and provide examples in financial reporting.
- 3. Define "revenue" and provide examples in financial reporting.
- 4. Define "expense" and provide examples in financial reporting.

Question: Attaining a thorough understanding of financial accounting and U.S. GAAP is a worthwhile endeavor especially if a person hopes to become successful in analyzing businesses or other organizations. Where should the journey to gain knowledge of financial accounting and its principles begin?

Answer: The study of a language usually starts with basic terminology. That is also an appropriate point of entry for an exploration into financial accounting. Consequently, four fundamental terms will be introduced here. Knowledge of these words is essential to understanding accounting because they serve as the foundation for a significant portion of the financial information provided by any business or other organization.

To illustrate, when examining the 2022 financial statements presented by Darden Restaurants, Inc. (owner of restaurant chains including Olive Garden and Longhorn Steakhouse), four monetary balances stand out because of their enormous size. As of the May of that year, this corporation reported \$10.1 billion in **assets** along with \$7.9 billion in **liabilities**. During the year ending in May, 2022, Darden generated **revenues** of \$9.6 billion and incurred **expenses** of \$8.6 billion as they recoverd from the impact of the global pandemic.

- Assets
- Liabilities
- Revenues
- Expenses

There are thousands of words and concepts found in financial accounting. However, no terms are more crucial to a comprehensive understanding than these four. Almost all discussions concerning financial reporting, whether practical or theoretical, come back to one or more of these words.

Question: The first term presented here is "asset." Is an asset a complicated accounting concept? What general information is conveyed to a decision maker by the term "asset"?

Answer: Simply put, an asset is a future economic benefit that an organization either owns or controls<sup>1</sup>. As of May 2022, Darden reported holding over \$10.1 billion of these economic benefits. If a customer walks into one of that company's restaurants (Olive Garden for example), many of the assets are easy to spot. The building itself may well be owned/controlled by the company and certainly provides a probable future economic benefit by allowing Darden to cook food and serve customers. Other visible assets are likely to include cash registers, the cash held in those machines, available food from chicken to pasta (usually referred to as **inventory** in financial accounting), refrigerators, tables, ovens, and the decorations. The plan is that each of those assets will help the company prosper in the future.

Question: All decision makers evaluating the financial health of an organization should be quite interested in learning about its assets because those balances reflect the economic resources held at the present time. This is valuable information. To provide additional clarification, what are the largest assets reported by Darden?

Answer: As a result of financial reporting, such information is readily available to anyone wanting to learn about virtually any business. As of May of 2022, the following three assets were reported by Darden as having the highest dollar amounts:





Land, Building and Equipment	\$3.3 billion
Control over leased restaurants buildings	\$3.5 billion
Goodwill	\$1.0 billion

The underlying meaning of these three figures will be explained at later points in this textbook.

#### **Test Yourself**

The Gandolf Company purchases a building with land for a cost of \$50 million. This building will be used to manufacture its new game console systems. Gandolf will show the \$50 million for accounting purposes as:

- A. An asset
- B. An obligation
- C. An economic resource
- D. An expense

The correct answer is A. This building is a resource that Gandolf owns and controls by virtue of the purchase and expects to provide future benefit thus it will be listed as an asset in their financial reports.

Question: Darden also reported owing just over \$7.9 billion in liabilities as of May, 2022. Does this balance reflect the total amount that the company will eventually have to pay to outside parties? Are liabilities the equivalent of monetary debts?

Answer: A more formal definition of a liability is that it is a probable future sacrifice of economic benefits arising from present obligations but, for coverage here, liabilities can certainly be viewed as the debts of the organization.

The \$7.9 billion liability total disclosed by Darden probably includes (1) amounts owed to the vendors who supply food and supplies to the company's restaurants, (2) notes due to banks as a result of loans, (3) income tax obligations, (4) amounts owed to landlords for leasing restaurants and (5) balances to be paid to employees, utility companies, advertising agencies, and the like. The amount of such liabilities reported by many businesses can be staggering. Wal-Mart, for example, disclosed approximately \$153 billion in liabilities as of January 31, 2022. However, even that amount pales in comparison to the \$2.2 trillion liability total reported by Citigroup at the end of 2022. To ensure that a fairly presented portrait is being produced, companies such as Darden and Citigroup must make certain that the reported data contain no material misstatements. Thus, all the information that is provided to decision makers about liabilities should be based on the rules and principles to be found in U.S. GAAP.

#### Test Yourself

Amounts owed to employees and amounts borrowed from the bank are two examples of which accounting element?

- A. Assets
- B. Revenues
- C. Liabilities
- D. Equity

The answer is C. Wages or salaries payable and loans or notes payable are examples of liabilities that require the future sacrifice or payment of assets to satisfy the obligation. The obligation must have arisen out of a past event and cannot just be anticipated (like we might have to pay for a broken leg if an employee falls on the job – not until they actually fall).

Question: In financial accounting, a company reports its assets, which are future economic benefits, such as buildings, equipment, and cash. Liabilities (debts) are also included in the financial information being disclosed. Both of these terms seem relatively straightforward. The third basic term to be discussed at this time—revenues—is one that initially appears to be a bit less clear. Darden reported that its stores generated revenues of over \$9.6 billion in fiscal 2022 alone. What information is conveyed by a company's revenue balance?

Answer: The term "revenue" is a measure of the financial impact on a company resulting from a particular process. This process is a sale. A customer enters a Darden restaurant (say Olive Garden) and pays \$60 for dinner with friends. The company receives an asset, possibly three \$20 bills. This \$60 asset inflow into the company results from a sale and is called revenue. Revenue is *not* an



asset; it is a measure of the increase in the company's net assets<sup>2</sup> that results from sales of inventory and services. As will be discussed in more detail in Chapter 3 "In What Form Is Financial Information Actually Delivered to Decision Makers Such as Investors and Creditors?", for reporting purposes, these sales must result from the primary or central operation of the business. Thus, for The Coca-Cola Company, revenues are derived from the sale of soft drinks. Sales resulting from noncentral parts of the company's operations (perhaps the disposal of a piece of land, for example) will be reported in a different manner.

Throughout each day of the year, Darden makes sales to customers and accepts cash, checks, or credit card payments. The reported revenue figure is merely a total of all sales made during the period, clearly relevant information to any decision maker attempting to determine the financial prospects of this company. During fiscal 2022, the multitude of Darden restaurants located around the United States sold food and received over \$9.6 billion in assets in exchange. That is the information communicated by the reported revenue balance. To reiterate, this figure is not exact, precise or accurate. However, according to the company, it is a fairly presented total determined according to the rules of U.S. GAAP so that it contains no material misstatement. Any outside party analyzing Darden should be able to rely on this number with confidence in making possible decisions about the company as a whole.

#### **Test Yourself**

According to the reading, Darden earns revenue by which of the following?

- A. Hiring employees and training them.
- B. Providing meals and drinks to customers in exchange for payment.
- C. Borrowing money from bank to build additional restaurants.
- D. Changing their menu to match new dining trends.

The answer is B. Providing goods and services are the essential process by which businesses earn revenue. As a restaurant chain, this takes the form of providing meals and drinks to customers (a combination of goods (food) and services (cooking and bringing it to the table).

Question: That leaves "expense" as the last of the four basic accounting terms being introduced at this point. Darden reported \$8.6 billion in total expenses during fiscal 2022. This figure apparently is essential information that helps paint a proper portrait of the company. What is an expense?

Answer: An expense is an outflow or reduction in net assets<sup>4</sup> that was incurred by an organization in hopes of generating revenues. To illustrate, assume that—at the end of a week—a local business pays its employees \$12,000 for the work performed during the previous few days. A \$12,000 salary expense must be reported. Cash (an asset) was reduced by that amount and this cost was incurred because the company employed those individuals to help generate revenues. The same general logic can be applied in recording insurance expense, rent expense, advertising expense, utility expense (such as for electricity and water), and many other similar costs.

In some ways, expenses are the opposite of revenues that measure the inflows or increases in net assets created by sales. Expense figures reflect outflows or decreases in net assets incurred in hopes of generating revenues.

#### **Test Yourself**

Some might say that expenses are bad and should be eliminated, an accountant might respond;

- A. If you spend enough on expenses they may become assets.
- B. As long as you do not include them with liabilities they are not that bad.
- C. Expenses are very similar to revenues and thus can genuinely improve your business.
- D. Expenses are incurred with the hope of generating revenues and thus are necessary for an operating business.

The answer is D. Expenses are the costs of generating revenues and no business can really earn revenue without incurring expenses. Businesses try to find the most efficient way to earn those revenues and thus reduce expenses but eliminating them is really not an option.

Question: To reiterate, four terms are basic to an understanding of financial accounting. Almost any coverage of accounting starts with these four. What is the meaning of asset, liability, revenue, and expense?



#### Answer

- Asset. A future economic benefit owned or controlled by the reporting company, such as inventory, land, or equipment.
- *Liability*. A probable future economic sacrifice or, in simple terms, a debt.
- *Revenue*. A measure of the inflow or increase in net assets generated by the sales made by a company. It is a reflection of the amounts brought into the company by the sales process during a specified period of time.
- *Expense*. A measure of the outflow or reduction in net assets caused by the company's attempt to generate revenues and includes costs, such as rent expense, salary expense, and insurance expense.

#### Key Takeaway

A strong knowledge of basic accounting terminology is essential for successful communication to take place in the reporting of financial information. Four terms provide a foundational core around which much of the accounting process is constructed. Assets are future economic benefits owned or controlled by an organization. Assets typically include cash, inventory, land, buildings, and equipment. Liabilities are the debts of the reporting entity, such as salary payable, rent payable, and notes payable. Revenue figures indicate the increase in a company's net assets (its assets minus its liabilities) that is created by a sale of goods or services. Revenues are the lifeblood of any organization. Without the inflow of cash or receivables that comes from generating sales, a company cannot exist for long. Expenses are decreases in net assets that are incurred by a company in hopes of generating revenues. Expenses incurred by most companies run a full gamut from rent and salary to insurance and electricity.

#### Talking with a Real Investing Pro

Following is a continuation of our interview with Kevin G. Burns.

*Question*: Financial accountants tend to place a heavy emphasis on the importance of generally accepted accounting principles (U.S. GAAP) to the world of business. After nearly three decades as an investment advisor, what is your opinion of the relevance of U.S. GAAP?

Kevin Burns: Before the accounting scandals of the late 1990s—such as Enron and WorldCom—financial information that adhered to U.S. GAAP was trusted worldwide. Investors around the globe took comfort in a standard that had such a great reputation for integrity. In the 1990s, though, I felt that U.S. GAAP become somewhat muddied because investors wanted to depend too heavily on one or two figures rather than judging the company as a whole. In the last several years, FASB has moved back to stressing clearer transparency for reported information. That objective enables investors to better see and understand the organization standing behind those statements. That is important in order to maintain investor confidence.

As for the current state of the U.S. GAAP, it is certainly superior to the majority of the world's standards. Unfortunately, it is getting more complicated every year, which is not always a good goal.

Question: Are you bothered by the fact that the financial information that is reported to you by a business is not terribly exact?

*KB*: No reporting system can ever be exact and many estimates are necessary in reporting any business. Am I bothered by the lack of precision? No, not particularly. I will say, though, that I tend to avoid companies that have an excessive quantity of notes to their financial statements. Many of those companies can be extremely difficult to evaluate because of the complexity of their operations. I prefer businesses where the analysis is a bit simpler and I am able to gain a genuine understanding of what is happening.

*Question*: When you begin to study the financial data reported by a company that you are analyzing as an investment possibility, which do you look at first: revenues, expenses, assets, or liabilities?

*KB*: For me, assets have always been the most important determination in the investments that I have chosen. However, that is because I have always been strictly a value investor. There are many different styles of investing. Value investors look at the value of a company's assets and then look for bargains based on current market prices. In comparison, growth investors look at earnings momentum and don't care too much about asset values. They like to see a consistent rise in profitability each year. Over the years, being a value investor has worked well for my clients and me.

<sup>1</sup>This is an opening chapter in an introductory financial accounting textbook. Definitions are somewhat simplified here so as to be more understandable to students who are just beginning their exploration of accounting. Many terms and definitions will be expanded in later chapters of this textbook or in upper-level accounting courses.



<sup>2</sup>"Net assets" is a term that reflects a company's assets less its liabilities. Revenue can also be created by a decrease in a liability rather than an increase in an asset as we will learn in chapter 5.

<sup>3</sup>An expense can cause a reduction in assets, especially if cash is paid. Frequently, though, an expense creates an increase in liabilities if the cost is incurred but payment has not yet been conveyed. In either case—the reduction of an asset or the creation of a liability—the amount of net assets held by the organization decreases.

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## 2.6: End-of-Chapter Exercises

#### Questions

- 1. Why is it acceptable for financial accounting to be imprecise?
- 2. What is materiality?
- 3. How is materiality determined?
- 4. What is a misstatement?
- 5. When is a misstatement considered fraud?
- 6. Give three examples of uncertainties faced by businesses.
- 7. Define "U.S. GAAP."
- 8. Why is GAAP so important to the capital market system in the United States?
- 9. Who creates U.S. GAAP?
- 10. What does it mean for financial information to be relevant?
- 11. What does it mean to match expenses with revenue?
- 12. Describe what is meant by objective information.
- 13. Define "asset" and give an example of one.
- 14. Define "liability" and give an example of one.
- 15. Define "revenue."
- 16. Define "expense."

#### True or False

- 1. \_\_\_\_ Most countries require companies to follow U.S. GAAP in preparing their financial statements.
- 2. \_\_\_\_ Companies face many uncertainties when preparing their financial statements.
- 3. \_\_\_\_ A liability is defined as a future economic benefit that an organization owns or controls.
- 4. Creation of U.S. GAAP is primarily done by the U.S. government.
- 5. \_\_\_\_ In order for investors to evaluate the financial information of a company, it is vital that the financial information be exact.
- 6. \_\_\_\_ Materiality depends on the size of the organization.
- 7. Material misstatements made on financial statements are acceptable as long as there are only a few of them.
- 8. \_\_\_\_ An example of an uncertainty faced by companies in financial statements is a pending lawsuit.
- 9. \_\_\_\_ Only accountants need to understand the terminology of accounting.
- 10. \_\_\_\_\_ Accountants are directed to be conservative not unbiased.
- 11. \_\_\_\_ Inflation is an important consideration in reporting financial information.
- 12. \_\_\_\_\_ Investors are considered by GAAP to be the primary users of financial information.
- 13. Full disclosure is probably more important with bad news than good news.
- 14. An employee is an example of an asset.
- 15. \_\_\_\_ A sale is usually considered revenue even if cash is not collected.
- 16. \_\_\_\_ The purchase of a building is recorded as an expense.
- 17. \_\_\_\_ A deliberate misstatement is known as fraud.

#### Multiple Choice

- 1. Which of the following is not an example of an uncertainty companies face in their financial reporting?
  - 1. Sales that have not yet been collected in cash
  - 2. Warranties
  - 3. A loan due to a bank
  - 4. A lawsuit that has been filed against the company
- 2. Which of the following is true about U.S. GAAP?
  - 1. U.S. GAAP has been developed over the past ten years.
  - 2. U.S. GAAP allows financial statement users to compare the financial information of companies around the world.
  - 3. U.S. GAAP helps accountants achieve an exact presentation of a company's financial results.
  - 4. U.S. GAAP helps investors and creditors evaluate the financial health of a company.



Questions 3, 4, and 5 are based on the following:

Mike Gomez owns a music store called Mike's Music and More. The store has inventory that includes pianos, guitars, and other musical instruments. Mike rents the building in which his store is located month to month, but owns the equipment and fixtures inside it. Last week, Mike's Music made sales of \$3,000. Some of the sales were made in cash. Some were made to customers who have an account with Mike's Music and are billed at the end of the month. Last month, Mike's Music borrowed \$10,000 from a local bank to expand.

- 3. Which of the following is not an asset owned by Mike's Music?
  - 1. The inventory of musical instruments
  - 2. The building in which the store is located
  - 3. The amount owed to Mike's Music by its customers
  - 4. The equipment and fixtures in the store
- 4. Which of the following is a liability to Mike's Music?
  - 1. The loan amount that must be repaid to the bank
  - 2. The amount owed to Mike's Music by its customers
  - 3. The sales Mike's Music made last week
  - 4. The cash collected from customers on the sales made last week
- 5. Which of the following is a true statement?
  - 1. Mike's Music is too small for anyone to care about its financial information.
  - 2. The sales Mike's Music made last week are considered revenue.
  - 3. The intent of Mike's Music to expand is an asset.
  - 4. The sales Mike's Music made on credit last week cannot be considered revenue.

#### Problem

Cach

Mark each of the following with an (A) to indicate it is an asset, an (L) to indicate it is a liability, an (R) to indicate it is revenue, or an (E) to indicate it is an expense.

1	Cdsii
2	2 Pizza delivery van
3	3 Loan due to the bank
4	I Inventory
5	5 Bonus owed to employees
$\epsilon$	S Rent expense
7	7 Sales tax collected from customers that must be paid to the state
8	3 Freezers to store food for a restaurant
Ö	D Amounts owed to suppliers
10	Sales

#### Research

- 1. The chapter introduces the Financial Accounting Standards Board (FASB) as the body that has primary responsibility for determining U.S. GAAP. You can learn more about this organization at <a href="http://www.fasb.org">http://www.fasb.org</a>. On the menu across the top, click on "About Us"
  - 1. How long has FASB been in existence?
  - 2. From which organization does FASB get its power?
  - 3. Why do you think it is important that FASB be independent?
  - 4. What role does the Financial Accounting Foundation play?
  - 5. Name two current members of FASB.
  - 6. What is the EITF?
- 2. Four fundamental accounting terms were introduced in Chapter 2: assets, liabilities, revenues, and expenses. We will explore these items further by examining the financial statements of Starbucks. You can access their financial statements by visiting <a href="https://investor.starbucks.com/finan...s/default.aspx">https://investor.starbucks.com/finan...s/default.aspx</a>



You will need to select the FY 2023 Annual Report and scroll down to the page labeled 42 at the bottom of the page.

- 1. The first page contains a statement showing the revenues and expenses for the year. What is this statement called?
- 2. What was Starbucks' total net revenue for the year? What three types of revenue does Starbucks report?
- 3. Based on your understanding of Chapter 2, can you say that this revenue number reported is the exact revenue earned by Starbucks in fiscal 2023? If not, what can you say about this revenue number?
- 4. List three different expenses reported by Starbucks and the amounts of those expenses.
- 5. The statement on page 44 reports Starbucks' assets and liabilities. What is this statement called?
- 6. Name the two largest assets in dollars and two largest liabilities in dollars reported by Starbucks. What are the amounts reported for each of these assets and liabilities?

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# **CHAPTER OVERVIEW**

# 3: In What Form Is Financial Information Actually Delivered to Decision Makers Such as Investors and Creditors?

- 3.1: The Construction of an Income Statement
- 3.2: Reported Profitability and the Principle of Conservatism
- 3.3: Increasing the Net Assets of a Company
- 3.4: Reporting a Balance Sheet and a Statement of Cash Flows
- 3.5: End-of-Chapter Exercises

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#### 3.1: The Construction of an Income Statement

#### **Learning Objectives**

At the end of this section, students should be able to meet the following objectives:

- 1. Understand that financial statements provide the structure for companies to report financial information to decision makers.
- 2. Identify each of the four financial statements typically reported by a company.
- 3. List the normal contents of an income statement.
- 4. Define "gains" and "losses" and explain how they differ from "revenues" and "expenses".
- 5. Explain cost of goods sold.
- 6. Compute gross profit and the gross profit percentage.
- 7. Describe the location of income taxes within an income statement.

Question: The revenues, expenses, assets, and liabilities reported by an organization provide data that are essential for decision making. The informational value of these figures enables a thorough analysis of an organization and its financial health and future prospects. How do outsiders learn of these amounts? How are financial data actually conveyed to interested parties? For example, a company such as Marriott Bonvoy Inc. (the hotel chain) has possibly millions of current and potential shareholders, creditors, and employees. How does such a company communicate vital financial information to all the groups and individuals that might want to make some type of considered evaluation?

Answer: Businesses and other organizations periodically produce financial statements that provide a formal structure for conveying financial information to decision makers. Smaller organizations distribute such statements each year, frequently as part of an annual report prepared by management. Larger companies, like Marriott Bonvoy, issue yearly statements but also prepare interim statements, usually on a quarterly basis<sup>1</sup>. Regardless of the frequency of preparation, financial statements serve as the vehicle to report all the monetary balances and explanatory information required according to the rules and principles of U.S. generally accepted accounting principles (U.S. GAAP). Based on these standards, such statements are intended as a fairly presented portrait of the organization—one that contains no material misstatements. In simple terms, a company's revenues, expenses, assets, and liabilities are reported to outsiders by means of its financial statements.

Typically, a complete set of financial statements produced by a business includes at least four separate statements along with comprehensive notes. When studied with knowledge and understanding, a vast array of information becomes available to aid decision makers who want to predict future stock prices, cash dividend payments, and cash flows.

### Financial Statements and Accompanying Notes<sup>2</sup>

- Income statement (also called a statement of operations or a statement of earnings)<sup>3</sup>
- Statement of retained earnings (or the more inclusive statement of stockholders' equity)
- Balance sheet (also called a statement of financial position)
- Statement of cash flows

The four financial statements prepared by Marriott Bonvoy as of December 31, 2022, and the year then ended were presented in just five pages of its annual report (pages 36 through 40) whereas the notes accompanying those statements made up the next 21 pages. Although decision makers often focus on a few individual figures found in financial statements, the vast wealth of information provided by the notes should never be ignored.

#### Real World View

See page 36 to 40 from Marriott and the time period they report at the linked video below.

https://youtu.be/uDjI2CdbHo8

Question: Assume that a financial investor is analyzing the latest income statement prepared by a company in hopes of deciding whether to buy its capital stock or, possibly, loan money to the company. Or, perhaps, a current employee must decide whether to stay with the company or take a job offer from another organization. Both of these individuals want to assess the company's financial health and future prospects. Certainly, all the available financial statements need to be studied but, initially, this person is looking at the income statement. What types of financial data will be available on a typical income statement such as might be produced by a business like IBM, Apple, Papa John's, or Home Depot?

Answer: The main content of an income statement is rather straightforward: a listing of all revenues earned and expenses incurred by the reporting organization during the period specified. As indicated previously in Chapter 2, revenue figures disclose increases in net assets (assets minus liabilities) that were created by the sale of goods or services resulting from the primary operations of the organization. For IBM, revenues are derived from providing computer consulting services and selling computer systems (a total of nearly \$60.5 billion in 2022) while, for Papa John's International, the reported revenue figure (a bit over \$2.1 billion) measures the sale of pizzas at company stores and the sale of product to franchisees.

Conversely, expenses are decreases in net assets incurred by a reporting company in hopes of generating revenues. For example, salaries paid to sales people for the work they have done constitute an expense. The cost of facilities that have been rented is also an expense as is money paid for utilities, such as electricity, heat, and water.

For example, IBM reported selling, general, and administrative expenses for 2022 of \$18.6 billion. That was just one category of its expenses disclosed within the company's income statement<sup>3</sup>. During the same period, Papa John's operating costs as an expense for its domestic company-owned restaurants of \$585 million. Financial accounting focuses on providing information about an organization and both of these figures should help decision makers begin to glimpse a portrait of the underlying company. Accounting is often said to provide transparency—the ability to see straight through the words and numbers to gain a vision of the company



and its operations. In doing so, companies can choose how much detail they include in their revenues and expenses. GAAP has not designated the names of expenses or how many categories they should be classified into.

Question: Is nothing else presented on an income statement other than revenues and expenses?

Answer: An income statement also reports gains and losses for the same period of time. A gain is an increase in the net assets of an organization created by an occurrence outside its primary or central operations. A loss is a decrease in net assets from a similar type of incidental event.

When Apple sells a computer to a customer, it reports revenue but if the company disposes of a piece of land adjacent to a warehouse, it reports a gain (if sold above cost) or a loss (if sold below cost). Selling computers falls within Apple's primary operations whereas selling land does not. If Home Depot sells a lawn mower to a customer, the transaction brings in assets. Revenue has been earned and should be reported as such. If this same company disposes of one of its forklifts that was used to move around inventory, the result is reflected as either a gain or loss. Home Depot is not in the business of selling forklifts. This classification split between revenues/expenses and gains/losses helps provide decision makers with a clearer portrait of what actually happened to the company during the reporting period.

An example of an income statement for a small convenience store is shown in Figure 3.1 "Income Statement". Note that the name of the company, the identity of the statement, and the period of time reflected are apparent. Although this is only an illustration, it is quite similar to the income statements created by virtually all business organizations in the United States and many other countries.

Figure 3.1 Income Statement

ŭ				
Davidson Groceries				
Income Statement				
Year Ended December 31, 2022				
Revenues				
	Sales of groceries		1,400,000	
Expenses				
	Cost of Goods Sold		900,000	
	Salaries		120,000	
	Rent		20,000	
	Advertising		30,000	
	Insurance		15,000	
	Miscellaneous		25,000	
		Total Expenses	1,110,000	
Operating Income			290,000	
Other Gains and Losses				
	Gain on Sale of Delivery Truck		5,000	
	Loss on sale of land behind bldg		(15,000)	
		Total Gains/Losses	(10,000)	
Income before income taxes			280,000	
Income tax expense			50,000	
Net Income			\$230,000	



#### Check yourself

Gains and losses are reported separately and below revenues and expenses because?

- A. Gains and losses are also reported on other financial statements
- B. Gains and losses are less important in communicating the financial situation of a business.
- C. Gains and losses are derived from the primary operation of the business
- D. Bad news is always reported last on the financial statements

Answer: B Gains and losses because they are reported in less detail and because they come from activities outside the normal or primary operations of the business are less important in telling the financial story of the business than revenues and expenses. Thus we list them separately and at the bottom of the income statement.

Question: A review of this sample income statement raises a number of questions. The meaning of balances such as salary expense, rent expense, advertising expense, and the like are relatively clear. These figures measure specific outflows or decreases in the company's net assets that were incurred in attempting to generate revenue. However, the largest expense reported on this income statement is called cost of goods sold. What does the \$900,000 cost of goods sold figure represent?

Answer: This convenience store generated sales of \$1.4 million in 2022. Customers came in during that period of time and purchased merchandise at the sales price determined by Davidson. That is the first step in the sale and is reflected within the revenue balance. The customers then took these goods with them and left the store; this merchandise no longer belongs to Davidson Groceries. In this second step, a decrease occurred in the company's net assets. Thus, an expense has occurred. As the title implies, "cost of goods sold" (sometimes referred to as "cost of sales") is an expense reflecting the cost of the merchandise that a company's customers purchased during the period. It is the amount that Davidson paid for inventory items, such as apples, bread, soap, tuna fish, and cheese, that were then sold.

Note that the timing of expense recognition is not tied to the payment of cash but rather to the loss of the asset. As a simple illustration, assume Davidson Groceries pays \$2 in cash for a box of cookies on Monday and then sells it to a customer for \$3 on Friday. The income statement will show revenue of \$3 (the increase in the net assets created by the sale) and cost of goods sold of \$2 (the decrease in net assets resulting from the sale). Both the revenue and the related expense are recorded on Friday when the sale took place and the inventory was removed.

The difference in revenue and cost of goods sold is often referred to as the company's **gross profit**, **gross margin**, or **markup**. It is one of the reported figures studied carefully by decision makers. For this year, Davidson Groceries earned a gross profit of \$500,000 (\$1.4 million in revenues less \$900,000 cost of goods sold). Its gross profit was 35.7 percent of sales (\$500,000/\$1.4 million) – this is sometimes referred to as 35.7 gross profit margin percent.

For the year ending January 29, 2023, Home Depot Inc. reported net sales revenues of \$157 billion along with cost of sales of \$104 billion. Thus, Home Depot earned a gross profit during that period of \$53 billion. Sales of merchandise (\$157 billion) exceeded the cost of those same goods (\$104 billion) by that amount. Its gross profit/margin percentage was 34 percent (\$53 billion/\$157 billion). Any potential investor or creditor will find such numbers highly informative especially when compared with the company's prior years or with competing enterprises. For example, for the year ending February 3, 2023, Lowe's Company., a major competitor of Home Depot, reported net sales of \$97 billion, cost of sales of \$65 billion, and gross margin (the company's term) of \$32 billion. Its gross profit percentage was 33 percent (\$32 billion/\$97 billion). Such information allows decision makers to compare these two companies and their operations.

Whether the amounts are reported in thousands of dollars or billions of dollars, the general formula for the income statement or statement of operations is:

#### Revenues – Expenses + Gains – Losses = Net Income or Net earnings

This ties back to our definitions of the accounting elements in chapter 2 – if an item is a revenue then it must be reported on the income statement – same for expenses (gains and losses, too). Thus if you see an item reported on the income statement, the company reporting it is defining it as a revenue or expense (gain or loss).

#### Check yourself

If Chunky Enterprises has revenues of \$43 million and cost of goods sold of \$26 million along with general and administrative expenses of \$9 million and a gain on the sale of a building of \$2 million, what is its net income not including taxes:

- A. \$17 million
- B. \$8 million
- C. \$10 million
- D. \$6 million

The correct answer is C. The formula is Revenues (43) less Expenses (COGS and General and Administrative 35) plus Gains (2) = \$10 million.

Question: In Figure 3.1 "Income Statement", revenues and expenses are listed first to arrive at an operating income figure. That is followed by gains and losses. This sequencing is appropriate since revenues and expenses relate to the primary or central operations of the business and gains and losses are created by more incidental events. Why then is income tax expense listed last, by itself, on the income statement and not with the other expenses?

Answer: State and federal income taxes cost businesses in the United States considerable sums of money each year. Home Depot reported income taxes of \$5.3 billion at the bottom of its 2022 income statement. The income tax figure is segregated in this manner because it is not an expense in a traditional sense. As previously described, an expense—like cost of goods sold, advertising, or rent—is incurred in order to generate revenues. Income taxes do not create revenues at all. Instead, they are caused by the company's revenues and related profitability. Although referring to income taxes as an expense is common, probably a more apt title is "income taxes assessed by government." The financial impact is the same as an expense (an outflow or decrease in net assets); thus, "income tax expense" is often used for labeling purposes. However, because the nature of this "expense" is different, the reported income tax figure is frequently isolated at the bottom of the income statement, separate from true expenses.



#### **Key Takeaway**

Financial information can be gathered about an organization but the resulting figures must then be structured in some usable fashion to be conveyed to interested decision makers. Financial statements serve this purpose. A typical set of financial statements is made up of an income statement, statement of retained earnings, balance sheet, statement of cash flows, and explanatory notes. The income statement reports revenues from sales of goods and services as well as expenses such as rent expense and cost of goods sold. Gains and losses that arise from incidental activities of a company are also included on the income statement but separately so that the income generated from primary operations is apparent. Income tax expense is reported at the bottom of the income statement because it is actually a government assessment rather than a true expense.

<sup>1</sup>Financial statements for many of the businesses that have their capital stock traded publicly on stock exchanges are readily available on corporate Web sites. For example, the statements released by Marriott Bonvoy can be located through the following path. The financial statements issued by most large companies will be found by using similar steps.• Go to <a href="http://www.marriott.com.">http://www.marriott.com.</a>• Click on "Our Company" (at the very bottom of the homepage).• Click on "Investors."• Click on "Financial Reports & Proxy."• Click on "2022 Annual Report."•

<sup>2</sup>Because the final figures derived on the income statement and the statement of retained earnings are necessary to produce other statements, the preparation of financial statements is carried out in the sequential order shown here.

<sup>3</sup>Financial information reported by large publicly traded companies tends to be highly aggregated – meaning they summarize revenues and expenses into just a very few categories. Thus, the expense figure shown by IBM is a summation of many somewhat related expenses. Those individual balances would be available within the company for internal decision making.

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## 3.2: Reported Profitability and the Principle of Conservatism

#### Learning Objectives

At the end of this section, students should be able to meet the following objectives:

- 1. Describe the method used to differentiate assets from expenses.
- 2. Discuss the rationale for the principle of conservatism and its effect on financial reporting.
- 3. Explain the reason dividend distributions are not reported within net income.
- 4. Discuss the need to study an entire set of financial statements rather than focus in obsessively on one or two numbers such as net income.

Question: Previously, the term "asset" was defined as a future economic benefit owned or controlled by a reporting company. On an income statement, items such as rent and advertising are listed as expenses. Why are such costs not grouped with the assets on the balance sheet? For example, the rent paid for a building could provide a probable future economic benefit for the reporting organization but it is included in Figure 3.1 "Income Statement" as an expense. The same is true for advertising. How does a company determine whether a cost represents an asset or an expense?

Answer: Drawing a distinction that allows a cost to be classified as either an asset or an expense is not always easy for an accountant. If a company makes a \$1,000 rent payment, an expense might have been incurred because an outflow of an asset has taken place. However, the cost of this rent could also be shown on the balance sheet as an asset if it provides future economic benefits.

A cost is identified as an asset if the benefit clearly has value in generating *future* revenues for the company whereas an expense is a cost that has already helped earn revenues in the *past*.

With an asset, the value will be consumed in the year. With an expense, the value has already been consumed. To illustrate, assume that on December 31, Year One, a company pays \$1,000 for rent on a building used during the previous month. The benefit gained from occupying that space has already occurred. Use of the building helped the company generate revenue during December. The outflow of this money is reflected on the income statement as a rent expense. The benefit is now in the past.

If on that same day, another \$1,000 is paid to rent this building again during the upcoming month of January Year Two, the acquired benefit relates directly to the future. Until consumed, this second cost should be shown on the balance sheet as a \$1,000 asset (referred to as prepaid rent).

- *Expense*. Cost that helped generate revenues in the past.
- Asset. Cost expected to help generate revenues in the future.

When a cost is incurred, the accountant must investigate to determine when the related benefit is expected. This timing—which is guided by U.S. GAAP—indicates whether an asset should be recognized (shown on the balance sheet) or an expense (reported on the income statement).

#### **Check Yourself**

Do you think you are ready to tell the difference between assets and expenses? Check to see using this podcast:







Question: A business or other organization can face many complicated situations. At times, the decision as to whether a specific cost will generate revenue in the future (and is reported as an asset) or has already helped create revenue in the past (an expense) is difficult. When an accountant encounters a case that is "too close to call," what reporting is appropriate? For example, assume that a company has agreed to pay \$24,000 but officials cannot ascertain the amount of the related benefit that has already occurred versus the amount that will take place in the future. When delineation between an asset and an expense appears to be impossible, what is reported?

Answer: Being an accountant is a relatively easy job when financial events are distinct and clearly understood. Unfortunately, in real life, situations often arise where two or more outcomes seem equally likely. The distinction raised in this question between an asset and an expense is simply one of numerous possibilities where multiple portraits could be envisioned. At such times, financial accounting has a long history of following the **principle of conservatism**.

The conservative nature of accounting influences many elements of U.S. GAAP and must be understood in order to appreciate the meaning of the financial information that is conveyed about an organization. Simply put, conservatism holds that whenever an accountant faces two or more *equally likely* possibilities, the one that makes the company look worse should be selected. In other words, financial accounting attempts to ensure that a reporting organization never looks significantly better than it actually is.

If a cost has been incurred that might have either a future value (an asset) or a past value (an expense), the accountant always reports the most likely possibility. That is the only appropriate way to paint a portrait of an organization that is the fairest representation. However, if neither scenario appears more likely to occur, the cost is classified as an expense rather than an asset because of the principle of conservatism. Reporting a past benefit rather than a future benefit has a detrimental impact on the company's appearance to an outside party. This handling reduces the reported net income as well as the amount shown as the total of the assets.

The principle of conservatism can be seen throughout financial accounting. When the chance of two possibilities is the same, accounting prefers that the least optimistic approach should be used.



Question: Why does conservatism exist in financial accounting? Companies must prefer to look as successful as possible. Why does a bias exist for reporting outcomes in a negative way?

Answer: Accountants are well aware that the financial statements they produce are relied on by decision makers around the world to determine future actions that will place monetary resources at risk. For example, if a company appears to be prosperous, an investor might decide to allocate scarce cash resources to obtain shares of its capital stock. Similarly, a creditor is more willing to make a loan to a company that seems to be doing well economically.

Such decision makers face potential losses that can be significant. Accountants take their role in this process quite seriously. As a result, financial accounting has traditionally held that the users of financial statements are best protected if the reporting process is never overly optimistic in picturing an organization's financial health and future prospects. Money is less likely to be lost if the accountant paints a portrait that is no more rosy than necessary. The practice of conservatism is simply an attempt by financial accounting to help safeguard the public.

The problem that can occur when a company appears excessively profitable can be seen in the downfall of WorldCom where investors and creditors lost billions of dollars. A major cause of this accounting scandal, one of the biggest in history, was the fraudulent decision by members of the company's management to record a cost of nearly \$4 billion as an asset rather than as an expense. Although any future benefit resulting from these expenditures was highly doubtful, the cost was reported to outsiders as an asset. Conservatism was clearly not followed.

Consequently, in its financial statements, WorldCom appeared to have more assets and be much more profitable (less expenses) than was actually the case. Investors and creditors risked their money based on the incorrect information they had received. Later, in 2002, when the truth **was** discovered, the stock price plummeted and the company went bankrupt. Even if the decision had been close as to whether these costs represented assets or expenses, the practice of conservatism would have dictated the need to record them as expenses to prevent an overly optimistic picture of the company and its financial health.

#### **Check Yourself**

- 1. The ABC company paid cash for the following during May, 2023
  - 1. Purchase of equipment \$5,000
  - 2. Rent on the building \$1,500 for May
  - 3. Wages to workers who worked in May \$4,000
  - 4. Utilities \$800 used in May
  - 5. Insurance to cover June 2023 until June 2025 \$3,200
- 2. If the revenues earned during May 2023 were \$9,500, what was the net income for May?

Net Income = Revenues \$9,500

- Expenses

Rent 1,500 Wages 4,000 Utilities 800

Net Income = \$3,200

The equipment and prepaid insurance would be assets that will have future benefit. They will be reported on the balance sheet but not the income statement. The benefit for the rent, wages and utilities were used in May 2023 and thus they are expenses.

Question: Previously, the term "dividends" was introduced and discussed. Dividend distributions reduce the net assets of a company. In Figure 3.1 "Income Statement", a number of expenses are listed but no dividends are mentioned. Why are dividend payments not included as expenses on an income statement?

Answer: Dividends are not expenses and, therefore, must be omitted in creating an income statement. Such payments obviously reduce the amount of net assets owned or controlled by a reporting company. However, they are not related in any way to generating revenues. A dividend is a reward distributed by a company (through the decision of its board of directors) to the owners of its capital stock. Thus, a dividend is a sharing of profits and not a cost incurred to create revenues.

In Figure 3.1 "Income Statement", Davidson Groceries reports net income for the year of \$230,000. The board of directors might look at that figure and opt to make a cash dividend distribution to company owners. That is one of the most important decisions for



any board. Such payments usually please the owners but reduce the size of the company and—possibly—its future profitability.

An income statement reports revenues, expenses, gains, and losses. Dividend distributions do not qualify and must be reported elsewhere in the company's financial statements.

#### Real World Example

What would we see if we took a look at an income statement from Tesla, Inc? Check out the linked video below to review Tesla's income statement.

https://youtu.be/F8dtTQMz7EM

Question: The final figure presented on the income statement is net income. This balance reflects the growth in a company's net assets during the period resulting from all revenues, expenses, gains, and losses. In evaluating the operations of any company, that figure seems to be incredibly significant. It reflects the profitability for the period. Is net income the most important number to be found in a set of financial statements?

Answer: The net income figure reported for any business organization is an eagerly anticipated and carefully analyzed piece of financial information. It is the most discussed number disclosed by virtually any company. However, financial statements present a vast array of data and the importance of one balance should not be overemphasized. A portrait painted by an artist is not judged solely by the small section displaying the model's ear but rather by the representation made of the entire person. Likewise, only the analysis of all information conveyed by a complete set of financial statements enables an interested party to arrive at the most appropriate decisions about an organization.

Some creditors and investors seek shortcuts when making business decisions rather than doing the detailed analysis that is appropriate. Those individuals often spend an exorbitant amount of time focusing on reported net income. Such a narrow view shows a fundamental misunderstanding of financial reporting and the depth and breadth of the information being conveyed. In judging a company's financial health and future prospects, an evaluation should be carried out on the entity as a whole. Predicting stock prices, dividends, and cash flows requires a complete investigation. That is only possible by developing the capacity to work with all the data presented in a set of financial statements. If a single figure could be used reliably to evaluate a business organization, creditors and investors would never incur losses.

#### **Key Takeaway**

Conservatism is an often misunderstood term in financial reporting. Despite a reputation to the contrary, financial accounting is not radically conservative. However, when two reporting options are equally likely, the one that makes the company look best is avoided. In that way, the portrait created of a company is less likely to be overly optimistic so that decision makers are protected. Losses are less likely to occur. For example, expenses refer to costs that had value in the past while assets reflect future economic benefits. If this distinction cannot be drawn for a particular cost, it should be reported as an expense. That assignment reduces both reported income and assets. The resulting net income figure is useful in evaluating the financial health and prospects of a company but no single figure should be the sole source of information for a decision maker.

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## 3.3: Increasing the Net Assets of a Company

#### **Learning Objectives**

At the end of this section, students should be able to meet the following objectives:

- 1. Define "retained earnings" and explain its composition.
- 2. Define "capital stock" and explain the meaning of its reported account balance.
- 3. Understand the lack of financial impact that the exchange of ownership shares between investors has on a company.

Question: The second financial statement is known as the statement of retained earnings<sup>1</sup>. The term retained earnings has not yet been introduced. What information does a retained earnings balance communicate to an outside decision maker? For example, on June 30, 2022, Microsoft, Inc. reported retained earnings of just over \$84.2 billion, one of the larger amounts found in the company's financial statements. What does that figure tell decision makers about this computer company?

Answer: Retained earnings is one of the most misunderstood accounts in all of financial reporting. In simplest terms, this balance is merely the total amount of net income reported by a company since it first began operations, less all dividends paid to stockholders during that same period. Thus, the figure provides a measure of the profits left in a business throughout its history to create growth.

Retained Earnings = Net Income earned since the beginning of the company – Dividends paid to stockholders since the beginning of the company

When a company earns income, it becomes larger because net assets have increased. Even if a portion of the profits is later distributed to shareholders as a dividend, the company has grown in size as a result of its own operations. The retained earnings figure informs decision makers of the amount of that internally generated expansion. The reported balance answers the question: How much of the company's net assets have been derived from operations during its life?

If a company reports net income of \$10,000 each year and then pays a \$2,000 dividend to its owners, it is growing in size at the rate of \$8,000 per year. After four years, for example, \$32,000 (\$8,000 × four years) of its net assets were generated by its own operating activities. That information is communicated through the retained earnings balance.

As of June 30, 2022, Microsoft reported total assets of \$365 billion and liabilities of \$198 billion. Thus, the company had net assets of \$167 billion. It held that many more assets than liabilities. Those additional assets did not appear by magic. They had to come from some source. One of the primary ways to increase the net assets of a company is through profitable operations. The balance for retained earnings shown by Microsoft at this time lets decision makers know that approximately \$84 billion of its net assets were generated by the net income earned since the company's inception, after all dividend distributions to shareholders were subtracted.

#### **Check Yourself**

Let's say that Boeing, Inc. had \$49.6 billion in retained earnings at the beginning of 2022 and \$55.9 billion in retained earnings at the end of 2022. What could we say about Boeing from the statement of changes in equity or retained earnings. Since retained earnings increased we know that Boeing had net income for the year (as opposed to a net loss that would make retained earnings drop). Not only do we know that they had net income but the amount of the net income was more than Boeing paid in dividends. Because if dividends were more than net income, retained earnings would also drop. If you also know that net income is 10.4 billion can you calculate the amount of dividends? Since net income and dividends are the only items that we know of so far than can change retained earnings, we would look to have retained earnings increase by \$10.4 billion if net income was \$10.4 billion and dividends were zero. But retained earnings increased by only \$6.3 billion (55.9-49.6). That means that dividends must have been paid of \$4.1 billion (10.4 – 6.3). The statement of changes in equity/retained earnings would show:

Beginning	49.6
Net Income	10.4
Dividends	(4.1)
Ending	55.9



Question: In Figure 3.1 "Income Statement", Davidson Groceries calculated its net income for 2022 as \$230,000. Assume that this company began operations on January 1, 2019, and reported the following balances over the years:

Figure 3.3

Year	Net Income	Dividends	Growth in the Company
2019	\$140,000	\$50,000	\$90,000
2020	\$180,000	\$70,000	\$110,000
2021	\$210,000	\$90,000	\$120,000
2022	\$230,000	\$100,000	\$130,000

How is this information reported?

What is the structure of the statement of retained earnings as it appears within a company's financial statements?

Answer: In its three prior years of existence, Davidson Groceries' net assets increased by a total of \$320,000 as a result of its operating activities. As can be seen here, the company generated total profit during this period of \$530,000 while distributing dividends to shareholders amounting to \$210,000, an increase of \$320,000. Net assets rose further during the current year (2022) as Davidson Groceries made an additional profit (see also Figure 3.1 "Income Statement") of \$230,000 but distributed \$100,000 in dividends.

Figure 3.4 "Statement of Retained Earnings" shows the format by which this information is conveyed to the decision makers who are evaluating Davidson Groceries.

Figure 3.4 Statement of Retained Earnings

Retained Earnings Balance from January 1, 2022 Net Income Earned from January 1 to December 31, 2022	\$320,000 \$230,000	Increase in Net Assets from Previous Years From the Income Statement for the year
Dividends Paid from January 1, to December 31, 2022	\$100,000	
Retained Earnings Balance from December 31, 2022	\$450,000	Beginning Balance + Net Income – Dividends = Ending Balance

Question: In the information given about Microsoft, the company reported holding net assets of \$167 billion but only about \$84 billion of that amount was generated through operations as shown by its retained earnings balance. Clearly, additional sources must have helped the company attain its growth in size. Increases in net assets of a company are not the result of magic or miracles. Other than through operations, how else does a company derive its net assets?

Answer: Beyond operations (as reflected by the retained earnings balance), a company accumulates net assets by receiving contributions from its owners in exchange for capital  $stock^2$ . This is the other major method by which Microsoft was able to gather its \$167 billion in net assets. On a balance sheet, the measure of this inflow is usually labeled something like **capital stock**, **common stock**, **or contributed capital**. The reported amount indicates the portion of the net assets that came into the business directly from stockholders.

The amount of a company's net assets is the excess of its assets over its liabilities. Two reported balances indicate the primary source of those net assets:

- *Capital stock* (*or contributed capital*). The amount invested in the business by individuals and groups in order to become owners. For example, as of December 31, 2022, IBM reported having received a total of approximately \$58 billion from its shareholders since its inception.
- **Retained earnings**. All the net income earned by the organization over its life less amounts distributed as dividends to owners. On December 31, 2022, IBM reported a retained earnings balance of \$149 billion (Statement of Retained Earnings showed Beginning Balance of 154 billion + Net Income 1.6 billion Dividends 5.9 billion = 149 billion). Because the dividends was more than the net income, retained earnings actually went down.



Companies that seek to grow must be able to generate resources from owners, operations, or both.

Question: A corporation issues (sells) ownership shares to investors. The source of the resulting inflow of assets into the business is reflected on its balance sheet by the reporting of a capital stock (or contributed capital) balance. Thus, over its life, Microsoft has received assets of \$83 billion from stockholders in exchange for capital stock. Does the company receive money in this way when shares are sold each day on the New York Stock Exchange, NASDAQ (National Association of Securities Dealers Automated Quotation Service), or other stock exchanges?

Answer: No, purchases and sales on stock markets normally occur between investors and not with the company. Only the initial issuance of the ownership shares to a stockholder creates the inflow of assets reported by the company's capital stock or contributed capital account.

To illustrate, assume that Investor A buys capital stock shares directly from Business B for \$179,000 in cash. This transaction increases the net assets of Business B by that amount. The source of the increase is communicated to decision makers by adding \$179,000 to the capital stock balance reported by the company. Subsequently, these shares may be exchanged between investors numerous times without any additional financial impact on Business B. For example, assume Investor A later sells the shares to Investor Z for \$200,000 using a stock market such as the New York Stock Exchange. Investor A earns a \$21,000 gain (\$200,000 received less \$179,000 cost) and Investor Z has replaced Investor A as an owner of Business B. However, the financial condition of the company has not been affected by this new exchange. Thus, the capital stock balance only measures the initial investment contributed directly to the business.

A statement of stockholders equity that reports the changes in both retained earnings and capital stock might look like this:

Microsoft Statement of Changes in Stockholders Equity for 2022 (Capital Stock and Retained Earnings)		
	Capital Stock	Retained Earnings
Beginning Balance (July 1, 2021)	\$83,111	\$57,055
Sales of stock to investors (add)	3,828	0
Net Income (add)	0	72,738
Dividends (subtract)	0	\$45,112
Ending Balance (June 30, 2022)	\$86,939	\$84,681

Also, note that while there is an item that increases Retained Earnings (Net Income) and decreases Retained Earnings (Dividends), we have only looked at items that increase capital stock (sale of stock directly from the company to stockholders) no decreases. Also note that you cannot complete the statement of retained earnings or the statement of changes in stockholders equity until you complete the income statement (to calculate net income).

#### **Real World Decision**

https://youtu.be/kvo0kgRWE7Y

What could the balance sheet and statement of cash flows tell us about the decision to increase the dividend at TJX company early in 2020?





#### **Key Takeaway**

The source of a company's net assets (assets minus liabilities) is of interest to outside decision makers. The reported retained earnings figure indicates the amount of these net assets that came from the operations of the company. This growth in size was internally generated. Retained earnings is all the net income earned since operations began less all dividend distributions. Net assets can also be derived from contributions to the company made by parties seeking to become owners. The capital stock (or contributed capital) balance measures this source of net assets. To impact the company, the assets must come directly from the owners. Hence, exchanges between investors on a stock exchange do not affect the company's net assets or its financial reporting.

<sup>1</sup>As indicated earlier, many companies actually report a broader statement of changes in stockholders' equity to present details on all the accounts appearing in the stockholders' equity section of the balance sheet. At this initial point in the coverage, focusing solely on retained earnings makes the learning process easier.

<sup>2</sup>As with many aspects of the coverage at this introductory stage, other events can also impact the reported total of a company's net assets and will be discussed in later chapters. The two sources here—capital stock and retained earnings—are shown by all corporations and are normally significantly large amounts.

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## 3.4: Reporting a Balance Sheet and a Statement of Cash Flows

#### **Learning Objectives**

At the end of this section, students should be able to meet the following objectives:

- 1. List the types of accounts presented on a balance sheet.
- 2. Explain the difference between current assets and liabilities and noncurrent assets and liabilities.
- 3. Calculate working capital and the current ratio.
- 4. Provide the reason for a balance sheet to always balance.
- 5. Identify the three sections of a statement of cash flows and explain the types of events included in each.

Question: The third financial statement is the balance sheet. If a decision maker studies a company's balance sheet (on its Web site, for example), what information can be discovered?

Answer: The primary purpose of a balance sheet is to report an organization's assets and liabilities at a particular point in time. The format is quite simple. All assets are listed first—usually in order of liquidity<sup>1</sup>—followed by the liabilities. A picture is provided of each future economic benefit owned or controlled by the company (its assets) as well as its debts (liabilities).

A typical balance sheet is reported in Figure 3.5 "Balance Sheet" for Davidson Groceries. Note that the assets are divided between current (those expected to be used or consumed within the next year) and noncurrent (those expected to remain within the company for longer than a year). Likewise, liabilities are split between current (to be paid during the next year) and noncurrent (not to be paid until after the next year). This labeling aids financial analysis because Davidson Groceries' current liabilities (\$57,000) can be subtracted from its current assets (\$161,000) to arrive at a figure often studied by interested parties known as working capital (\$104,000 in this example). The current assets can also be divided by current liabilities (\$161,000/\$57,000) to determine the company's current ratio (2.82 to 1.00), another figure calculated by many decision makers as a useful measure of short-term operating strength.

The balance sheet shows the company's financial condition on one specific date. All the other financial statements report events occurring over a period of time (often a year or a quarter). The balance sheet discloses assets and liabilities as of the one specified date.

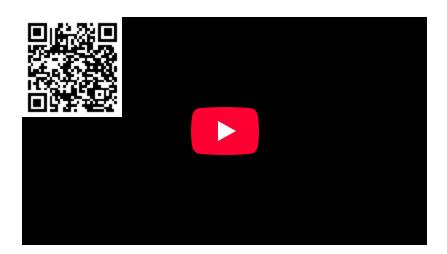
Figure 3.5 Balance Sheet

			Davi Groc Balar					
			As of 12/3	f 1/2022				
Assets					Liabilitie	es		
	Current Assets					Current	Liabilities	
		Cash	\$	22,000			Accounts Payable	\$ 48,000
		Accounts Receivable		24,000			Salaries Payable	9,000
		Inventory		103,000		Total Cu	ırrent Liabilities	\$ 57,000
		Prepaid Rent		12,000		Non-Current Liabilities		
	Total Current Assets		\$	161,000			Note Payable – Bank	\$ 300,000
	Non Current Assets						Note Payable – Finance Co	220,000
		Land	\$	210,000		Total No	on-Current Liabilities	\$ 520,000
		Equipment (Net)		155,000		Total Liabilties		\$ 577,000
		Building (Net)		680,000	Equity			
	Total Non Curren	t Assets	\$	1,045,000		Capital Stock		\$ 179,000



Total Assets	\$ 1,206,000	Retained Earnings	450,000
		Total Equity	\$ 629,000
		<b>Total Liabilities and Equity</b>	\$ 1,206,000

#### Review





Question: Considerable information is included on the balance sheet presented in Figure 3.5 "Balance Sheet". Assets such as cash, inventory, and land provide future economic benefits for a company. Liabilities for salaries, insurance, and the like reflect debts that are owed at the end of year. The \$179,000 capital stock figure indicates the amount of assets that the original owners contributed to the business. The retained earnings balance of \$450,000 was computed earlier in Figure 3.4 "Statement of Retained Earnings" and identifies the portion of the net assets generated by the company's own operations over the years. For convenience, a general term such as "stockholders' equity" or "shareholders' equity" encompasses the capital stock and the retained earnings balances.

Why does the balance sheet balance? This agreement cannot be an accident. The asset total of \$1,206,000 is exactly the same as the liabilities (\$577,000) plus the two stockholders' equity accounts (\$629,000—the total of capital stock and retained earnings). Thus, assets equal liabilities plus stockholders' equity. What creates that equilibrium?

Answer: The balance sheet will always balance unless a mistake is made. This is known as the accounting equation:

#### assets = liabilities + stockholders' equity.

Or if the stockholders' equity account is broken down into its component parts,

#### assets = liabilities + capital stock + retained earnings.

This equation stays in balance for one simple reason: assets must have a source. If a business or other organization has an increase in its total assets, that change can only be caused by (a) an increase in liabilities such as money being borrowed, (b) an increase in capital stock such as additional money being contributed by stockholders, or (c) an increase created by operations such as a sale that generates a rise in net income. There are no other ways to increase assets.



One way to understand the accounting equation is that the left side (the assets) presents a picture of the future economic benefits that the reporting company holds. The right side provides information to show how those assets were derived (from liabilities, from investors, or from operations). Because no assets are held by a company without a source, the equation (and, hence, the balance sheet) must balance.

assets = the total source of those assets

Question: The final financial statement is the statement of cash flows. Cash is so important to an organization and its financial health that a complete statement is devoted to presenting the changes that took place in that asset. As can be determined from the title, this statement provides a picture of the various ways in which the company generated cash during the year and the uses that were made of it. How is the statement of cash flows structured?

Answer: Outside decision makers place considerable emphasis on a company's ability to create significant cash inflows and then wisely apply that money. Figure 3.6 "Statement of Cash Flows" presents an example of that information in a statement of cash flows for Davidson Groceries for the year ended December 31, 2022 Note that all the cash changes are divided into three specific sections: **operating activities, investing activities, and financing activities.** 

Figure 3.6 Statement of Cash Flow

rigure 3.0 Statement of Cash Flow				
		Davidson Groceries		
		Cash Flow Statement Year Ended December 31, 2022		
Cash flows from Operating Activities				
	Cash collected from Customers		\$ 1,075,000	
	Cash paid for Inventory		(420,000)	
	Cash paid for Salaries		(208,000)	
	Cash paid for Rent		(95,000)	
	Cash paid for advertising		(81,000)	
	Cash paid for insurance		(57,000)	
	Cash paid for income taxes		(52,000)	
Total Cash Flows from Operating Ac	ctvities		\$ 162,000	
Cash flows from Investing Activities	3			
	Cash from sale of Delivery Truck		\$ 26,000	
	Cash from sale of Land		75,000	
	Cash paid for purchase of Building		(300,000)	
Total Cash Flows from Investing Act	tivities		\$ (199,000)	
Cash Flows from Financing Activities				
	Cash Paid as Dividends		\$ (100,000)	
	Cash received from borrowing	(bank loan)	120,000	
Total Cash from Financing Activities	S		\$ 20,000	
Total Change in Cash			\$ (17,000)	
		Beginning Cash		39,000
		Ending Cash		22,000



Question: In studying the statement of cash flows, a company's individual cash flows relating to selling inventory, advertising, selling land, buying a building, paying dividends, and the like can be readily identified. For example, when the statement indicates that \$120,000 was the "cash received from bank on a loan," a decision maker should have a clear picture of what happened. There is no mystery.

All the cash flows are divided into one of the three categories:

- 1. Operating activities
- 2. Investing activities
- 3. Financing activities

How are these distinctions drawn?

On a statement of cash flows, what is the difference in an operating activity, an investing activity, and a financing activity?

Answer: Cash flows listed as operating activities relate to receipts and disbursements that arose in connection with the central activity of the organization. For Davidson Groceries, these cash changes resulted from the daily operations carried out by the convenience store and include selling goods to customers, buying merchandise, paying salaries to employees, and the like. This section of the statement shows how much cash the primary function of the business was able to generate during this period of time, a figure that is watched closely by many financial analysts. Eventually, a company is only worth the cash that it can create from its operations.

Investing activities report cash flows from events that (1) are separate from the central or daily operations of the business and (2) involve a long term asset. Thus, the amount of cash collected when either equipment or land is sold is reported within this section. A convenience store does not participate in such transactions as a regular part of operations and it involves a long term asset. Cash paid to buy a building or machinery will also be disclosed in this same category. Such purchases do not happen on a daily operating basis and a long term asset is involved.

Like investing activities, the third section of this statement—cash flows from financing activities—is unrelated to daily business operations but, here, the transactions relate to either a liability or a stockholders' equity balance. Borrowing money from a bank meets these criteria as does distributing a dividend to shareholders. Issuing stock to new owners for cash is another financing activity as is payment of a noncurrent liability.

Any decision maker can review the cash flows of a business within these three separate sections to receive a picture of how company officials managed to generate cash during the period and what use was made of it. Note that the cash balances at the end match the balance sheet on the earlier balance sheet.

#### Real World Review

Podcast of financial statements from McDonalds, Inc. See how much you can already tell from the published financial statements. https://youtu.be/EGRhYxvxZB0

Go ahead and check out some other familiar company and see what you can tell from their financial statements.

#### **Key Takeaway**

The balance sheet is the only financial statement created for a specific point in time. It reports a company's assets as well as the source of those assets: liabilities, capital stock, and retained earnings. Assets and liabilities are divided between current and noncurrent amounts, which permits the company's working capital and current ratio to be computed for analysis purposes. The statement of cash flows explains how the company's cash balance changed during the year. All cash transactions are classified as falling within operating activities (daily activities), investing activities (nonoperating activities that affect an asset), or financing activities (nonoperating activities that affect either a liability or a stockholders' equity account).

#### Talking with a Real Investing Pro (Continued)

Following is a continuation of our interview with Kevin G. Burns.

*Question*: Warren Buffett is one of the most celebrated investors in history and ranks high on any list of the richest people in the world. When asked how he became so successful at investing, Buffett answered quite simply: "We read hundreds and hundreds of annual reports every year<sup>4</sup>."



Annual reports, as you well know, are the documents that companies produce each year containing their latest financial statements. You are an investor yourself, one who provides expert investment analysis for your clients. What is your opinion of Mr. Buffett's advice?

Kevin Burns: Warren Buffet—who is much richer and smarter than I am—is correct about the importance of annual reports. Once you get past the artwork and the slick photographs and into the "meat" of these reports, the financial statements are a treasure trove of information. Are sales going up or down? Are expenses as a percentage of sales increasing or decreasing? Is the company making money? How are the officers compensated? Do they own stock in the company? Are there many pages of notes explaining the financial statements?

I actually worry when there are too many pages of notes. I prefer companies that don't need so many pages to explain what is happening. I like companies that are able to keep their operations simple. Certainly, a great amount of important information can be gleaned from a careful study of the financial statements in any company's annual report.

<sup>1</sup>Liquidity refers to the ease with which assets can be converted into cash. Thus, cash is normally reported first followed by investments in stock that are expected to be sold soon, accounts receivable, inventory, and so on.

<sup>2</sup>As will be discussed in detail later in the second half of Principles of Financial Accounting, noncurrent assets such as buildings and equipment are initially recorded at cost. This figure is then systematically reduced as the amount is moved gradually each period into an expense account over the life of the asset. Thus, balance sheet figures for these accounts are reported as "net" to show that only a portion of the original cost still remains recorded as an asset. This shift of the cost from asset to expense is known as depreciation and mirrors the using up of the utility of the property. On this company's income statement—Figure 3.1 "Income Statement"—assume that depreciation for the period made up a portion of the "other" expense category.

<sup>3</sup>The cash flows resulting from operating activities are being shown here using the direct method, an approach recommended by the Financial Accounting Standards Board (FASB). This format shows the actual amount of cash flows created by individual operating activities such as sales to customers and purchases of inventory. In the business world, an alternative known as the indirect method is more commonly encountered. This indirect method will be demonstrated in detail in later accounting classes.

<sup>4</sup>See http://www.minterest.com/warren-buffet-quotes-quotations-on-investing/.

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## 3.5: End-of-Chapter Exercises

#### Questions

- 1. Why do businesses produce financial statements?
- 2. What are the four financial statements typically produced by a company?
- 3. On which financial statement would one find revenues and expenses?
- 4. What is a gain?
- 5. How does a gain differ from a revenue?
- 6. What is a loss?
- 7. How does a loss differ from an expense?
- 8. Why are revenues and expenses reported separately from gains and losses?
- 9. What three items are typically listed at the top of a financial statement?
- 10. Define "cost of goods sold."
- 11. Define "gross profit."
- 12. How do companies determine if a cost is an expense or an asset?
- 13. Define "conservatism."
- 14. Explain why dividends are not reported on the income statement.
- 15. What are retained earnings?
- 16. Define "capital stock."
- 17. On which statement would assets and liabilities be reported?
- 18. What differentiates a current asset from a noncurrent asset?
- 19. Give the accounting equation and explain why it is true.
- 20. What are the three categories of cash flows on the cash flow statement?
- 21. How do operating, investing and financing cash flows differ from one another?

#### True or False

The income statement gives company's revenues and expenses for one particular day of the year.
 An increase in net assets of a business due to the sale of its inventory is a gain.
 Retained earnings represents amounts contributed to the business by its owners.
 Assets and liabilities can be broken down into the categories of current and noncurrent.
 Income tax expense is typically reported separately from other expenses.
 Conservatism helps companies look better to potential investors.
 Dividends paid are reported on the balance sheet.
 Companies receive money each time their stock is sold on a stock exchange.
 A balance sheet should always balance.
 The statement of cash flows is broken up into operating, investing, and financing activities.
 Notes are considered part of a complete set of financial statements.
 Sales revenue less cost of goods sold is referred to as net income.
 A gain is the amount of net income earned by a company over its life less any dividends it has paid.

14. \_\_\_\_ The purpose of the balance sheet is to report the assets and liabilities of a company on a specific date.

#### **Multiple Choice**

- 1. You are the CEO of Fisher Corporation. You are very concerned with presenting the best financial picture possible to the owners of your company. Unfortunately, Fisher has a lawsuit pending at the end of the year, which could result in the company having to pay a large sum of money. On the bright side, Fisher also has business deal that might go through, which could result in the company making a large gain. The principle of conservatism would say that which of the following is true?
  - 1. Fisher should not report the potential loss related to the lawsuit.
  - 2. Fisher should report the possible gain from the business deal.
  - 3. Fisher should report the potential liability it has related to the lawsuit.
  - 4. Fisher should report the potential cash inflow it could receive from the business deal.



- 2. Henderson Inc. reports the following: assets of \$500,000, liabilities of \$350,000 and capital stock of \$100,000. What is the balance in retained earnings?
  - 1. \$450,000
  - 2. \$50,000
  - 3. \$250,000
  - 4. \$750,000
- 3. Giles Corporation borrowed money from Midwest Bank during the year. Where would this event be reported on Giles's statement of cash flows?
  - 1. Operating activities
  - 2. Investing activities
  - 3. Financing activities
  - 4. It would not be reported on the statement of cash flows.
- 4. You are considering investing in the stock of Mogul Corporation. On which of the following statements would you find information about what a company has to help it generate revenue in the future and what the company owes to others?
  - 1. Income statement
  - 2. Statement of retained earnings
  - 3. Balance sheet
  - 4. Statement of cash flows
- 5. Which of the following is not a correct representation of the accounting equation?
  - 1. Assets = Liabilities + Capital Stock + Retained Earnings
  - 2. Assets Liabilities = Owners' Equity
  - 3. Assets = Liabilities + Owners' Equity
  - 4. Assets + Liabilities = Owners' Equity

#### **Problems**

- 1. Use the following abbreviations to indicate on which statement you would find each item below. Some items may appear on more than one statement. Include all abbreviations that would apply (might be more than one).
  - IS: Income statement
  - SRE: Statement of retained earnings
  - BS: Balance sheet
  - 1. \_\_\_\_ Sales
  - 2. \_\_\_\_ Vehicles
  - 3. \_\_\_\_ Gain on sale of land
  - 4. Retained earnings
  - 5. \_\_\_\_ Utilities Expense
  - 6. \_\_\_\_ Capital stock
  - 7. \_\_\_\_ Dividends paid
  - 8. \_\_\_\_ Loss on sale of investment
  - 9. \_\_\_\_ Income tax expense
  - 10. \_\_\_\_ Net income
  - 11. \_\_\_\_ Cash
- 2. The following relate to Farr Corporation for the month of April:

Sales Revenue	\$160,000
Gain on the Sale of Land	\$15,000
Cost of Goods Sold	\$79,000
Tax Expense	\$12,000



Selling Expense	\$10,000
Dividends Paid	\$6,000
Loss on Lawsuit	\$14,000

- 1. Determine Farr's gross profit for the month of April.
- 2. Determine Farr's net income for the month of April.
- 3. If retained earnings at the beginning of April were \$1,200,000, what would retained earnings be at the end of April?
- 3. Maverick Company has the following account balances at the end of December. Show that Maverick's balance sheet would balance using the accounting equation.

Cash	\$18,000
Capital Stock	\$100,000
Inventory	\$16,000
Note Payable	\$65,000
Retained Earnings	\$39,000
Building	\$150,000
Equipment	\$20,000

- 4. Ramond Company has hired you to prepare financial statements for the year ending 12/31. On your first day of work, your assistant comes to you with several items that could be classified as expenses or could be classified as assets. Based on your knowledge of accounting so far, determine whether the following items should be recorded as an expense or an asset.
  - 1. On 12/31, Ramond paid \$14,000 to rent office space for the next twelve months.
  - 2. On 10/1, Ramond paid \$40,000 for insurance that covered the company's property for the last quarter of the year.
  - 3. On 6/1, Ramond purchased \$27,000 in supplies, all of which were used by 12/31.
  - 4. On 12/31, Ramond purchased \$5,000 worth of supplies for the coming month.
- 5. For each of the following, determine the missing balance (Hint:this will be easier if you set up the financial statement and then calculate the missing information).

1.

Net Income	\$82,900
Cost of Goods Sold	\$609,030
Advertising Expense	\$46,000
Gain/Loss on Sale of Equipment	?
Income Tax Expense	\$50,000
Sales Revenue	\$799,000

2.

Net Income	\$6,500
Retained Earnings, 12/31 End of year	\$16,200
Dividends	?



3.

4.

Retained Earnings, 1/1
Beginning of year \$12,400

Cash	\$460,000
Accounts Receivable	\$540,200
Current Assets	\$1,670,000
Inventory	?

Total Assets \$54,000

Total Liabilities \$32,000

Capital Stock \$15,000

Retained Earnings ?

6. Rescue Records needs rescuing. The downloading of songs and other media are killing its business. The owners of Rescue want to know if they made a net income or a net loss for the year ended December 31. Given the following account balances, prepare an income statement for Rescue similar to Figure 3.1 "Income Statement".

Advertising Expense	\$4,600
Salary Expense	\$25,470
Cost of Goods Sold	\$109,000
Sales Revenue	\$197,000
Income Tax Expense	\$3,800
Loss on Sale of Extra shelving units	\$4,090
Rent Expense	\$32,000

7. Your lawn care business, A Cut Above, has grown beyond your wildest dreams—to the point where you would like to buy some new equipment and hire some people to help you. Unfortunately, you don't have that kind of money sitting around, so you are applying for a loan. The bank has requested financial statements, including, of course, a balance sheet. The following are the balances you have on 5/31. Prepare a **classified** (**show current and long term**) balance sheet to submit to the bank.

Cash	\$2,400
Prepaid Insurance	\$1,400
Note Payable Due Two Years from Now (Loan from Mom)	\$5,000
Capital Stock (Money You Invested to Start Business)	\$2,000
Accounts Receivable	\$500
Supplies Inventory	\$300
Equipment, Net	\$3,000



Accounts Payable	\$300
Retained Earnings	\$300

8. Maria Sanchez, an accountant by trade, moonlights as a personal trainer. Maria is curious about her cash inflows and outflows from her personal work for the month of February. Using the following information, prepare a statement of cash flows for Maria (make sure you have all three sections of the cash flow statement).

Cash for Supplies Inventory	\$500
Cash for Advertising	\$400
Cash Paid for Equipment	\$900
Cash Received from Bank Loan	\$1,000
Cash Paid for Insurance	\$700
Cash Received from Customers	\$2,200
Cash Paid for Taxes	\$400
Cash Balance, 2/1 - beginning of the month	\$500

9. The following information was gathered for BBB, Inc. for 2023. The amounts are for the year ended December 31, 2023 or as of that date except for the Beginning Retained Earnings which is given for the beginning of 2023. Please complete an Income Statement, Statement of Owners Equity and classified Balance Sheet (there is no change in capital stock during the year).

Revenue	51,272
Cost of goods sold	37,523
Selling expenses	10,325
Beginning Retained earnings	6,372
Inventory	5,897
Accounts payable	3,894
Fixtures and equipment	4,701
Accounts Receivable	2,948
Accrued liabilities	1,571
Cash	1,125
Prepaid Expenses	1,103
Capital stock	920
Income tax expense	803
Land and buildings	766
Long-term debt	1,211



Interest expense	487
Short-term debt	557
Salaries payable	256
Dividends paid	150
Utilities expense	225

#### Research

- 1. The U.S. Securities and Exchange Commission (SEC) is a governmental organization whose mission is to protect investors and oversee capital markets. The SEC requires companies whose stock is traded on U.S. public exchanges to submit financial statements like those introduced in this chapter on a quarterly and annual basis. Anyone can access these statements using the SEC's EDGAR (Electronic Data Gathering and Retrieval) database system. This exercise will allow you to learn more about the SEC and use its database to access a company's financial statements. You can access the SEC on the Internet at <a href="http://www.sec.gov">http://www.sec.gov</a>.
  - 1. When and why was the SEC created?
  - 2. Name the main divisions of the SEC and briefly explain their function.
  - 3. From the home page, select "Forms and Filings (EDGAR)." Select "search for company filings." Select "companies and other filers." In the box beside "company name," enter the name or part of the name of a company about which you are interested in learning more. You should see a long list of strange letters and numbers like 8-K and 10-K. These designate the type of filing the company has made. Scroll down until you come to a 10-K filing. This is the annual report of the company. Select html and then select the document next to 10-K. Scroll down to the table of contents and select item 8. These are the company's financial statements. Which financial statements do you see?

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# **CHAPTER OVERVIEW**

## 4: Why Should Decision Makers Trust Financial Statements?

- 4.1: The Need for the Securities and Exchange Commission
- 4.2: The Role of the Independent Auditor in Financial Reporting
- 4.3: Performing an Audit
- 4.4: The Need for Internal Control
- 4.5: The Purpose and Content of an Independent Auditor's Report
- 4.6: Accounting ethics
- 4.7: End-of-Chapter Exercises

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## 4.1: The Need for the Securities and Exchange Commission

#### **Learning Objectives**

At the end of this section, students should be able to meet the following objectives:

- 1. Understand the reasons that financial statements might not be fairly presented.
- 2. Describe the mission of the Securities and Exchange Commission (SEC).
- 3. Explain the purpose of the EDGAR (Electronic Data Gathering and Retrieval) system.
- 4. Discuss the times when state laws apply to corporate securities rather than the rules and regulations of the SEC.
- 5. Explain the relationship of the SEC and the Financial Accounting Standards Board (FASB).

Question: The potential importance of financial statements to any person making an analysis of a business or other organization appears rather obvious. The wide range of available information provides a portrait that reflects the company's financial health and potential for future success. However, a degree of skepticism seems only natural when studying such statements because they are prepared by the company's own management.

Decision makers are not naïve. They must harbor some concern about the validity of data that are self-reported. Company officials operate under pressure to present good results consistently, period after period. What prevents less scrupulous members of management from producing fictitious numbers just to appear profitable and financially strong?

Why should anyone be willing to risk money based on financial statements that the reporting entity itself has created?

Answer: The possible presence of material misstatements (either accidentally or intentionally) is a fundamental concern that should occur to every individual who studies a set of financial statements. Throughout history, too many instances have arisen where information prepared by a company's management has proven to be fraudulent causing decision makers to lose fortunes. In fact, the colorful term "cooking the books" reflects the very real possibility of that practice. Theranos, Lehman Brothers, and Madoff Investment Securities are just a few examples of recent and wide-ranging scandals.

The potential for creating misleading financial statements that eventually cause damage to both investors and creditors is not limited to current times and devious individuals. Greed and human weakness have always rendered the likelihood of a perfect reporting environment virtually impossible. In addition, fraud is not the only cause for concern. Often a company's management is simply overly (or occasionally irrationally) optimistic about future possibilities. That is also human nature. Therefore, financial information should never be accepted blindly.

Over the decades, numerous laws have been passed in hopes of creating a system to ensure that distributed financial statements are a fair representation of the underlying organization they profess to report. This is an objective that governments take seriously. Under capitalism, the financial health of the economy depends on the ability of worthy businesses to gain external financing for both operations and expansion. Without trust in the financial reporting process, raising large monetary amounts becomes difficult, if not impossible. As has been seen in recent times, hesitancy on the part of investors and creditors restricts the growth of companies and undermines the strength of the entire economy.

In the United States, ultimate responsibility for the availability of complete and reliable information about every organization that issues publicly traded securities<sup>2</sup> lies with the Securities and Exchange Commission (SEC). The SEC is an independent agency within the federal government established by the Securities Exchange Act of 1934. Its mission "is to protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation."

Virtually all U.S. companies of any significant size—as well as many foreign companies—fall under the jurisdiction of the SEC because their securities are traded publicly within the United States. Financial statements and other formal filings have to be submitted regularly to the SEC by these companies so that they can then be made available to the public through a system known as EDGAR (Electronic Data Gathering and Retrieval). All such statements and other released information must conform to the rules and regulations of the SEC. The SEC can also enforce accounting rules by suing those businesses that it believes are not providing appropriate financial information and impose fines and other sanctions on individuals and companies that provide misleading information.

Companies that do not issue even a minimum amount of securities to the public normally are required to comply with state laws rather than with the SEC and federal laws. Financial statements for such companies, although not as likely to be public information, are often required by financial institutions and other interested parties. For example, a bank might insist that a local convenience



store include financial statements as part of a loan application. The form and distribution of that financial information must conform to state laws (often referred to as "blue sky laws").

Question: Companies such as General Electric or Starbucks that issue securities to the public are required to satisfy all applicable federal laws and regulations. The SEC has authority over the amount and nature of the information that must be provided and the actions that can be taken by both the buyer and the seller of the securities. Does the SEC develop the specific accounting principles to be followed in the production of financial statements that are issued by public companies?

Answer: Legally, the SEC has the ability to establish accounting rules for all companies under its jurisdiction simply by stating that certain information must be presented in a particular manner in the public filings that it requires. However, the SEC has opted to leave the development of authoritative accounting principles to FASB, which is a private (nongovernment) organization<sup>5</sup>. This decision has, at times, been controversial. Some view it as an abdication of an important responsibility by the federal government. The assumption underlying this decision by the SEC is that the members of FASB can be trusted to study each issue meticulously before arriving at a reasoned resolution.

Thus, FASB produces accounting rules to be applied by all for-profit and not-for-profit organizations in the United States. State and local governments follow accounting standards produced by the Governmental Accounting Standards Board (GASB). In July, 2009, FASB Accounting Standards Codification was released to serve as the single source of authoritative nongovernmental U.S. generally accepted accounting principles (U.S. GAAP). As a result, all the previous individual rules that had been created over the decades were reclassified into a more logical framework. According to a FASB news release, "The Codification reorganizes the thousands of U.S. GAAP pronouncements into roughly 90 accounting topics and displays all topics using a consistent structure. It also includes relevant Securities and Exchange Commission (SEC) guidance that follows the same topical structure in separate sections in the Codification."

Groups other than FASB also contribute to accounting standards but in a much less significant fashion. The most important of these is the Emerging Issues Task Force (EITF), which was created in 1984 to assist FASB<sup>8</sup>. The EITF examines new problems when they initially arise in hopes of coming to quick agreement as to an appropriate method of reporting based on existing U.S. GAAP. Thus, the EITF is not forming U.S. GAAP as much as helping to apply it to newly created situations. If consensus is achieved (that is, no more than three members object), the conclusions rendered by the EITF are considered to be authoritative until such time—if ever—as FASB provides its own formal guidance. In this way, FASB does not have to issue hasty pronouncements to resolve every unique reporting concern when it first appears.

The SEC itself is not totally absent from the formation of U.S. GAAP. It occasionally issues guidelines to ensure that adequate information is being disclosed to the public through its own rules and interpretive releases. That is especially true in situations where reporting concerns have emerged and adequate official guidance does not exist. The SEC tends to restrict its own power over financial reporting to those areas where U.S. GAAP—for whatever reason—has not yet been well constructed. Assume, for example, that a new type of transaction arises and the EITF is unable to arrive at a consensus resolution. The SEC might specify relevant data to be included in the notes to financial statements or could prohibit certain methods of reporting until FASB had the opportunity to provide a studied ruling.

#### **Check Yourself**

While the SEC has been given the responsibility by Congress to protect investors from misleading financial information, the SEC has generally done which of the following?

- A. Delegate the setting and changing of accounting rules to the Financial Accounting Standards Board.
- B. Delegate the setting and changing of accounting rules to the American Institute of Certified Public Accountants.
- C. Leave the enforcement of accounting rules to the Financial Accounting Standards Board.
- D. Required accountants to get a license from the SEC that allows them to provide financial information.

The correct answer is A. While the SEC still has the authority and governmental authority to set and enforce accounting rules, they have for the most part allowed the FASB to set the rules with oversight by the SEC.

#### Key Takeaway

The U.S. economy depends on the willingness of investors and creditors to risk their hard-earned financial resources by conveying it to organizations. Financial statements play an important role in providing the information that allows such decisions to be made. However, accounting scandals periodically remind all parties that fraud is possible in the financial reporting process. In the United



States, the Securities and Exchange Commission (SEC) is responsible for the fair distribution of information by companies with publicly traded securities. The EDGAR system makes this information readily available. State laws apply to all other organizations. In hopes of creating a well-developed system of considered accounting principles, the SEC has chosen to allow FASB to set U.S. GAAP. The SEC typically only becomes involved with the creation of accounting rules (usually limited to disclosure of information) when current standards are found to be unclear or incomplete.

<sup>1</sup>Although often viewed as a relatively recent linguistic creation, variations of the term "cooking the books" had already been in use for over one hundred years when Tobias Smollett included the following phrase in his book *The Adventures of Peregrine Pickle*, first published in 1751: "Some falsified printed accounts, artfully cooked up, on purpose to mislead and deceive." Even over 250 years later, those words aptly describe accounting fraud.

<sup>2</sup>For this introductory textbook, a security will include ownership shares of a company as well as debt instruments that can be sold from one party to another. A debt instrument is a promise to pay a stated amount plus a specified rate of interest at a particular point in time.

<sup>3</sup>See http://www.sec.gov.

<sup>4</sup>Considerable information on accessing the financial data filed with the SEC can be found at <a href="http://www.sec.gov/edgar.shtml">http://www.sec.gov/edgar.shtml</a>. Any student considering a career in financial analysis or the like should visit this site to become familiar with its contents, especially the tutorial, so that the EDGAR system can be used to gain information provided by publicly traded companies.

<sup>5</sup>As mentioned in Chapter 2 "What Should Decision-makers Know So That Good Decisions Can Be Made about an Organization?", the process of switching authority from U.S. GAAP to International Financial Reporting Standards (IFRS) appears to be at its inception. The SEC has played a major role in this ongoing development and will certainly continue to do so over the next several years.

<sup>6</sup>State and local governments follow accounting standards produced by the Governmental Accounting Standards Board (GASB). Information can be found at <a href="http://www.gasb.org">http://www.gasb.org</a>.

<sup>7</sup>News release by FASB, July 1, 2009.

<sup>8</sup>In Chapter 2 "What Should Decision-makers Know So That Good Decisions Can Be Made about an Organization?", http://www.fasb.org was mentioned as an excellent source of information about FASB. Another tab available at this Web site discusses the role of the EITF.

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# 4.2: The Role of the Independent Auditor in Financial Reporting

## **Learning Objectives**

At the end of this section, students should be able to meet the following objectives:

- 1. Understand the purpose of an independent audit.
- 2. List the two primary components of an independent audit.
- 3. Explain the function of an independent audit firm.
- 4. Describe the steps required to become a Certified Public Accountant (CPA).
- 5. List the various services provided by many public accounting firms.
- 6. Discuss the necessity for the creation of the Public Company Accounting Oversight Board (PCAOB) and describe its function.

Question: The SEC allows FASB to set U.S. GAAP. Does the SEC physically visit each company that issues securities to the public to ensure that periodic financial statements properly follow the rules and guidelines of U.S. GAAP?

Answer: A detailed examination of the financial statements produced by thousands of publicly traded companies around the world would require a massive work force with an enormous cost. Therefore, this very essential role in the financial reporting process has been left by the SEC to auditing (also known as public accounting) firms that operate both inside and outside the United States. Before submitting their statements to the SEC and then to the public, reporting companies such as IBM and Wells Fargo must hire one of these independent auditing organizations to

- perform an **audit** (examination) of the financial statements,
- report on whether sufficient supporting evidence was gathered to enable the auditor to provide reasonable assurance that the statements are presented fairly because they contain no material misstatements according to U.S. GAAP.

This written report by the company's independent auditor is then attached to the financial statements for all to see. The report is essential to the integrity of the reporting process. It provides the auditor's expert opinion as to whether decision makers should feel safe in relying on the financial information to make their decisions. The report is a legal requirement for statements provided to the SEC. Even many companies that are not affected by the rules of the SEC have their statements audited by an independent firm to enhance credibility. For example, a convenience store seeking a bank loan could pay for an audit in hopes of increasing the chances that the application will be approved (or because bank officials have required the audit for the bank's own protection).

Not surprisingly, companies that have audits are able to get loans at lower interest rates than comparable organizations that do not have their financial statements subjected to examination (Blackwell, et. al., 1998). The audit serves to reduce the lender's risk of loss. Thus, a lower interest rate is needed to convince banks and other institutions to provide financial resources.

In the United States, **independent auditing firms** can only be operated by individuals who have been formally recognized by a state government as **Certified Public Accountants (CPAs)**. Such firms range in size from massive (KPMG employs over 227,000 individuals working in 147 countries and generated annual revenues of approximately \$29.2 billion for the year ended September 30, 2020<sup>2</sup>) to organizations comprised of just one or two people.

Obviously, for the financial statements of the biggest clients (the ExxonMobils and Wal-Marts of the world), only a public accounting firm of significant size could effectively perform an audit engagement. Consequently, four firms (known collectively as the **Big Four**) are truly huge global organizations:

- Deloitte
- Ernst & Young
- KPMG
- PricewaterhouseCoopers

However, thousands of smaller independent CPA firms exist providing numerous services, such as **audit, tax planning and preparation**, and **advisory work** for a wide range of clients. Ernst & Young indicates on its Web site (http://www.ey.com) that the following services are provided to its clients with each explained in detail: consulting, assurance, tax and transaction/corporate finance.

Check Yourself

A financial audit is performed by a certified public accountant as required by the SEC and its purpose is to:



- A. Recommend an investor buy stock in a particular company.
- B. Indicate whether or not the company will be hiring more employees in the near future.
- C. Check to see if the company's stock price will be going down over the next year.
- D. Provide an opinion as to whether the company is following GAAP appropriately.

The correct answer is D. The independent auditor's role is to enhance the credibility of the financial statements and indicate that they show what is actually happening with the business according to GAAP. They are not to recommend or provide any opinion on the stock price or future of the company.

Question: FASB creates U.S. GAAP, the official standards for the preparation of financial statements. What group sets the examination and reporting rules to be followed by independent auditors? Their work is not in accordance with accounting principles. Instead, they are seeking to determine whether U.S. GAAP was applied properly. These auditing firms clearly provide a vital service by adding credibility to reported financial information. How do independent auditors know what actions should be taken in assessing the data reported by a company such as Uber or Bank of America?

Answer: When an audit is performed on the financial statements of any organization that issues securities to the U.S. public, the examination and subsequent reporting is regulated by the **Public Company Accounting Oversight Board (PCAOB)**. The PCAOB was brought into existence by the U.S. Congress through the Sarbanes-Oxley Act of 2002, a measure passed in response to a number of massive accounting scandals, including Enron and WorldCom. Members of Congress apparently felt that the auditing profession had failed to provide adequate protection for the decision makers who were relying on published financial information. Consequently, the federal government became more involved. The PCAOB was established under the oversight and enforcement authority of the SEC. It holds wide-ranging powers that include the creation of official guidelines for the performance of a proper audit. Its mission is stated as follows: "The PCAOB is a private-sector, nonprofit corporation, created by the Sarbanes-Oxley Act of 2002, to oversee the auditors of public companies in order to protect the interests of investors and further the public interest in the preparation of informative, fair, and independent audit reports."

If an audit is performed on financial statements that are produced by an organization that does not issue securities to the public, the PCAOB holds no authority. For such smaller engagements, the **Auditing Standards Board (ASB)** officially sets the rules for an appropriate audit. The ASB is a technical committee within the **American Institute of Certified Public Accountants (AICPA)**, a national professional organization of CPAs.

A local convenience store, as mentioned previously, or a medical practice or law firm might choose to have an audit on its financial statements. These audits fall under the guidelines provided by the ASB rather than the PCAOB because the organizations do not issue publicly traded securities. Thus, the rules for performing an audit on a large public company can differ somewhat from those applied to a smaller private one.

Question: If FASB sets U.S. GAAP and the PCAOB (and the ASB) establishes rules for performing an audit, what function does the SEC actually serve?

Answer: The goal of the work done by the SEC is summed up in the following statement from its Web site: "The laws and rules that govern the securities industry in the United States derive from a simple and straightforward concept: all investors, whether large institutions or private individuals, should have access to certain basic facts about an investment prior to buying it, and so long as they hold it."

Thus, the SEC strives to make certain that the organizations that fall under its jurisdiction are in total compliance with all laws so that decision makers have ready access to information viewed as relevant. It reviews the required filings submitted by each organization to ensure that the rules and regulations are followed. The SEC also has the power to enforce securities laws and punish companies and individuals who break them. (The FASB has no enforcement power – it only sets the rules but cannot punish those who break them). For example, if a company fails to disclose a significant transaction or other event that the SEC believes is necessary, trading of that company's securities can be halted until the matter is resolved. Such regulatory actions can cause a huge financial loss for a business; thus, compliance is viewed as vital.

In addition, if corporate officials provide false or misleading data, fines and jail time are also possible: "The Securities and Exchange Commission recently charged Silicon Valley-based private company Theranos Inc., its founder and CEO Elizabeth Holmes, and its former President Ramesh "Sunny" Balwani with raising more than \$700 million from investors through an elaborate, years-long fraud in which they exaggerated or made false statements about the company's technology, business, and financial performance. "As a result of Holmes' alleged fraudulent conduct, she is paying \$500,000 in fines, being stripped of



control of the company she founded, is returning millions of shares to Theranos, and is barred from serving as an officer or director of a public company for 10 years," said Stephanie Avakian, Co-Director of the SEC's Enforcement Division.<sup>5</sup>

#### **Check Yourself**

Providing rules for the auditing process and making sure they are followed is the charge of which institution?

- A. FASB
- B. PCAOB
- C. GAAP
- D. IFRS

The correct answer is B. For those auditing publicly traded companies, the Public Company Accounting Oversight Board sets the rules to be followed during the audit and performs inspections of auditors to promote compliance with those rules. For non publicly traded companies the rules are set by the Auditing Standards Board of the AICPA.

#### Key Takeaway

Independent auditing firms provide credibility to financial statements by examining the evidence that underlies the information provided and then reporting on those findings. Official oversight of the rules for this process is in the hands of the Public Company Accounting Oversight Board (PCAOB) if the audited company issues securities to the public and the Auditing Standards Board (ASB) if not. The role of the Securities and Exchange Commission (SEC) is to ensure that this reporting process is working as intended by the government. The SEC examines the filings of the various companies and can take disciplinarian action if either the company or its officials fail to act appropriately.

<sup>1</sup>The rules for becoming a CPA vary by state but usually include a specific amount and level of education as well as a passing grade on each of the four parts of the uniform CPA Exam. Some states also require a defined length of practical experience such as one or two years. Information about the CPA Exam and state requirements for applying are available at <a href="http://www.cpa-exam.org">http://www.cpa-exam.org</a>.

<sup>2</sup>See http://www.kpmg.com as of Sept 30, 2020.

#### References

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<sup>&</sup>lt;sup>3</sup>See http://www.pcaob.com.

<sup>&</sup>lt;sup>4</sup>See http://www.sec.gov.

<sup>&</sup>lt;sup>5</sup>www.sec.gov/news/press-release/2018-41



# 4.3: Performing an Audit

## **Learning Objectives**

At the end of this section, students should be able to meet the following objectives:

- 1. Describe the goal of an auditor in examining an account balance.
- 2. List audit tests that might be performed on an account receivable total.
- 3. Understand the reason that an independent auditor only provides reasonable assurance and not absolute assurance.

Question: A company is preparing a set of financial statements for the most recent year. It has hired an independent firm of CPAs to audit those statements and provide a report that will be attached to them. Perhaps this action is required of the company by the SEC or maybe by a local bank or other lender. What work does an independent auditor perform in examining a set of financial statements? The audit firm seeks to provide reasonable assurance to decision makers that these statements are presented fairly and, thus, contain no material misstatements according to U.S. GAAP. How is the auditor able to gain the evidence needed to make that assertion?

Answer: An independent audit is an elaborate and complicated activity that often requires scores of experienced CPAs many months to complete. A basic understanding of the audit process is best achieved through one or more upper-level college courses as well as years of practical experience. Thus, coverage here must, by necessity, be rather superficial.

The numbers found on a set of financial statements do not appear by magic. For example, if receivables are disclosed on a balance sheet as \$12.7 million, a legitimate reason has to exist for reporting that particular figure. In preparing statements, company accountants should document how each balance was derived and why it is considered appropriate according to U.S. GAAP. The statements are the representation of the company; thus, the **burden of proof** is on that organization and its officials. The independent auditors then examine the available evidence to determine whether reliance on the reported information is advised.

As a simple illustration, assume that a business presents a list of one thousand customers and claims that the total amount due from them is \$12.7 million. This figure is reported for "accounts receivable" under the asset section of the company's year-end balance sheet. The independent audit firm seeks to accumulate sufficient, competent evidence to substantiate that this balance is not materially misstated in accordance with U.S. GAAP.

For these receivables, the auditor could carry out several testing procedures to gain the assurance needed. Such techniques might include the following:

- Add up the individual account balances to ascertain that the total really is \$12.7 million (computer can do this).
- Examine sales documents (including shipment verification) for a sample of individual customers to determine that the amounts sold are equal to the figures listed within the receivable. For example, if the sales document indicates that Mr. A bought goods at a price of \$1,544 is that same dollar amount found in the company's receivable balance?
- Examine cash receipts documents for a sample of customers to ensure that no unrecorded payments were collected prior to the end of the year. If Mr. A paid cash of \$1, 544 on December 30, was the corresponding receivable balance reduced by that amount prior to the end of the year?
- Contact a sample of the customers directly to confirm that the balance shown is, indeed, appropriate. A letter or other correspondence that asks: "Mr. A: Company records show that you owe \$1,544. Is that amount correct?"

Through these and other testing procedures, the auditor hopes to ascertain that \$12.7 million is a fairly presented amount for this asset account. All other reported balances are also examined during the independent audit. The quantity and type of audit testing varies considerably based on the nature of the account. Looking at \$12.7 million in receivables requires different steps than investigating a building bought for that same amount. Not surprisingly, large balances often require especially extensive testing. In addition, certain accounts (such as cash or inventory) where the risk of misstatement is particularly high draw particular attention from the independent auditors.

If the auditor eventually concludes that sufficient evidence has been obtained to reduce the risk of a material misstatement in the financial statements to an acceptably low level, an audit report can be issued with that opinion. Assuming no problems were encountered, reasonable assurance is provided by the independent auditor to decision makers that the statements are presented fairly and, thus, contain no material misstatements according to U.S. GAAP.



As mentioned, the independent auditor's report is then attached to the financial statements. Upon reading this report, investors and creditors should feel confident relying on the information provided by those statements to make financial decisions about the organization.

#### **Check Yourself**

For each amount reported on the financial statements, which of the following is a quick summary of the audit process?

- A. The auditors provide the amount and the company managers verify it by checking the evidence.
- B. The company managers report the amounts and evidence to back it up with the auditor checking that evidence.
- C. The auditor goes to suppliers and customers outside the company to obtain the amounts on the financial statements.
- D. The auditor simply adds all the amounts provided by the company to see if they add up to the correct totals.

The correct answer is B. All of the financial statement amounts are the responsibility of company management. They provide the amounts and the evidence to prove the amounts are as close as possible. The auditor's role is to examine that evidence and evaluate whether it is sufficient to show that the amounts do not include any material misstatements.

Question: One aspect of the audit process seems particularly puzzling. The independent auditor merely provides reasonable assurance. The risk that a material misstatement is included in the accompanying financial statements is only reduced to a low level and not to zero. Why do decision makers who may be risking significant amounts of money not insist on absolute and complete assurance? Because of the potential for financial loss, decision makers surely must want every possibility of incorrect reporting to be eliminated by the work of the independent auditor. Is reasonable assurance that no material misstatements are present truly adequate for decision makers who must rely on a set of financial statements for information?

Answer: Independent auditors provide reasonable assurance but not absolute assurance that financial statements are presented fairly because they contain no material misstatements according to U.S. GAAP. A number of practical reasons exist as to why the assurance level is limited in this manner.

First, many of the figures found on any set of financial statements are no more than estimations. Auditors do not possess reliable crystal balls that allow them to predict the future. The uncertainty inherent in these estimations immediately eliminates the possibility for absolute assurance. For example, reporting the amount of cash that will be collected from a large group of accounts receivable is simply a carefully considered guess. It is presented according to U.S. GAAP but it is still an estimate.

Second, organizations often take part in so many transactions during a period that uncovering every potential problem or issue is impossible. Usually, in analyzing most account balances, the auditor only has time to test a sample of the entries and adjustments. Without examining every individual event, absolute assurance is not possible. Material misstatements can always be missed if less than 100 percent of the transactions are tested.

Third, an independent auditor visits a company for a few weeks or months each year to carry out testing procedures. Company officials who want to hide financial problems are sometimes successful at concealment. Auditors can never be completely certain that they have not been victimized by an elaborate camouflage scheme perpetrated by management. Thus, they are not comfortable providing absolute assurance.

Fourth, informed decision makers should understand that independent auditors can only provide reasonable assurance. Through appropriate testing procedures, risk of a material misstatement is reduced to an acceptably low level but not eliminated entirely. Investors and creditors need to take that limitation into consideration when assessing the financial health and future well being of an organization presented through a set of financial statements. Although the risk is small, their decisions should factor in the level of uncertainty that is always present.

## **Check Yourself**

There is no possible way that auditors could check each and every transaction to verify the evidence provided without taking too long to give their opinion. Thus the strategy is generally to do what?

- A. Not check any transactions just check the addition and subtraction on the financial statements.
- B. Ask employees of the company to check the transactions for them.
- C. Only check transactions for one month out of the year.
- D. Review a random sample of transactions to verify the evidence provided.



The correct answer is D. A truly random sample of transactions will generally uncover problems in the amounts and recording of transactions even though there is still a risk that it could be missed. Recent developments is artificial intelligence and other automated auditing tools are beginning to allow auditors to actually check every transaction without slowing down the audit process.

## **Key Takeaway**

Financial statements are the product of company management. An independent auditing firm performs extensive testing of the balances and disclosure reported. Auditors seek to obtain sufficient evidence that the statements are presented fairly because no material misstatements are present according to U.S. GAAP. When the risk of a material misstatement has been reduced to an acceptably low level, reasonable assurance can be provided. Thus, decision makers can feel safe using the information. Absolute assurance is not humanly possible because all statements contain many estimations and the auditors do not have time (or the need) to examine every transaction. Management can, in some cases, also conceal problems from the auditors. Thus, decision makers need to understand that only reasonable assurance of no material misstatements is possible when examining a set of financial statements.

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## 4.4: The Need for Internal Control

## **Learning Objectives**

At the end of this section, students should be able to meet the following objectives:

- 1. Define "internal control."
- 2. Explain a company's need for internal control policies and procedures
- 3. Describe the effect that a company's internal control has on the work of the independent auditor.
- 4. Identify and apply internal control principles to business situations

Question: In the previous discussions, the role of the independent auditor is described as adding credibility to financial statements. The reported figures, though, are still the responsibility of management. How do a company and its officials make certain that the information displayed in a set of financial statements is fairly presented?

Companies like Alphabet (Google) and Bath and Body Works participate in millions of transactions in hundreds geographically distant locations. Working with that amount of data, gathered from around the world, can be a daunting technological challenge. Some organizations are able to accumulate massive quantities of information with few—if any—problems; others seem to be overwhelmed by the task. The reliability of the numbers gathered for reporting purposes impacts the amount and type of testing that the independent auditor considers necessary. How do companies make certain that their own information is free of material misstatements?

Answer: The human body is made up of numerous systems that perform specific tasks, such as the breathing of air, the circulation of blood, and the digestion of food. Organizations operate in much the same manner. Systems are designed and set in place by management to carry out essential functions, such as paying employees, collecting cash from customers, managing inventory levels, and monitoring receivable balances. Within each system, individuals are charged with performing specific tasks, often in a preordained sequence. For example, a cash payment received electronically from a customer should be handled in a set way every time that it occurs to ensure that it is properly recorded and protected from theft.

To be efficient and effective, these systems must be carefully designed and maintained. They need to keep company assets secure at a minimum cost. In addition, appropriate record keeping is a required aspect of virtually every system. Thus, employees are properly paid when their salary comes due, but also adequate documentation is maintained of the amounts distributed. The entire function is performed according to company guidelines and a record is maintained.

Well-designed systems generate information that poses a reduced threat of material misstatements. However, simply having systems in place—even if they are properly engineered and constructed—is not sufficient to guarantee both the effectiveness of the required actions and the reliability of the collected data. Thus, extra procedures are built into every system by management to help ensure that every operation is performed as intended and the resulting financial data are reliable. All the redundancies added to a system to make certain that it functions properly are known collectively as **internal control**. For example, a rule requiring two designated employees to sign any check for over \$5,000 (or some other predetermined amount) is part of a company's internal control. There is no inherent necessity for having a second signature; it is an added safeguard included solely to minimize the chance of theft or error. All actions like this comprise a company's internal control.

Internal control policies and procedures can be found throughout the various systems of every company.

- One person calculates payroll amounts and a second verifies the amounts.
- One person requests the purchase of an asset and a second authorizes the request.

Internal control is made up of all the procedures that are performed purely to help make certain that each system operates as intended. Systems cannot be considered well designed without the inclusion of adequate internal control. Management is responsible for the development of effective systems but also for all the internal control rules and requirements to ensure that these systems accomplish their stated objectives.

Question: If a company creates and then maintains good operating systems with appropriate internal control, the financial information that is produced is less likely to contain material misstatements. In performing an audit, is the work of the independent



CPA affected by the company's internal control? Does the quality of internal control policies and procedures impact the amount and type of audit testing?

Answer: As a preliminary step in an audit examination, the CPA gains an understanding of the internal control procedures included within each of these systems that relate to reported financial accounts and balances<sup>1</sup>. The auditor then makes an evaluation of the effectiveness of those policies and procedures. In cases where internal control is both well designed and appears to be functioning as intended, a reduction is possible in the amount of audit testing that is needed. The likelihood of a material misstatement is reduced by the company's own internal control.

To illustrate, assume that a company claims to hold accounts receivable totaling \$12.7 million. The auditor plans to confirm one hundred of the individual balances directly with the customers to substantiate the separate amounts listed in the accounting records. A letter will be written to each of these individuals asking them whether the specified balance is correct. A stamped return envelope will be included.

Although effective, this confirmation process is slow and expensive. During the year, the reporting company applied several internal control procedures within those systems that maintain the receivables balances. These controls are evaluated by the independent CPA and judged to be excellent. As a result, the auditor might opt to confirm only thirty or forty individual accounts rather than the one hundred that had originally been determined. Because of the quality of internal control in the receivable area, the risk of a material misstatement is already low. Less audit testing is necessary.

Thus, at the beginning of an independent audit, the design of the reporting company's internal control and the effectiveness of its procedures are assessed. Only then does the auditor start to seek sufficient evidence to substantiate that each account balance is presented fairly because no material misstatements are included according to U.S. GAAP.

Question: Besides having fairly presented financial statements, what other reasons do companies have to implement a system of internal control? How big is the problem of fraud in business?

#### https://youtu.be/Tb6QX9Yy1GM

Internal controls are designed to reduce the opportunity for fraud as shown in the video clip above.

Question: What principles do companies use to help to determine an appropriate system of internal control to combat fraud and prevent misstated financial statements?

In 1992 the Committee of Sponsoring Organizations (COSO), first released its Internal Control-Integrated Framework and an updated version in 2013.

COSO was organized in 1985 to sponsor the National Commission on Fraudulent Financial Reporting, an independent private-sector initiative that studied the causal factors that can lead to fraudulent financial reporting. It also developed recommendations for public companies and their independent auditors, for the SEC and other regulators, and for educational institutions.

The National Commission was sponsored jointly by five major professional associations headquartered in the United States: the American Accounting Association (AAA), the American Institute of Certified Public Accountants (AICPA), Financial Executives International (FEI), The Institute of Internal Auditors (IIA), and the National Association of Accountants (now the Institute of Management Accountants [IMA]). Wholly independent of each of the sponsoring organizations, the Commission included representatives from industry, public accounting, investment firms, and the New York Stock Exchange.

COSO's standards have achieved broad acceptance around the world as principles that lead to a quality system of internal control. In the executive summary of COSO's updated framework the following are given as Components of Internal Control. Each of them is interrelated with the others.

#### **Control Environment**

The control environment is the set of standards, processes, and structures that provide the basis for carrying out internal control across the organization. The board of directors and senior management establish the tone at the top regarding the importance of internal control including expected standards of conduct. Management reinforces expectations at the various levels of the organization. The control environment comprises the integrity and ethical values of the organization; the parameters enabling the board of directors to carry out its governance oversight responsibilities; the organizational structure and assignment of authority and responsibility; the process for attracting, developing, and retaining competent individuals; and the rigor around performance measures, incentives, and rewards to drive accountability for performance. The resulting control environment has a pervasive impact on the overall system of internal control.

## Risk Assessment



Every entity faces a variety of risks from external and internal sources. Risk is defined as the possibility that an event will occur and adversely affect the achievement of objectives. Risk assessment involves a dynamic and iterative process for identifying and assessing risks to the achievement of objectives. Risks to the achievement of these

objectives from across the entity are considered relative to established risk tolerances. Thus, risk assessment forms the basis for determining how risks will be managed.

A precondition to risk assessment is the establishment of objectives, linked at different levels of the entity. Management specifies objectives within categories relating to operations, reporting, and compliance with sufficient clarity to be able to identify and analyze risks to those objectives. Management also considers the suitability of the objectives for the entity. Risk assessment also requires management to consider the impact of possible changes in the external environment and within its own business model that may render internal control ineffective.

#### **Control Activities**

Control activities are the actions established through policies and procedures that help ensure that management's directives to mitigate risks to the achievement of objectives are carried out. Control activities are performed at all levels of the entity, at various stages within business processes, and over the technology environment. They may be preventive or detective in nature and may encompass a range of manual and automated activities such as authorizations and approvals, verifications, reconciliations, and business performance reviews. Segregation of duties is typically built into the selection and development of control activities. Where segregation of duties is not practical, management selects and develops alternative control activities.

#### **Information and Communication**

Information is necessary for the entity to carry out internal control responsibilities to support the achievement of its objectives. Management obtains or generates and uses relevant and quality information from both internal and external sources to support the functioning of other components of internal control. Communication is the continual, iterative process of providing, sharing, and obtaining necessary information. Internal communication is the means by which information is disseminated throughout the organization, flowing up, down, and across the entity. It enables personnel to receive a clear message from senior management that control responsibilities must be taken seriously. External communication is twofold: it enables inbound communication of relevant external information, and it provides information to external parties in response to requirements and expectations.

## **Monitoring Activities**

Ongoing evaluations, separate evaluations, or some combination of the two are used to ascertain whether each of the five components of internal control, including controls to effect the principles within each component, is present and functioning. Ongoing evaluations, built into business processes at different levels of the entity, provide timely information. Separate evaluations, conducted periodically, will vary in scope and frequency depending on assessment of risks, effectiveness of ongoing evaluations, and other management considerations. Findings are evaluated against criteria established by regulators, recognized standard-setting bodies or management and the board of directors, and deficiencies are communicated to management and the board of directors as appropriate.

Internal Control — Integrated Framework • © 2013 Committee of Sponsoring Organizations of the Treadway Commission (COSO).

Question: What do these principles of internal control look like in practice for employees?

Chances are very high that either at work or in your interactions with businesses you have encountered internal controls – perhaps without realizing it. Let's consider an example and how it illustrates the internal control. Lets say you are checking out or returning an item at a store. Once in a while, the person helping you has to call over a manager or assistant manager to put in a code or use their key to complete the transaction. So what you just observed is that the store did a risk assessment with regard to the process of returning an item or cancelling an item on the register and they determined that there was an unacceptably high risk that the transaction could be done incorrectly or where the employee by themselves could take assets (cash being the riskiest asset). Once the risk has been identified, then control procedures were put in place. The manager coming to use their code or key is an example of authorization/approval – it has to be someone other than the creator of the transaction to be a good internal control. The cash register or the technology enforces the authorization meaning it keeps the transaction going forward without authorization. If the employee knew the manager's code or had their key then the employee could do two parts of the job and there would not be segregation of duties. How does the employee know to call over the manager for the authorization? While we do not see that part, we can assume that the procedure is part of a training manual reviewed with the employee somewhere. That is the information and communication piece. The technology probably helps with monitoring by keeping track of each time the override is done and by whom. This could be reviewed by the store manager to make sure that the internal control is operating and to see if there are any patterns or anomalies that may indicate a problem with the system. Store cameras could also be used to monitor the



application of this internal control. Of course, if no one looks at the report or the video surveillance then monitoring is not being included in the control system.

#### You can probably think of other examples you have seen at work or in business like:

Expense reports must be authorized by a supervisor or higher (depending on the amount) before an employee is reimbursed – shows authorization and segregation of duties and required documentation

Employee time cards must be approved by a department manager before entered into the payroll system and the employee paid – shows approval and segregation of duties (dept manager does not pay the employee and payroll cannot approve the hours)

Bank and credit card accounts are reconciled to see if the transactions recorded in the accounting records match those recorded by the financial institution. To maintain segregation of duties, this should be done by someone who does not have authorization to pay cash, use the credit card or deposit money.

## Some practical considerations when working with internal control procedures you should remember are:

Mistakes (unintentional) and fraud (intentional) can both result in misstatements and in missing assets. Both can be hard to detect – mistakes because they are random and fraud because the thief will try to cover it up.

When identifying risks a company faces focus on the assets – nobody steals liabilities – with cash in all its forms (electronic) being the most vulnerable asset because it is the easiest to use if you steal it.

A company's information (including customer data like credit card numbers) is a vulnerable asset and should have multiple internal controls procedures to protect it.

Control activities should be designed to counteract a specific risk identified.

To segregate duties you want to have separate individuals have custody for assets (custody means they have access to potentially steal the asset) and have record keeping for that asset.

Technology safeguards like passwords and access codes are excellent ways to preserve authorization and segregation of duties as long as they are not shared or guessed or hacked.

Referring back to our example of the item being returned and needing authorization by a manager, any internal control procedure can be taken too far. It is not true that if one authorization is good then 2 is better. Just think of the backlog if this kind of transaction required two or three separate approvals – pretty soon the customers would stop coming or employees would ignore the onerous requirement. A good system finds the simplest and most efficient control procedure to combat each risk without piling on extra reviews. It also allows transactions with low risk to continue quickly.

#### **Check Yourself**

An internal control activity is most effective when which of the following is true?

- A. When it was designed after a specific risk was identified during the risk assessment phase.
- B. When the same person takes physical custody of the asset and does the record keeping.
- C. When the activity is done in a weak internal control environment.
- D. When no one is monitoring to make sure that internal control activities are completed.

The correct answer is A. Control activities should address a particular risk of error or fraud. Otherwise the activity may be redundant or not really improve the internal controls. Segregation of duties with regard to physical custody of assets, a foundation of a strong internal control environment and periodic monitoring are all steps that can make internal control activities more effective.

## **Key Takeaway**

All companies operate by means of numerous systems that carry out designated tasks, such as the collection of cash and the payment of purchases. These systems need to be well designed and operating as intended to reduce the chance of material misstatements. Additional policies and procedures are included at important junctures in the construction of these systems to ensure that they function appropriately. All such safeguards make up the company's internal control system. The independent auditor evaluates the quality of the internal control found in the various systems. If the risk of material misstatement has been reduced as a result of the internal control in a particular system, less audit testing is required.



A properly designed system of internal control employees principles and control procedures that can be applied to a range of business situations.

<sup>1</sup>Some internal controls have nothing to do with a company's financial statement accounts and are not of importance to the work of the independent auditor. For example, a company might establish a review procedure to ensure that only deserving employees receive promotions. This guideline is an important internal control for the operating effectiveness of the company. However, it does not relate to a reported account balance and is not evaluated by the independent auditor.

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#### 4.5: The Purpose and Content of an Independent Auditor's Report

#### Learning Objectives

At the end of this section, students should be able to meet the following objectives:

- 1. Describe the purpose of the independent auditor's report.
- 2. Identify the intended beneficiaries of an independent auditor's report.
- 3. Discuss the contents of the introductory, scope, and opinion paragraphs in an independent auditor's report.
- 4. List problems that might impact the contents of an independent auditor's report.
- 5. Indicate the method used by decision makers to determine whether an independent auditor has been unable to issue an unqualified opinion.

Question: At the conclusion of an audit, a report is issued that will be attached to the financial statements for all to read. While the format of this report is specified by the PCAOB (approved by the SEC) and some of the words will sound the same for each company- the PCAOB has recently approved changes to the report that will make them more uniquely tailored for each company. What information is conveyed by an independent auditor and what should a reader look for when studying an audit report?

Answer: The audit report accompanying the 2022 financial statements for Apple, Inc. is found below.

#### To the Shareholders and the Board of Directors of Apple Inc.

#### Oninion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Apple Inc. as of September 24, 2022 and September 25, 2021, the related consolidated statements of operations, comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended September 24, 2022, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of Apple Inc. at September 24, 2022 and September 25, 2021, and the results of its operations and its cash flows for each of the three years in the period ended September 24, 2022, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (the "PCAOB"), Apple Inc.'s internal control over financial reporting as of September 24, 2022, based on criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated October 27, 2022 expressed an unqualified opinion thereon.

#### Basis for Opinion

These financial statements are the responsibility of Apple Inc.'s management. Our responsibility is to express an opinion on Apple Inc.'s financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to Apple Inc. in accordance with the U.S. federal securities laws and the applicable rules and regulations of the U.S. Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

#### Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the account or disclosure to which it relates.

	Uncertain Tax Positions				
Description of the Matter	As discussed in Note 5 to the financial statements, Apple Inc. is subject to taxation and files income tax returns in the U.S. federal jurisdiction and many significations. As of September 24, 2022, the total amount of gross unrecognized tax benefits was \$16.8 billion, of which \$8.0 billion, if recognized, woul Inc.'s effective tax rate. In accounting for uncertain tax positions, Apple Inc. uses significant judgment in the interpretation and application of comple international tax laws.  Auditing management's evaluation of whether an uncertain tax position is more likely than not to be sustained and the measurement of the benefit of vario can be complex, involves significant judgment, and is based on interpretations of tax laws and legal rulings.				
How We Addressed the Matter in Our Audit	We tested controls relating to the evaluation of uncertain tax positions, including controls over management's assessment as to whether tax positions are not to be sustained, management's process to measure the benefit of its tax positions, and the development of the related disclosures.  To evaluate Apple Inc.'s assessment of which tax positions are more likely than not to be sustained, our audit procedures included, among others, readin management's assumptions and analysis, and, as applicable, Apple Inc.'s communications with taxing authorities, that detailed the basis and technic uncertain tax positions. We involved our tax subject matter resources in assessing the technical merits of certain of Apple Inc.'s tax positions based on o				
	relevant tax laws and experience with related taxing authorities. For certain tax positions, we also received external legal counsel confirmation letters a matters with external advisors and Apple Inc. tax personnel. In addition, we evaluated Apple Inc.'s disclosure in relation to these matters included in Note				

/s/ Ernst & Young LLP

We have served as Apple Inc.'s auditor since 2009.

statements.

San Jose, California

October 27, 2022

To understand the role of the independent audit within the financial reporting process, a considerable amount of information should be noted in the report found above.

1. The report is addressed to the board of directors (elected by the shareholders) and the shareholders. An audit is not performed for the direct benefit of the reporting company or its management but rather for any person or group studying the financial statements for decision-making purposes. The salutation stresses that those external users (rather than the company itself) are the primary



beneficiaries of the work carried out by the independent auditor.

Interestingly, independent auditors are paid by the reporting company. The concern is raised periodically as to whether an auditor can remain properly independent of the organization that is providing payment for the services rendered. However, audit examinations are quite expensive and no better method of remuneration has yet been devised.

- 2. To avoid any potential misunderstanding, the first (opinion) section identifies the specific financial statements to which the report relates. Note that reference is made to two audits an audit of the financial statements (CPA's do not audit the records but rather the financial statements accounting records provide evidence) and an audit of internal controls. For both, the auditors express an opinion that the statements and internal controls meet specified standards.
- 3. The second (basis for opinion) section provides considerable information about the audit work. In addition, both the responsibility of the management for those financial statements and the responsibility of the independent auditor for providing an opinion on those statements are clearly delineated. The statements are examined by the auditor. The statements are not created by the auditor; that is a job for management. Note the key sentence at the beginning of the second paragraph. It explains the purpose of the audit by referring to the standards created by the PCAOB. It further explains that the audit is planned to obtain "reasonable assurance" not absolute assurance.

The remainder of the second paragraph describes in general terms the steps taken by the auditor:

- · Examine evidence on a test basis to support reported amounts
- · Assess the accounting principles that were applied
- o Assess significant estimations used in creating the statements
- · Evaluate overall presentation
- 4. The third (CAM) section describes critical audit matters. According to the PCAOB, a critical audit matter is "any matter arising from the audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved especially challenging, subjective, or complex auditor judgment." This section will be unique for each company and is designed to give greater clarity to difficult issues that arose during the audit. This does not mean there are material misstatements but rather that this is an area where there was a higher than normal risk of misstatement.
- 5. The fourth section describes how the auditor responded to the critical audit matter(s) described above. What extra work or specialized tasks did they undertake to respond to the additional risk identified above so that we can still have confidence that there are no material misstatements.
- 6. The auditor signs the report and must include the length of time for which they have been the auditor (some believe being a long time auditor makes it less likely that the auditor will miss material misstatements).

Question: The audit report presented here for Apple, Inc. is an clean opinion. The independent auditor is providing reasonable assurance to decision makers that the company's financial statements are presented fairly, in all material respects, in conformity with U.S. GAAP. What can cause an independent auditor to issue an audit report with less than an clean opinion and how is that report physically different?

Answer: An independent auditor renders an opinion that is not clean in two general situations:

- The auditor was not able to obtain sufficient evidence during the audit to justify a clean opinion. Perhaps the amount reported for a building or a liability could simply not be substantiated to the auditor's satisfaction. The balance might well be fairly presented according to U.S. GAAP but evidence was not available to allow the auditor to make that assertion with reasonable assurance.
- The auditor discovers the existence of a material misstatement in the financial statements, a balance or disclosure that does not conform to U.S. GAAP. Because of the potential damage to the credibility of the financial statements, a reporting company will usually make any adjustments necessary to eliminate such misstatements. If not, though, the auditor must clearly warn readers of such problems.

The physical changes made in the report depend on the type of problem that is involved and its magnitude. The opinion paragraph will altered to reflect the auditor's concern that they cannot express an opinion that GAAP has been followed. Furthermore, a new paragraph is added after the opinion paragraphs to describe the auditor's areas of concern in some detail. Decision makers often scan the audit report solely to see if such a paragraph is contained. If present, a careful reading of its contents (as well as related changes found in the wording of the opinion paragraph) should be made to determine the possible ramifications. Whether evidence was lacking or a material misstatement was uncovered, the auditor is providing a warning for the reader. The presence of an added paragraph always draws attention.

#### Key Takeaway

Upon completion of an audit, the independent auditor's report is attached to the financial statements. It is provided for the benefit of external decision makers. The financial statements are identified and the second (basis for opinion) section provides an explanation of the audit process. If no problems are encountered, the report is said to be clean and the opinion paragraph provides reasonable assurance to readers that the financial statements are presented fairly because no material misstatements are present according to U.S. GAAP. A qualification arises if the auditor is not able to obtain a satisfactory amount of evidence or if a material misstatement is found. Information about any such problem is then inserted into the audit report between the opinion section and the basis for opinion paragraph.

#### Talking with a Real Investing Pro (Continued)

Following is a continuation of our interview with Kevin G. Burns.

*Question*: An independent audit is extremely expensive for any reporting company. As an investor, is the benefit gained from seeing the independent auditor's report attached to a set of financial statements actually worth the cost that must be incurred by the company?

Kevin Burns: I think the answer to this question is fairly obvious given the recent scandals, especially in the hedge fund world. An independent audit is absolutely critical for a corporation no matter what the expense. It is an exciting time to be in the accounting profession as investors are demanding additional transparency and independent oversight. Market confidence will be even more critical than usual for any business that wants to obtain money by issuing its equity shares and debt instruments. An internal audit would be perceived as self serving and untrustworthy and perception is 90 percent of reality, especially in today's cynical environment.

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# 4.6: Accounting ethics

## **Learning Objectives**

At the end of this section, students should be able to meet the following objectives

- Identify the basis on which accounting ethics are built
- Explain the principles guiding the AICPA Code of Professional Conduct
- Analyze business situations in light of ethical principles

Question: Doesn't trusting the accounting information come down to trusting accountants? Can we count on the external auditors and internal accountants to be professional and thorough with the information they report?

While no group or profession is without flaw, the accounting profession has worked to establish the expectations for those in this important role. Ethics is usually defined as the moral principles that guide a person's behavior – how they decide what is right and what is wrong. So accounting ethics would be those principles that guide accountants in their role in communicating financial information. In the video link below, the Markkula Center for Applied Ethics at Santa Clara University outlines a straight forward framework for making ethical decisions.





As reviewed in the video, there are five questions you could ask when evaluating accounting decisions that reflect different ethical approaches. They are:

- Which option will produce the most good and do the least harm? (The Utilitarian Approach)
- Which option best respects the rights of all who have a stake? (The Rights Approach)
- Which option treats people equally or proportionately? (The Justice Approach)
- Which option best serves the community as a whole, not just some members? (The Common Good Approach)
- Which option leads me to act as the sort of person I want to be? (The Virtue Approach)

The accounting profession has for the most part adopted the Virtue Approach. Virtue ethics is a philosophy developed by Aristotle and other ancient Greeks. It is the quest to understand and live a life of moral character.



This character-based approach to morality assumes that we acquire virtue through practice. By practicing being honest, brave, just, generous, and so on, a person develops an honorable and moral character. According to Aristotle, by honing virtuous habits, people will likely make the right choice when faced with ethical challenges. As you will see below in the AICPA Code of Professional Conduct, the accounting profession has committed to principles that build the virtue of trust in the financial information – fundamentally can you be a professional that can be trusted.

The AICPA Code of Professional Conduct can be found here. https://pub.aicpa.org/codeofconduct/Ethics.aspx#



A quick review of the principles of the AICPA Code of Professional Conduct can be seen https://youtu.be/UMmNwH25peM



Question: But is knowing what is right in your mind or based on who you want to be enough? Why do some accountants do things they know are wrong?

Inevitably, all of us are human and make mistakes – even accounting professionals. This means we act contrary to what we believe is right under the code of ethical principles we have adopted. Note that in the framework for making ethical decisions above, an important step is to reflect on our decisions including where we may have not lived up to our ethical values so that we can improve. Learning from our mistakes is a critical part of being an ethical professional. But maybe there is reflection that we can use to anticipate ethical decisions and plan our response that will make it more likely to act according to what we believe is true. This is referred to as Giving Voice to Values by Mary Gentile currently at the University of Virginia. An introduction to this practice is linked to below:



https://ethicsunwrapped.utexas.edu/video/introduction-to-giving-voice-to-values

#### **Key Takeaways**

The financial system relies on information provided by businesses to investors that can be trusted. This information is prepared, reported and audited by accounting professionals and thus the integrity of those accounting professionals is key to building that trust. Accountants have agreed on some ethical principles that help them discern what is right and what is wrong but individually they each need to stand up for those principles in a practical way even when pressure or human nature may lead them to do otherwise.



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# 4.7: End-of-Chapter Exercises

#### Questions

- 1. Why is it important that people and organizations have trust in the financial reporting process?
- 2. What is the Securities and Exchange Commission?
- 3. What types of companies fall under the jurisdiction of the SEC?
- 4. Who has the SEC given responsibility to for setting generally accepted accounting principles (GAAP) in the United States?
- 5. Who is the Emerging Issues Task Force?
- 6. Why doesn't the SEC examine all the financial statements submitted to it to ensure their accuracy?
- 7. For what must public companies hire an auditing firm before they submit their financial statements to the SEC?
- 8. Why would a nonpublic company have its statements audited?
- 9. What is a CPA?
- 10. Which organization sets standards for and regulates firms who audit public companies?
- 11. Which act established the Public Company Accounting Oversight Board?
- 12. Which organization sets standards for and regulates firms who do not audit public companies?
- 13. What type of assurance does an audit provide?
- 14. Why do audits not provide absolute assurance that financial statements are presented fairly according to GAAP?
- 15. What are internal controls?
- 16. How is an auditor's work affected by a company's internal controls?
- 17. What principles guide the implementation of an internal control system?
- 18. What are examples of internal control procedures?
- 19. To whom is the audit report addressed?
- 20. What is a clean opinion?
- 21. What is a critical audit matter?
- 22. Why would an auditor not give a clean opinion?

## True or False

- 1. \_\_\_\_ The quality of a company's internal controls has no effect on the work of an auditor.
- 2. \_\_\_\_ Acquiring the CPA designation requires a candidate to pass an exam, meet education requirements, and meet experience requirements.
- 3. \_\_\_\_ The SEC is the current accounting standard setting body in the United States.
- 4. \_\_\_\_ The inclusion of an explanatory paragraph in an audit report is an indication that the financial statements should not be relied on.
- 5. The PCAOB oversees auditors of public companies.
- 6. Nonpublic companies have no reason to have an audit of their financial statements performed.
- 7. \_\_\_\_ If one manager approval is a good internal control then two approvals is always better.
- 8. \_\_\_\_ An individual who handles cash should not also be able to do the record keeping for cash.
- 9. \_\_\_\_ Audits are paid for by the creditors and investors of a company.
- 10. \_\_\_\_ CPAs can work for large, multinational firms, or for small, local firms.
- 11. \_\_\_\_\_ Auditors provide reasonable assurance that financial statements are fairly presented in accordance with U.S. GAAP.
- 12. \_\_\_\_ The Financial Accounting Standards Board is a governmental agency.

## Multiple Choice

- 1. Whittington and Company is a CPA firm that audits publicly traded companies. Which of the following is true concerning Whittington and Company?
  - 1. Whittington and Company are regulated by FASB.
  - 2. Whittington and Company are hired by the companies they audit.
  - 3. Whittington and Company should follow the auditing standards set forth by the Auditing Standards Board.
  - 4. Whittington and Company prepares the financial statements for the companies they audit.
- 2. Which of the following is **not** true about an audit report?



- 1. An explanatory paragraph may be included to draw the reader's attention to some aspect of the financial statements.
- 2. If a material misstatement exists in the financial statements and has not been corrected, the auditor should not issue a clean opinion.
- 3. The report is addressed to the company's board of directors and shareholders.
- 4. If anything other than clean opinion is issued, the financial statements must contain a material misstatement.
- 3. Which of the following is true about the Financial Accounting Standards Board (FASB)?
  - 1. FASB sets standards that apply to companies throughout the world.
  - 2. FASB was created by the EITF to handle smaller issues in a timely manner.
  - 3. FASB produces standards that apply to almost all companies in the United States.
  - 4. FASB was created by the Securities Exchange Act of 1934.
- 4. Which organization is a governmental entity?
  - 1. SEC
  - 2. FASB
  - 3. EITF
  - 4. ASB
- 5. Which of the following is true about the Securities and Exchange Commission (SEC)?
  - 1. The SEC has the power to set accounting standards in the United States.
  - 2. The SEC does not have any enforcement powers.
  - 3. The SEC determines auditing standards for those who audit public companies.
  - 4. The SEC relies on fees collected from publicly traded companies to operate.
- 6. Which principle of internal control emphasizes the importance of someone or technology checking up to make sure that internal control procedures are being followed?
  - 1. Monitoring
  - 2. Risk assessment
  - 3. Documentation
  - 4. Information and communication

## **Problems**

1	Match the	following	organizations	to their des	crintions

PCAOB

SEC

• \_\_\_\_ EITF

• ASB

- 1. Sets auditing standards for auditors of publicly traded companies
- 2. Sets U.S. generally accepted accounting principles
- 3. Helps apply U.S. generally accepted accounting principles to new situations
- 4. Sets auditing standards for auditors of private companies
- 5. Created by the Securities Exchange Act of 1934 to protect investors
- 2. Read the case at https://ethicsunwrapped.utexas.edu/video/tesco-cooks-the-books

#### Answer the following questions:

- a. The officers of a public company owe a fiduciary duty, a duty of trust and confidence, to the company's shareholders. What was the fiduciary duty of Tesco? How did Tesco officers breach that duty? Why do you think Tesco did this? Explain.
- b. Do you think the officers were actually trying to fulfill their fiduciary duty to act in the shareholders' best interests, but doing so in a wrongful (and ultimately self-defeating) way? Why or why not?
- c. If the accounting irregularities had been an honest mistake, do you think Tesco would still be liable for breaking their fiduciary duty? Why or why not?



- d. As the shareholder of a public company, would you want your company's officers to fudge the numbers in order to avoid damage to the company's share price?
- e. If you were one of the accountants who faced pressure by managers to "pull forward" future income, what would you have done and why?

#### Research

- 1. The chapter mentions the Big Four public accounting firms: Deloitte, Ernst & Young, KPMG, and PricewaterhouseCoopers. We will visit the Web site for one of these—PricewaterhouseCoopers. Go to <a href="http://www.pwc.com">http://www.pwc.com</a> and answer the following questions:
  - 1. Find two offices of PWC that are closest to your home what are those offices according to the map in About Us.
  - 2. Select capabilities. Name four services that the firm offers in the United States besides financial statement audit.
  - 3. Select the Financial Statement Audit capability. What key points does the firm make about their financial statement audit process and what the PCAOB says about them?
    - PricewaterhouseCoopers is currently the auditor of Dell. Go to <a href="http://www.dell.com">http://www.dell.com</a> and scroll to "Our Company" at the bottom of the page. Choose "Investors" half way down the list. Click on "financials" in the upper ribbon. Choose SEC filings from the drop down menus. Choose 2023 and annual filings from the drop down menus below the graphic. Click on the icon for html to the right of the 10-k link. Find the auditors report (about page 74).
  - 4. What is the auditors opinion of the financial statements?
  - 5. Are there any critical audit matters? What were these matters? What did PWC do in response to these matters?
  - 6. What is the auditor's opinion on internal control included as part of the audit report (note references to opinions)?
- 2. In the United States, audits must be conducted by Certified Public Accountants (CPAs). Each state has different requirements that individuals must meet to become licensed as a CPA. This exercise will give you a chance to discover the rules in your state. Begin by going to the Web site for the National Association of State Boards of Accountancy (NASBA) at <a href="http://www.nasba.org">http://www.nasba.org</a>. On the left the menu will show "Boards of Accountancy". Click on that item. A listing of the United States will appear. Click on your state. It will navigate to the information for your state. Click on the Web site given. By navigating around the Web site for your state board of accountancy, you should be able to find out what the exam, education, and experience requirements are in your state. Write these down.

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# **CHAPTER OVERVIEW**

# 5: How is the accounting equation used to summarize changes to amounts reported in the financial statements?

- 5.1: Using a chart of accounts.
- 5.2: Summarizing transactions in the expanded accounting equation
- 5.3: Tracking the changes in assets.
- 5.4: Track the changes in liabilities.
- 5.5: Track changes in revenues and expenses.
- 5.6: Preparing financial statements from accounting equation worksheet.
- 5.7: End of chapter exercises

<sup>5:</sup> How is the accounting equation used to summarize changes to amounts reported in the financial statements? is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.



# 5.1: Using a chart of accounts.

## **Learning Objectives**

After completing this section, students will be able to:

- Relate accounts to the financial statements
- Describe how a chart of accounts is used
- Identify how accounts relate back to the earlier discussion of accounting elements

Question: How do companies know what items or amounts to put on the financial statements we learned about earlier?

Earlier we learned the accounting equation, specifically:

## Assets = Liabilities + Equity

and we learned that these items are reported on the balance sheet. We learned that Revenues – Expenses +- Gains/Losses = Net Income which then increases equity. Other changes in equity were shown on the statement of equity or changes in retained earnings. The examples we looked at and worked with seemed to have amounts associated with each asset or liability. Those amounts were determined by looking at each account and by what amount it changes due to business events at the company. This means if a company wants to report amounts for individual assets, liabilities, revenues and expenses, it must first have an **account** to track the increases or decreases to that item. A chart of accounts is simply a list of all the items – assets, liabilities, equity, revenue, expense, gain or loss – that the company wants to track separately. It might look like this:

Chart of Accounts						
Number	Description	Account Type	Financial Statement			
1-001	Cash	Asset	Balance Sheet			
1-010	Accounts Receivable	Asset	Balance Sheet			
1-020	Prepaid Expenses	Asset	Balance Sheet			
1-030	Inventory	Asset	Balance Sheet			
1-040	Fixed Assets	Asset	Balance Sheet			
1-050	Accumulated Depreciation	Asset	Balance Sheet			
1-060	Other Assets	Asset	Balance Sheet			
2-001	Accounts Payable	Liability	Balance Sheet			
2-010	Accrued Liabilities	Liability	Balance Sheet			
2-020	Taxes Payable	Liability	Balance Sheet			
2-030	Payroll Payable	Liability	Balance Sheet			
2-040	Notes Payable	Liability	Balance Sheet			
3-001	Common Stock	Equity	Balance Sheet			
3-010	Retained Earnings	Equity	Balance Sheet			
3-020	Additional Paid in Capital	Equity	Balance Sheet			
4-001	Revenue	Revenue	Income Statement			
4-010	Sales returns and allowances	Revenue	Income Statement			
5-001	Cost of Goods Sold	Expense	Income Statement			
5-010	Advertising Expense	Expense	Income Statement			
5-020	Bank Fees	Expense	Income Statement			
5-030	Depreciation Expense	Expense	Income Statement			
5-040	Payroll Tax Expense	Expense	Income Statement			
5-050	Rent Expense	Expense	Income Statement			
5-060	Supplies Expense	Expense	Income Statement			
5-070	Utilities Expense	Expense	Income Statement			
5-080	Wages Expense	Expense	Income Statement			
6-001	Other Expenses	Other	Income Statement			



The minimum accounts needed are 1 for assets, 1 for liabilities, 1 for equity, 1 for revenues, 1 for expenses, but we probably want to track a lot more detail like is shown in the sample. The key is to determine how many different assets or expenses you want to be able to track information about. If you do not list it on the chart of accounts then it will be difficult to be able to track the amount of that particular item and report it on the financial statements.

Questions: So should there be a whole bunch of accounts and is there a limit to the number of accounts? What if I think of an account after we start our accounting?

The number of accounts on the chart of accounts is up to each individual company and depends on the information it wants to use and communicate to investors. The FASB has not given as specific lists of accounts or what they may be called (there are some recommendations for submitting electronic files of financial statements). So referring to the list of assets on our sample above, a company that provides only services and does not buy and carry inventory could leave the inventory account off their chart of accounts. Another company may decide that fixed assets is not specific enough and would like to break it down and have a Trucks account separate from its Building account. They would list Trucks and then Building (two accounts) instead of Fixed Assets. Another company may lump all of the land, buildings and equipment into one account called Property or Fixed Assets like is shown in our sample. There are few rules and as accountants we would want to anticipate what we want our financial statements to look like (lots of detail and thus lots of accounts versus summarized with few accounts) and what that communicates to investors when we set up our chart of accounts.

Most computerized accounting systems have room for almost unlimited accounts and will allow for the addition of more accounts as you go through your financial year. However, thinking of things before we begin can make our life easier throughout the year.

Question: Should new accounts just be added to the end of the list on the chart of accounts?

One of the most important things to remember about an account and adding one to the chart of accounts is that each account needs to be identified as one of the accounting elements (asset, liability, revenue, etc.) and grouped with other accounts from that same element. Thus assets should be added and grouped with assets. So when part way through the year, when you for the first time have to hire and pay an attorney you may need to add an account. You may already have an account called professional services expense and you may just choose to use that. However if you want to see the legal costs separate from what you pay for engineering or other professionals, then you will need to add an account. You may even need more than one. If you are going to pay the attorney before they provide services then you will need an account called prepaid legal services (or something like that) and it will be listed with the other assets (prepaid means future benefit). If you are going to only pay the attorney as they provide the services or after they provide the services then you need a legal expense account to be grouped with the other expenses. An account can only be in one group (cannot be both asset and expense) so if you will pay the legal costs before the services are provided (asset) and then use those services such that they become an expense you will need two accounts (one for the asset and one for the expense). No moving accounts around – we can move amounts but should not move accounts.

#### **Key Takeaways**

- What you want to communicate on the financial statements determines the length of the chart of accounts. Detailed financial statements mean long detailed charts of accounts while shorter, summarized financial statements can be developed from shorter charts of accounts.
- Each account must be associated with one and only one accounting element.

## Check yourself

# Business event – purchase a delivery van for use in the business with cash

What would we look for on the chart of accounts? Since we know that the delivery van is an asset (future benefit) and cash is an asset, we will look in the asset section of our chart of accounts to find van (or vehicles or something similar) and cash. If they are not there or if we want the van separate from other vehicles or property then we would add that account and group it with long term assets. Cash would be an account under current assets.

# Business event – borrow money from the bank

What would we look for on the chart of accounts? Since we are borrowing money and will need to pay it back then we know we have a liability. We can look in the liability section of the chart of accounts for note payable or loan payable and in the asset section for cash (that is what we are borrowing). If there is no account there or at least if we decide we want to track this loan



separately from other liabilities then we can add an account and group it with either long term or current liabilities depending on whether we are paying it back in less than one year (current) or in more than one year (long term).

Question: How do accountants remember all of the accounts and what accounting element they are associated with?

It is impossible to list let alone memorize all of the possible accounts. With millions of businesses in the United States and each of them having different assets, liabilities, revenues and expenses trying to list all the possibilities would be a waste of time. Accountants use lots of different accounts and account names and we do not want to get too concerned about the exact terminology. However, there are some principles about accounts you might use to help identify what accounting element is involved.

- The term **receivable** means we will receive cash in the future and thus a future benefit and an asset (examples: Accounts Receivable, Notes Receivable, Interest Receivable)
- The term **payable** means we owe cash in the future and thus it is a liability (examples: Accounts Payable, Loan Payable, Wages Payable)
- **Prepaid** means we have paid for something now that we will receive in the future and thus is an asset even when paired up with expense terminology (examples: Prepaid expenses, Prepaid Insurance, Prepaid Legal Services)
- **Unearned** means we have received cash now for something we will provide to a customer later this means we owe the customer something so it is a liability even when it is paired up with revenue terminology (examples: Unearned revenues, unearned fees)
- **Accrued** means owed and thus will be used with accounts that belong with liabilities (examples: Accrued wages = Wages payable)
- The term **earned** is usually describing a revenue (examples: Fees Earned, Interest Earned)
- The term **deferred** means *wait for later* so it could be associated with either assets (payments received later) or some services provided later (deferred revenue = unearned revenue) so you will need to look for other clues on be more clear with the other words describing the account

You may want to download and complete the attached [] Account Classification Worksheet.xlsx as a review of what you should know about various accounts. Once completed it could serve as a reference going forward in using the accounts to track financial information.

#### **Key Takeaways**

Terminology can be helpful in determining the account name and accounting element to group it with but it is not exact and may need clarification.

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# 5.2: Summarizing transactions in the expanded accounting equation

## Learning Objectives

After completing this section, students will be able to

- Identify the expanded accounting equation
- Use the equation to identify the changes to accounting elements

Question: What is the accounting equation and how does it relate to the financial statements of a business?

In an earlier chapter, the accounting equation was identified as:

## Assets = Liabilities + Equity

This is also the equation and format for a balance sheet. As business events occur that change the elements of the accounting equation, we track those changes by keeping the equation in balance. So for example if an owner of a business invests \$100,000 in cash into the business in return for ownership of that business (either as a sole proprietor or stockholder) then we use the accounting equation to examine what happened because of this business event.

	ASSETS =	LIABILITIES	+ EQUITY
Investment by owner	Increase 100,000		Increase 100,000

So as shown in the above table – the business's assets increased by \$100,000 because of the investment and so does the equity which represents ownership by the owner mentioned. Notice that assets = liabilities equity after the business event or \$100,000 = 0 + \$100,000. This means that to keep the equation in balance (and keep the balance sheet balanced) the amount of the change on one side of the equation must equal the amount of the change on the other side.

Question: That seems to work for the balance sheet but what about the other financial statements?

We learned earlier that equity (or net assets) especially can be broken down into its components and thus typically equity consists of capital stock (measure of the amount invested by owners like our \$100,000 above) and retained earnings (measure of the amount earned by the business not returned to shareholders). Thus we could expand our equation to:

	ASSETS =	LIABILITIES	+	<b>EQUITY (Net Assets)</b>
			CAPITAL STOCK	RETAINED EARNINGS
Investment by owner	Increase 100,000		Increase 100,000	

Thus, with the equation expanded to show the components of equity, we can show additional detail about our transaction and communicate that on the balance sheet without changing the original equation. This would give us some of the information we need for the statement of changes in equity where we report changes to capital stock (aka common stock) separately from changes to retained earnings.

So can we break down retained earnings even further? Yes we can. Calling upon our earlier discussion of revenues and expenses, we learned that both affect equity (net assets) and more specifically retained earnings. So to expand a little further:

ASSETS =	LIABILITIES	+	EQUITY
		CAPITAL STOCK	RETAINED EARNINGS



REVENUES – EXPENSES – DIVIDENDS
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Notice that the original equation (balance sheet) has not changed but by expanding equity to include capital stock, revenues, expenses and dividends we can show the changes necessary to communicate not only the balance sheet but also the income statement (Revenues – Expenses) and the changes in stockholders equity like dividends. So retained earnings is increased by revenues and decreased by expenses and dividends. We will look at the statement of cash flows later in the chapter. We could also break down assets into current assets and long-term assets and do the same for liabilities. We can also add in gains and losses under retained earnings so that we get the very helpful equation as follows:

	ASSETS =				LIABILITIES		+		EQUITY		
	CURRENT	LONG TERM	CURRENT	LONG TERM	CAPITAL STOCK		RETAINE	D EARNINGS			
						REVENUES	– EXPENSES	– DIVIDENDS	GAINS- LOSSES		
Investment by owner	Increase \$100,000				Increase \$100,000						

We will refer to the above more detailed breakdown above as the expanded accounting equation. This format allows us to track changes to all the major elements of our three financial statements and thus provide the information needed to communicate the information in a summarized form to investors and other interested parties. We can provide further detail by identifying accounts under each of the accounting elements as listed and described in the chart of accounts we learned about in the last section. So our investment by the shareholder we used as an example was in the form of cash. Thus, for more detail under current assets we could list accounts and one of them would be cash. So our business event increased cash (a part of current assets) by \$100,000 and also capital stock by the same amount. The original equation is still equal (A = L + E) and we have been able to provide more information to our investors or potential investors.

#### Application Exercises (Check yourself)

1. Using the expanded accounting equation shown above to illustrate how would you show the investment by owner differently if they invested equipment worth \$100,000 instead of cash?

The increase on the asset side would be in the long-term asset column instead of the current asset column. We may even want to be even more specific and use an account labeled equipment under the heading long term asset.

What difference would that make? Having cash that would be available to pay employees or other expenses is a different situation from having equipment that while useful is not available to pay bills at least not right away. You see why we might want to give more detail by using accounts from our chart of accounts – the accounts we use help us tell the financial story or paint the financial picture of the business.

2. Using the expanded accounting equation shown above to illustrate, what would be different if instead of \$100,000 from shareholders, the \$100,000 in cash was borrowed from a bank?

The increase on the asset side would go back to being to cash under current assets. On the liabilities and equity side, instead of capital stock, there would be an increase in either the current liabilities or long term liabilities columns depending on when the loan was to be paid back. We may even want to provide further detail by indicating the account loan or note payable increased under liabilities.

What difference would that make? The loan would need to be paid back while the owner investment would not need to be repaid. By putting the loan either as current or long term we communicate to those reading the financial statements how quickly the business will need to be able to come up with the money to repay the loan.



## **Key Takeaways**

The expanded accounting equation allows us to capture changes in all of the elements found on the balance sheet, income statement and changes in stockholders equity while keeping the equation and thus the balance sheet in balance.

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# 5.3: Tracking the changes in assets.

## **Learning Objectives**

At the end of this section, students will be able to identify changes in assets come from the following types of transactions:

- Exchange of assets
- Incurring a liability
- · Direct investment from stockholders
- Earning by providing goods or services

Question: What business events change assets and how are these reflected in the expanded accounting equation?

ASSETS =	LIABILITIES	STOCKHOLDERS
ASSETS -	+	EQUITY

Given that the above accounting equation must stay in balance or stay equal, we can reason that if an company is going to add to its assets and thus grow its ability to make revenues – there are a limited number of ways or business events that can make that happen. Those are:

- The business exchanges one asset for another (then total assets do not change and the equation stays in balance).
- The business can obtain control of the asset by incurring a liability (borrowing money)
- The business can get assets directly from the stockholders (this was illustrated in the last section)
- The business can earn assets by providing goods or services

Together, we will look at a couple of examples of each of the these that we have not yet considered. First exchanges of assets for other assets. Let's say the Lincoln Company used cash of \$2,500 to purchase an insurance policy that will cover the company for the next year. They also use \$8,000 in cash to purchase a machine for use in their business.

	ASSETS	LIABILITIES +	STOCKHOLDERS EQUITY		
CUR	RENT	LONG-TERM			
CASH	PREPAID INSURANCE MACHINERY				
Decrease 2,500	Increase 2,500				
Decrease 8,000 Increase 8,000					

See the changes and how the total assets did not change for either transaction or business event. For the insurance transaction, we note that while one current asset went down another went up thus leaving current assets unchanged in total. The prepaid insurance is a current asset because the benefit to the business for the insurance will last only one year. For the second transaction, it also reduced cash (a current asset) and increased a long-term asset by the same amount. So for the second current assets are reduced and long term assets are increased while total assets still do not change. We can also start to see the value of recording each business event like this along with all other business events. Because both events affected cash, we see using the column for the cash account we can track the cumulative amount of cash spent to see what our new balance would be after the business transactions. So if cash was 20,000 prior to these events, then we could know its new balance after the transactions by subtracting the total decreases from the 20,000.

ASSETS =			LIABIL	ITIES +	STOCKHOLDERS EQUITY
CURRENT		LONG-TERM	CURRENT	LONG – TERM	
CASH INVENTORY		BUILDING	ACCOUNTS PAYABLE	NOTES PAYABLE	



Increase 3,000		Increase 3,000		
	Increase \$80,000		Increase \$80,000	

We will use the equation above to consider the following two examples. The Lincoln company purchased inventory but instead of paying cash they purchased it on credit for \$3,000 (that means that whoever Lincoln purchased it from was willing to sell the inventory now in return for Lincoln paying for it later). Lincoln also purchased a building for \$80,000 and instead of paying cash for it, signed a note (a legal document) promising to pay back the current owner of the building over the next 20 years with interest.

Note in the equation above that the increases took place on the left side of the equal sign as well as on the right side – thus keeping the equation in balance. Inventory is a current asset because we intend to sell it in the next year while the building is long-term because the benefit will extend well beyond the next year. Accounts payable is the term we generally use for purchases on credit because buying on credit means we have an account with our supplier and we are going to pay them for the inventory in the future. That obligation to pay is due most likely in the next couple of months so it is a current liability. The loan or note we borrowed to buy the building will be paid back over several years and thus it is a long-term liability. Notice that we do not record interest at the beginning of the loan rather we will record it in future periods as time goes by.

Our first four examples showed changes to assets that did not in any way affect stockholders equity and certainly did not affect retained earnings. Our last examples will illustrate this type of business transaction. Say for instance that Lincoln Company provided services to a customer in exchange for the customer paying Lincoln \$1,500 in cash. For another customer, Lincoln also provided services which while completed now, the customer and Lincoln agree that the customer will pay \$1,200 to Lincoln 60 days from now.

ASSETS =		LIABILITIES	+ STOCKHOLDERS EQUITY				
CURRENT			CAPITAL RETAINED EARNINGS STOCK			IGS	
CASH	ACCOUNTS RECEIVABLE			REVENUES -EXPENSES DIVIDENDS		DIVIDENDS	
Increase 1,500				Increase 1,500			
	Increase 1,200			Increase 1,200			

So for the first transaction above, there was an increase to current assets (and total assets) along with an increase in revenues that increased stockholders equity. The second transaction did the same because the revenue has been earned even if the cash has not been received. When a customer owes us money in return for providing them with goods or services, that is referred to as accounts receivable and since we hope to collect well before 1 year that future benefit is a current asset. Again we see that we can use the columns to summarize the transactions and show that we have earned a total of \$2,700 during this accounting period.

But what about more complicated transactions, could there be combinations of the above transactions?

So we will use the following examples to illustrate how these types of transactions are combined but can still be recorded and summarized in the accounting equation.

Lincoln purchased machinery that cost \$8,000 by paying \$2,000 as a down payment and financed the remaining \$6,000 with a note with interest due in 5 years.

Lincoln sold inventory items that originally cost \$500 (Lincoln paid 500 for them) for \$900 to a customer who paid in cash.

ASSETS =	LIABILITIES	+ EQUITY	STOCKHOLDERS
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CUR	RENT	LONG TERM	LONG- TERM	CAPITAL STOCK	RETAINED F		NGS
CASH	INVENTORY	MACHINERY	NOTE PAYABLE		REVENUES -EXPENSES DIV		- DIVIDENDS
Decrease 2,000		Increase 8,000	Increase 6,000				
Increase 900	Decrease 500				Increase 900	Increase 500	

When we record the purchase of machinery we both decrease another asset (exchange) and incur a liability (borrow money) but the increase in total assets (\$6,000) is the same as the increase in liabilities. The equation is still in balance because the change was the same on both sides of the equal sign. But we also communicate that we have less cash or current assets. For the sale of inventory, we increase cash for the amount received in exchange or the sales price. This also increases revenues on the right side of the equation by the same amount since that is what has been earned. Because we sold the customer some of the items we had as part of inventory, the current asset inventory goes down by the cost. These items sold (since the benefit is now in the past and no longer in the future) become an expense rather than an asset. We increase expenses but because they are subtracted to get net income that increase in expenses reduces stockholders equity. The result is an increase of 400 in current assets and an increase in stockholders equity of 400 in retained earnings because of this transaction.

#### **Key Takeaways**

Business transactions can affect several different accounts on different sides of the accounting equation. The key is that the change on the left or assets side of the equation must equal the change on the right or liability/equity side of the equation.

## Check yourself

Uwe Company purchased supplies (current asset) on credit for \$700 in the current month. Which of the following is a result of this transaction?

- a. Current assets decrease \$700
- b. Stockholders Equity increases \$700
- c. Current liabilities increase \$700
- d. Long-term liabilities decrease \$700
- C. is the answer both current assets and current liabilities will increase by \$700 keeping the equation in balance there is no effect on stockholders equity.

Uwe Company purchased a machine to be used in their business for \$9,000 by paying cash. Which of the following is a result of this transaction?

- a. Current assets decrease \$9,000
- b. Total assets do not change
- Stockholders equity increases by \$9,000
- d. A and B

D is the correct answer. Because this is an exchange of assets (cash for machinery) current assets goes down and long term assets go up but total assets and thus stockholders equity does not change.

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# 5.4: Track the changes in liabilities.

Learning Objectives

Upon completion of this section, students will be able to identify that changes to liabilities occur due to the following business events or transactions

- Exchange assets for liabilities
- · Accrual of expenses
- · Receipt of unearned revenue

Questions: How do liabilities change with exchanges for assets and how are those changes tracked in the accounting equation?

Liabilities are obligations that must be paid some time in the future and that payment is going to involve assets being transferred. Thus the liability can come about through the purchasing of an asset on credit like we saw in the last section. So a company can buy inventory or equipment and instead of paying cash immediately they receive the inventory or equipment in exchange for a promise to pay for it later (a liability). Then when the company pays for the inventory or equipment, the liability is reduced or satisfied (that can be one payment or many payments) as illustrated below in the accounting equation.

ASSETS		=	LIABILITIES		+ STOCKHOLDERS EQUITY	
CURI	RENT	LONG TERM	CURRENT	LONG TERM	CAPITAL STOCK	RETAINED EARNINGS
Cash	Inventory	Equipment	Accounts Payable	Notes Payable		
	Increase \$4,000		Increase \$4,000			
		Increase \$12,000		Increase \$12,000		
Decrease \$4,000			Decrease \$4,000			
Decrease \$2,000				Decrease \$2,000		

Note that in the transactions above the inventory was purchased on credit with payment due in 90 days so the purchase and the subsequent payment affected accounts payable (all was paid at once). The exchange was first for inventory in return for a promise to pay and later an exchange of cash in return for a reduction to zero of the amount owed. In the transactions having to do with the equipment we used a long-term liability because we are going to pay off the note payable over a time (several payments) which is why we paid only 2,000 on the note payable and still show an amount owed of \$10,000. The tracking of these transactions looks a lot like those we did in the last section because they are really the same – changes in assets that affect liabilities are the same as changes in liabilities that affect assets. However when payment is made for inventory the change is to the related liability (accounts payable) and not to the asset. Make sure that you see the difference between paying the liability shown above and selling the inventory which we did in the last section. Hopefully you also see that all these exchanges shown above do not impact stockholders equity.

Questions: But are there changes to liabilities that do impact stockholders equity? If so what are they and how would they be shown?

Some unusual transactions can impact liabilities and stockholders equity like borrowing money and giving the cash to shareholders in the form of a dividend would make liabilities go up and retained earnings go down (because liabilities and equity are both on the same side of the equation they must go in opposite directions to stay in balance). We are going to focus on much more common transactions where a business uses an expense (the term in accounting is incurred) but did not pay cash for it – instead they promise to pay for it later. A good example is utilities. Once a company signs up for electricity or gas, they use those costs in their business to keep the lights on or keep the place warm or cool. They use the utilities throughout the month (April) and then the utility



company sends them a bill (\$350) at the end of April that the company will need to pay by the end of May. So for April, there is an increase in expenses (which reduces retained earnings) and an increase in accounts payable (utilities payable if you like more a more detailed chart of accounts). Then when the bill is paid, the cash is reduced and so is the accounts payable (just like we did above in paying for the inventory).

ASSETS	= LIABILITIES	+ EQUITY			STOCKI	IOLDERS
CURRENT	CURRENT	CAPITAL STOCK	+		RETAINED EAF	RNINGS
Cash	Accounts Payable		Revenues	– Expenses	+Gains/-Losses	-Dividends
	Increase \$350			Increase \$350		
Decrease \$350	Decrease \$350 (in May)					
	Increase \$600			Increase \$600		

Many expenses (different from assets because they provide current or past benefit) are used by companies without paying for them immediately and thus incur a liability. Some have physical or electronic reminders like the bill from the electric company we just illustrated. Others are a little more mysterious or without reminders like interest or wages. When we borrow money over a long period of time the cost to borrow that money is interest. Every day we have the bank's money (using it in our business) the amount of interest grows or accrues until we pay the amount owed with a transfer of cash or other assets. We probably do not want to show the change in the amount of interest owed every day (the bank certainly does) but rather wait until the end of a month or year or other accounting period to show the increase of \$600 for interest above. Employees work in the same way from an accounting standpoint — every hour that the employee works and we utilize their labor in the business the amount the business owes that employee increases. We probably do not bother to record that increase until the end of the pay period or accounting period when we increase wages expense and increase the current liability (wages payable or accrued wages). When we pay employees or interest the amount owed is reduced to zero just to start growing again with time going by or employee hours worked.

Question: What about the situation where a company receives money from a customer before they have done anything for the customer?

This situation looks very much like when we borrow cash from the bank like we have seen earlier. Cash is going to increase while the current liability is going to also increase to keep the equation in balance. However, instead of settling this liability by giving the customer cash (that is not what they want) we are going to settle the obligation by providing goods or services. That is the obligation and what is owed as shown below:

ASSETS	= LIABILITIES	+	STOCKHOLDERS EQUITY				
CURRENT	CURRENT	CAPITAL STOCK	+ RETAINED EARNINGS				
Cash	Unearned Revenue		REVENUES	-EXPENSES	+GAINS/- LOSSES	– DIVIDENDS	
Increase \$1,500	Increase \$1,500						
	Decrease \$1,000		Increase \$1,000				



Note the liability account or term we use is unearned revenue which is also known as deferred revenue. The point is it is not revenue because we have not done what is necessary to earn the revenue at the point the cash was received. Later when we have done work on the project, the unearned revenue goes down by the amount we have earned while the revenues increase. Please do not get unearned revenue and revenue mixed up — unearned means its a liability that is going to be satisfied in the future by providing goods or services at which time the liability becomes revenues. As shown above, the company still owes \$500 worth of services or goods as shown in unearned revenue. You might remember that if you use the term payable you are expecting to provide cash in the future to satisfy the obligation while using unearned or deferred revenue indicates that our obligation will be satisfied with providing goods or services (revenue).

## **Key Takeaways**

Liabilities increase in return for the acquisition of assets, in the borrowing of cash or the receipt of unearned revenue. They decrease when the amounts borrowed are paid back in cash or other assets. Unearned revenue decreases when goods or services are provided to earn the previously unearned revenue.

#### **Check Yourself**

- 1. Arden Inc. receives cash from a customer in April for services that Arden will provide for the customer in June. Which of the following is true about the result of this transaction in April?
- A. Current assets and current liabilities increase
- B. Current assets increase and revenues increase
- C. Current assets and current liabilities decrease
- D. Current liabilities increase and revenues decrease

The correct answer is A. The receipt of cash increases current assets while the unearned revenue increases in the current liabilities keeping the equation in balance and showing that Arden owes the customer future services. There is no impact on revenues in April because nothing has been earned through providing services in April.

- 2. Arden Inc. has a loan it owes to the bank for \$50,000 which is a long-term liability. Interest on this loan has been growing (accruing) for the past 3 months equal to \$700. To record the impact of this interest growing (not the payment) Arden would:
- A. Increase revenue and increase expenses \$700
- B. Increase expenses and increase current liabilities \$700
- C. Increase current liabilities and decrease long-term liabilities \$700
- D. Decrease current liabilities and decrease current assets \$700

The answer is B. As interest accrues over time because we are using the bank's money, the impact on the accounting equation is an increase in the current liability interest payable and an increase in the interest expense. While some might consider increasing the loan payable (which is a long term liability) it is usually better to keep the interest separate from the principal of the loan. The increase in liabilities and decrease in stockholders equity caused by the increase in expenses keeps the right side of the accounting equation the same.

- 3. Arden Inc. pays \$1,500 in cash toward the loan mentioned in 2. \$700 to pay the interest and \$800 to pay down the loan principal. This transaction would be recorded as follows:
- A. Decrease current assets \$1,500 and increase current liabilities \$1,500
- B. Decrease current assets \$1,500 and decrease expenses \$1,500
- C. Decrease current assets \$1,500 and decrease current liabilities \$700 and decrease long-term liabilities \$800
- D. Increase current assets \$1,500 and increase current liabilities \$700 and increase long-term liabilities \$800

The answer is C. Payment of cash decreases current assets and payment for the interest decreases the current liability interest payable that was recorded in number 2 and payment toward the loan decreases the long-term liabilities. Both sides of the accounting equation decrease by a total of \$1,500 to keep everything in balance. Note that the expense has already been increased in the transaction in 2.



- 4. Arden provides all the services agreed to in June for the customer that sent the cash we dealt with in #1. What is the result of providing these services on the accounting equation in June?
- A. Increase in current assets and increase in revenue
- B. Decrease in current liabilities and increase in revenue
- C. Decrease in current liabilities and decrease in revenue
- D. Increase in current liabilities and increase in revenue

The answer is B. Providing the services to earn unearned revenue means that Arden no longer owes services to the customer so the current liability for those services needs to be reduced. Because they are now earned the amount earned represents revenue which should be increased. A decrease to a liability coupled with an increase in revenues (stockholders equity) results in the accounting equation remaining in balance.

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# 5.5: Track changes in revenues and expenses.

Learning Objectives

After completing this section, students will be able to explain the revenue recognition process and how expenses are incurred in four ways:

- 1. Matching with revenues
- 2. Use of resources that have only current benefit
- 3. Passing of time or use of an asset
- 4. Reduction in the usefulness of assets

Question: How do accountants know when and how much to record as revenue for a company?

No question is more critical to the financial success of a business and no question has caused more discussion in the accounting profession than how much revenue should be recorded on the income statement of that business. Listed first on the income statement it is a key metric that is looked at by investors and others to make decisions regarding the company. The process by which some companies earn revenue is complex while other companies have a very simple process. Accountants for years have discussed rules that would help all businesses small and large, simple and complex be able to use the same guidelines to determine when and how much revenue should be recognized (listed on the income statement). The result is the revenue recognition model that the FASB adopted in 2014. This model has the following 5 steps in this order:

- 1. Identify the contract the model is dependent on an agreement or contract between the seller and the customer. While it does not need to be in writing (although that helps), there does need to be agreement on both sides before any revenue can be considered earned. A business cannot just send out products to random people and claim that it has earned revenue by simply providing products. No agreement with customer then no revenue. It might be something else but it is not revenue.
- 2. Based on the contract/agreement in step 1, the business identifies the performance obligations in the agreement. Essentially what is required in the agreement with the customer. This could be simple like Walmart agrees to let you take ownership of a product in the store as you check out and pay for it. One product and thus a single performance obligation. But it could also be much more complicated like Ford selling you a car and a warranty (maybe two performance obligations) or IBM installing a major computer system including hardware, software programming, and ongoing support and updates (maybe three performance obligations). Related products and services may be considered one bundled performance obligation or several separate performance obligations. Accountants have to use judgement and refer to the customer agreement to make the determination. The more interrelated (cannot work separately) products and services are the more likely they are to be determined to be one instead of many performance obligations.
- 3. Based on the agreement, determine the transaction price how much the customer is most likely to pay when all conditions of the contract are fulfilled. This includes estimating returns, discounts, rebates and other such adjustments at the time the services or goods are provided not later. So if Walmart has a long history of product returns that indicates that 5% of the products are returned then the most likely amount customers in general will pay will be 95% of the sales price. Thus the transaction price is 95% of sales. If a road building contractor is to receive a 10% bonus for completing a road construction project ahead of schedule and their history is that they are almost always able to complete early then the transaction price may be 110% of the contract price from the beginning.
- 4. Using the result of steps 2 and 3 we allocate the transaction price in step 3 to the performance obligations identified in step 2. Now when only one performance obligation was identified in step 2 then all of the transaction price is allocated to that obligation and we are done. However, if there is more than one performance obligation then we have to answer the question How much of the transaction price is for each performance obligation? So if the transaction price is \$25,000 for a car with warranty and we decided that the car and warranty are separate performance obligations how much of the 25,000 is for the car and how much for the warranty. The rules state that the best way to make this judgement is to look for stand alone prices (if you sell the two performance obligations separately what is the individual prices). These standalone prices may come from our sales or the sales of competitors in the market.
- 5. Recognize the amount of the transaction price that is allocated to a performance obligation at the time when the performance obligation is met. This could come at a single point in time (transfer of ownership) or over time (little bit every month). Let's say that we had our car and warranty and allocated \$24,000 to the car and \$1,000 to the warranty. We would recognize \$24,000 at the point in time when ownership of the car transfers. The warranty would be earned over the length of the warranty (say 36 months) by dividing 1,000 by 36 and recognizing that amount as revenue each month.



Note that from an accounting equation point of view, if you receive cash from a customer and have not satisfied the model to recognize revenue, then the amount would increase current assets (cash) and increase unearned revenue (current liability). The current liability would be reduced and revenue increased when the performance obligations are met at a point in time or over time. If the revenue model has been satisfied and performance obligations have been completed but cash has not yet been received then revenue is increased and accounts receivable (current asset) is increased as well.

So you could say that there is only one way that revenue increases in the accounting equation and that is by satisfying the revenue recognition model shown above. The only way that revenue can be reduced is if we need to fix any of the estimates we made when we applied the model needs to be reduced. Changes in revenue go along with changes in accounts receivable or cash (current assets) or unearned revenue (current liability). Returns or rebates or other parts of the agreement that cause the seller to give to customer may result in an increase in a current liability as well.

An example using the accounting equation is as follows:

Pepsi sells syrup to Taco Bell for use in its drink machines located in its restaurants. The agreement includes the incentive that if Taco Bell reaches a certain level of purchases during the year that Pepsi will give Taco Bell a 2% rebate of all purchases for the year. Almost all of Pepsi's customers reach the level to get the rebate. So for Pepsi, we have an agreement (step 1), a single performance obligation (syrup – step 2) and the transaction price (98% step 3). Step 4 is easy with only one performance obligation and step 5 means when syrup is delivered Pepsi will record revenue for 98% of the invoice. So here is how a shipment of \$1,000,000 of syrup to Taco Bell on credit would show in the accounting equation for Pepsi:

ASSETS		= I IARII ITIFS		+ STOCKHOLDER EQUITY		HOLDERS
CURRENT	LONG TERM	CURRENT	LONG-TERM	CAPITAL STOCK	RETAINED EARNINGS	
Accounts Receivable		Rebate Payable			Revenues	– Expenses
Increase 1,000,000		Increase \$20,000			Increase \$980,000	

Note that the total changes to assets and liabilities/equity are \$1,000,000 thus we are still in balance.

#### Real World Example

See how Apple applies the revenue recognition model.





Question: So in addition to revenues on the income statement, we have expenses. Where do expenses come from how do they fit into the accounting equation?

A quick reminder that the definition of expenses we discussed earlier is costs incurred to generate revenue and provide a past or current benefit. This definition gives us clues to how expenses originate and how they will affect the accounting equation. Most of the expected transactions that lead to the recording of expenses have been covered already in our discussion of changes in assets and liabilities but our focus was on those changes. Now we will consider them emphasizing the change in expenses:

- When we sold inventory in our section about changes in assets, the inventory decreased and the expense cost of goods sold increased this is an example of **matching** the expense (cost of the items) with the revenue (sales price of those items to customers). This could also be illustrated by recording the cost of employees working on a project that we charge a customer for. The cost of the employees time is the expense and it is matched in the same time period as the revenue earned by selling that project to a customer.
- Another illustration of expenses was also shown earlier when discussing changes in liabilities. The use of utilities like electricity were described (this cost was incurred to help us earn revenues but not in the direct way as we saw with cost of goods sold and matching) and because the electricity would not provide any future benefit then it is a **resource used** and increases the expenses and the current liability (not paid yet). The effect on expenses would be the same in an example of a used resource like rent if we paid the rent (reduce the current asset cash) in the same accounting period as resource is used (increase expense). The increase in expense is not dependent on how it is paid for (cash in the same period rent or liability to be paid for later utilities). The expense is recorded in the time period it is used.
- Using up an asset because time has passed is another way that expenses are recognized or increased. This comes about when assets (both current and long-term) have a designated time period for their future benefit. As time passes, what was once a **future benefit becomes a current or past benefit**. So if we purchase an insurance policy that is going to last for 1 year, that is a future benefit and an asset. As one month goes by, then 1/12 of the benefit has become current or past and we would reflect that reduction in the asset and an increase in the expense. A piece of equipment that is getting used up/worn out over time is another example the original asset is recorded at its cost and we reduce the asset and increase the expense as time goes by and the equipment is used up.
- The last place to look for expenses are when there is a change in the benefit of an asset not because of the passage of time but
  rather from something unexpected. This could come because inventory becomes obsolete because of a change in technology or
  damage to equipment from a leaking roof. These reductions in the asset also result in an increase in expenses.

	ASS	SETS		= LIABILITIES	+ STOCKH	+ STOCKHOLDERS EQUITY			
CUR	RENT	LONG-	-TERM	CURRENT		RETAINED EARNINGS			
Inventory	Prepaid Insurance	Equipment	Building		Revenues	– Expenses			
	Decrease 500					Increase 500	Insurance Expense		
Decrease 350						Increase 350	Cost of Goods Sold		
	Decrease 4,000					Increase 4,000	Depreciation Expense		

Note that it may be easier to remember how expenses are shown on the accounting equation to put them as negative even though they are increases to the expenses. This keeps the equation in balance because an increase in expenses is actually a reduction or has a negative impact on retained earnings/stockholders equity. That negative impact is the same as the negative impact on the asset side of the accounting equation.

The accounting equation shows the following impacts from transactions that result in expenses:

• One month of an insurance policy that cost \$6,000 for a year was used during the month



- Inventory declined in value below what it cost by \$350 due to an unexpected change in technology
- Equipment that cost \$40,000 and lasts for 10 years has been used for one year.

Note how similar these expenses are in the accounting equation – each is a reduction to the assets and an increase to expenses. Which assets and expenses are used and how much detail we use to describe these changes depends on the chart of accounts and the information needs of those looking at the financial information. If the event that reduces the usefulness of an asset is extraordinary like a flood or lightning strike we might even use the term loss instead of expense and move it to the bottom section of the income statement to highlight just how unusual the event was. In each case shown above, the **increase in expenses reduces retained earnings** and thus the decrease on the asset side keeps the equation in balance.

#### Key Takeaway

The examples given of changes in revenues and expenses show that revenues and expenses almost always move in one direction — they increase. Unlike assets like inventory and liabilities like accounts payable that go up and down regularly, revenues and expenses are not going to go down except when an earlier revenue or expense amount is refunded or determined to have been too high in the first place. These instances are rare and unexpected.

#### **Check Yourself**

Arturo Corp. has a team of engineers who produce intricate designs for renewable energy systems which designs are then sold to customers who use the designs to build the systems. When the design is sold and revenue recognized, Arturo then increases its expense called costs of revenues for the amount paid to the engineers for their work on the design. This is an example of which expense recognition option?

- A. Use of resources
- B. Passing of time
- C. Reduction of usefulness of an asset
- D. Direct matching with revenue

The answer is D. The cost of the labor by the engineers employed in creating the designs is used to increase expenses in the same time period as the revenue from the sale of the designs is increased.

Arturo Corp. has a leak in its office building due to a severe storm. This damages several computers and desks such that they need to be thrown out. For the accounting equation, Arturo would reflect this damage with which of the following?

- A. Increase in current liabilities
- B. Decrease in revenues
- C. Decrease in assets
- D. Increase in assets

The answer is C. When assets lose some of their usefulness whether over time or with a sudden event, the asset is reduced by the amount of the drop in usefulness. In this case, this would be the cost of the desks and computers that are thrown out. To balance the accounting equation, Arturo would also record this amount as an increase in expenses (or loss if very unusual) that would reduce retained earnings/stockholders equity.

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## 5.6: Preparing financial statements from accounting equation worksheet.

Learning Objectives

Upon completion of this section, students will be able to:

- Describe how the expanded accounting equation is used to produce financial statements
- Identify the process for rolling results of the accounting equation over to the following year

Question: What do you do with the accounting equation when it is completed and all the increases and decreases for an accounting period have been entered?

While the expanded accounting equation is a useful tool to consider transactions and their impact on various accounting elements, by itself it does not communicate very well the financial picture of a company. Remember that is the job of the four financial statements we learned about back in chapter 3. So we need to see how what we have learned in chapter 5 ties back to our preparation of the financial statements introduced in chapter 3. Before we do this, we should understand that in real life accounting is done using sophisticated computers and software that allows for the simultaneous tracking of literally as many as millions of transactions. However, even these highly automated systems, do the same thing – summarize transactions into changes to assets, liabilities, equity, revenues and expenses – that we are going to do with these simple illustrations.

Date	ASSETS		=	L	IABILITIES	5	+ STOCKHOLDERS EQUITY			
	CUR	RENT	LONG TERM	CURRENT		LONG TERM	CAPITAL STOCK	+	RETAINED EARNINGS	
	Cash	Inventory	Equipment	Accounts Payable	Unearned Revenue	Note Payable		– Dividends	+ Revenues	– Expenses
Jan 5	Increase \$5000						Increase \$5000			
Jan 8	Increase \$7000					Increase \$7000				
Jan 10		Increase \$1500		Increase \$1500						
Jan 14	Decrease \$1000		Increase \$2500			Increase \$1500				
Jan 20	Increase \$3000				Increase \$3000					
Jan 21	Increase \$4000	Decrease \$1500							Increase \$4000	Increase \$1500
Jan 24				Increase \$730						Increase \$730
Jan 31					Decrease \$500				Increase \$500	
Jan 31	Decrease \$1500			Decrease \$1500						
Jan 31	Decrease \$200							Increase \$200		
Jan 31			Decrease \$50							Increase \$50



So we added a column for the date for each transaction. That is to emphasized the periodic nature of accounting. We need an accounting period — in this example one month from January 1 to January 31 — and if the transaction takes place during that accounting period then it gets accounted for and if not it does not (we will look at February transactions below). We could use a year or a quarter as our accounting period but either way we need a start and an end. Our illustration above shows the equation for a brand new company — so there is zero assets, liabilities or equity when we begin.

January 5 Issued stock to shareholders for 5,000 in cash

January 8 Borrowed \$7000 from the bank

January 10 Purchased inventory on credit

January 14 Purchase equipment with \$1000 in cash and borrowing \$1500

January 20 Received cash from a customer for services to be provided the next month

January 21 Sold inventory to a customer B for \$4000 in cash. The inventory cost \$1500

January 24 Recorded bill from electric company for \$730 for electricity used during January to be paid in February.

January 31 Provided services to customer B worth \$500 (early) from contract agreed to on January 21.

January 31 Paid for the inventory purchased on credit

January 31 Paid dividends of \$200 in cash

January 31 Used up equipment over the passage of time (one month)

So how many of those transactions could you have guessed? Do you see how each row balances both sides of the accounting equation like our examples in earlier sections?

When we are confident that no other transactions took place in January then we can do some summarizing like this (lines up with the columns from our accounting equation):

Cash	Inventory	Equipment	Accounts Payable	Unearned Revenue	Notes Payable	Capital Stock	Dividends	Revenues	Expenses
16,300	0	2.450	730	2500	8500	5000	200	4500	2280

These amounts came from adding up the increases and subtracting the decreases so that we have one amount for each account (on our chart of accounts and accounting equation). Normally, we would have separate columns for each kind of expense (Cost of Goods, Utilities, Depreciation) based on your chart of accounts but we put them all together to save space. Lets check to see that our totals balance like they are supposed to:

Assets = 16.300 + 0 + 2.450 = \$18.750

Liabilities = 730 + 2500 + 8500 = \$11,730

Stockholders Equity = 5,000 - 200 + 4500 - 2280 = \$7,020

\$18,750 = 11,730 + 7,020 = \$18,750

Just how we planned it would work.

We now have all the information we need for financial statements:

#### **Income Statement for January**

Revenues 4,500

Cost of Goods Sold 1,500 this is an expense

Gross Profit 3,000



– Expenses 780 (we could break them into more detail as desired by those reading the financial statements with more columns or descriptions on each expense)

Net Income \$ 2,220

#### **Statement of Changes in Equity for January**

Capital Stock Retained Earnings

Beginning of January 0 0

Stock Purchase 5,000

Net Income 2,220

Dividends (200) Parentheses means to subtract

Ending of January \$5,000 \$2,020

### **Balance Sheet as of End of January**

**Current Assets** 

Cash 16,300

Longterm Assets

Equipment 2450

Total Assets \$18,750

**Current Liabilities** 

Accounts Payable 730

Unearned Revenue 2,500

Long term Liabilities

Notes Payable 8,500

Total Liabilities \$11,730

Capital Stock 5,000

Retained Earnings 2,020

Total Equity \$7,020

Liabilities and Equity \$18,750

#### **Statement of Cash Flows for January**

Operating

Cash from sales 4,000

Cash from customers prior to earning it 3,000

Cash for inventory (1,500)

Total Operating \$5,500

Investing

Purchase of new Equipment (1,000)

Financing

Sale of stock 5,000
Borrowing from bank 7,000



Dividends paid (200)
Total Financing \$11,800

Ending Cash 0 + 5,500 + (1,000) + 11,800 = \$16,300 (zero to start with since this is a new company)

So all the information on our financial statements came from the expanded accounting equation – for the Income Statement, Statement of Equity and Balance Sheet from the totals at the bottom of the worksheet (or is calculated from those totals). Even the cash flow statement which uses each entry in the cash column and classifies them as operating, investing or financing can be created from the accounting equation worksheet. Because our accounting equation stayed in balance, the balance sheet is in balance. While each of the items on the financial statements comes the accounting equation worksheet the reverse is also true – each total has a place to go on the financial statements. We do the financial statements in the order given because they work together and we cannot complete the later financial statements without information from the earlier ones.

Question: So what about February? How does the accounting equation worksheet move forward to the next accounting period?

So the business can determine what accounting period to use. It could be a month, a quarter or a year or maybe even some other period as long as we have a distinct starting date and ending date. So for our illustration, February becomes our new accounting period and we start a new accounting equation worksheet. Some of the information from January comes forward as shown below:

Date	ASSETS			+ LIABILITIES			+ STOCKHOLDERS EQUITY			
	CURRENT		LONG TERM	CURRENT		LONG TERM	CAPITAL STOCK	+ RETAINED EARNINGS = 2,020		ETAINED
	Cash	Inventory	Equipment	Accounts Payable	Unearned Revenue	Notes Payable		- Dividends	+ Revenue	– Expenses
From January	16,300	0	2,450	730	2,500	8,500	5,000	0	0	0
Feb 2	Decrease 500					Decrease 500				
Feb 5					Decrease 2,500				Increase 2,500	

So asset accounts like cash and liability accounts like unearned revenue and equity accounts like capital stock come to the new accounting period exactly where we left off from the accounting period before. Retained earnings is not directly from the January accounting equation worksheet but rather from the statement of stockholders equity (it is the retained earnings at the end of January). Dividends, revenue and expenses do not carry to the new accounting equation worksheet but rather start over at zero. That way we can measure how much revenue and expense and dividends (and gains and losses if we have them) happened during the accounting period. So each income statement and cash flow statement and statement of stockholders equity, the reporting is the change in the items reported during the accounting period. The income statement for February given only the transactions listed above would show only revenue of 2,500 earned in February. For the statement of stockholders equity for February the beginning retained earnings would be 2,020. The balance sheet carries forward where transactions in the new accounting period modify the balances in those accounts so for unearned revenue, the new balance would be zero because the earning of the revenue resulted in a decrease in unearned revenue of 2,500. Start with 2,500 from January and then decrease by 2,500 and the new amount would be reported on the balance sheet (not the change). Notes payable would change from 8,500 to 8,000 which would be what is reported.

#### **Key Takeaways**

Income statements, statements of equity and cash flow statements report the change in accounts from the beginning of the accounting period to the end of the accounting period. Balance sheets report the amount in an account at the end of an accounting period not the changes. Balance sheets carry forward to start the new accounting period while revenues, expenses, dividends start over at zero with a new accounting period.

#### Check Yourself

Which of the following would start over at zero at the beginning of a new accounting period?



- A. Unearned Revenue
- B. Accounts Receivable
- C. Inventory
- D. Utilities expense

D is the correct answer. Revenues and expenses start over at zero each new accounting period while liabilities (unearned revenue) and assets (Accounts Receivable and Inventory) carry forward to the new accounting period from the old.

Which of the following would be an **INCORRECT** heading for an accounting period as shown on the financial statements?

- A. Cash flow statement from January 1 to December 31, 2023
- B. Balance sheet from January 1 to December 31, 2023
- C. Income statement for year ending December 31, 2023
- D. Statement of stockholders equity beginning with January 1 and ending with December 31, 2023

B is the correct answer. Only the balance sheet does not refer to a beginning and ending date but only a single date at the end of the accounting period. The heading for the income statement implies both a beginning and ending since it refers to the accounting period (a year) and the ending date.

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## 5.7: End of chapter exercises

#### Questions

- 1. What is an account?
- 2. What is a chart of accounts?
- 3. What differences might you expect between the chart of accounts of a small service company and a large manufacturing company?
- 4. How is a typical chart of accounts grouped to make the accounting process easier?
- 5. Where should new accounts be added to the chart of accounts?
- 6. What is the expanded accounting equation?
- 7. An investment of cash by stockholders in a corporation would result in changes to what two accounts?
- 8. Retained earnings can be broken down into what three elements?
- 9. What are the two elements where increases in those elements reduce stockholders' equity?
- 10. What is a difference between borrowing from a bank and getting cash from stockholders in return for stock?
- 11. Which changes in assets also result in a change in stockholders equity?
- 12. What is an example of a liability that grows or accrues over time?
- 13. When borrowing money from a bank, what is the impact on the accounting equation?
- 14. When assets are used up over time, the asset is decreased and what is increased?
- 15. What are the five steps in the revenue recognition model?
- 16. In what order are the financial statements prepared?
- 17. Where do the items listed on the cash flow statement come from on the accounting equation worksheet?

#### True/False

1	The number of accounts on the chart of accounts is strictly limited.
2	Every account on the chart of accounts must be identified by one of the accounting elements
3	An account on the chart of accounts could be both a liability and a revenue.
4	The term prepaid is usually associated with an asset account.
5	Unearned revenue would usually be listed in the asset section of a chart of accounts.
6	The FASB dictates to companies what their chart of accounts must look like.
7	The accounting equation stays in balance except when dealing with dividends.
8	Gains and losses are listed under retained earnings because they change the amount of retained earnings.
9	Paying cash for prepaid insurance will not change retained earnings.
10	Using electricity in June and receiving a bill from the electric company in June will result in an increase in assets during
Jı	une.
11	Selling inventory for a price more than what was paid will increase retained earnings.
12	Amounts to be reported on the financial statement come from the accounting equation worksheet.
13	Accounts receivable at the end of 2023 would become the beginning balance for accounts receivable in 2024.
14	Cost of Goods Sold for the year 2023 would become the beginning balance for Cost of Goods Sold in 2024.
15	Every total from the accounting equation worksheet will have a place to go on the financial statements.
16	When unearned revenue is earned, liabilities are decreased.
17	For revenue recognition the transaction price is adjusted for discounts and rebates that are most likely to take place.
18	Allocating the transaction price to the performance obligations is not necessary if there is only one performance
ol	bligation.

#### Multiple Choice

Which of the following would most likely be found in the expenses section of a chart of accounts?

- A. Accounts receivable
- B. Salaries payable
- C. Utilities
- D. Capital stock



When looking at the names of accounts and determining where they belong, the term deferred is usually used to show:

- A. Something that is to be received or earned later.
- B. An amount owed for services received now.
- C. The same as the term accrued.
- D. Only amounts associated with stockholders' equity.

Cash invested by stockholders in the company in return for stock will have the following effect:

- A. Increase expenses
- B. Decrease current liabilities
- C. Increase revenue
- D. Increase current assets

Which of the following is NOT a way that assets change on the accounting equation?

- A. One asset is exchanged for another asset.
- B. An asset is earned by providing goods or services to customers.
- C. An asset is purchased by using a liability.
- D. All of the above are examples of how assets can change.

Using cash to pay off a loan that is due in 10 years will have the following effect on the accounting equation:

- A. A decrease in long term liabilities
- B. An increase in current assets
- C. A decrease in revenues
- D. An increase in long term assets

Interest Earned would most likely be reported on which of the financial statements?

- A. Balance sheet
- B. Income statement
- C. Statement of stockholders equity
- D. Statement of contingencies

Marvin Inc. sells products to customers for \$250 that originally cost \$150. The total impact on the expanded accounting equation of this transactions is:

- A. Increase in current liabilities for \$100.
- B. Increase in current assets for \$100.
- C. Increase in retained earnings for \$250.
- D. Decrease in retained earnings for \$150.

From the dividends column of the expanded accounting equation worksheet, the total would go on which of the financial statements?

- A. Statement of stockholders equity.
- B. Income statement
- C. Balance sheet
- D. Statement of amounts received by owners

If amounts of cash are received from a customer and under the revenue recognition model, they are determined to have not been earned yet, the company receiving the cash would properly:



- A. Increase assets
- B. Increase liabilities
- C. Increase revenue
- D. Increase expenses

#### **Problems**

- 1. Indicate in which section (Asset, Liability, Equity, Revenue, Expenses, Gains/Losses) the following accounts would most likely be found in:
  - Interest payable
  - Interest receivable
  - Interest earned
  - Interest expense
  - Inventory
  - o Cost of Goods Sold
  - Sales
  - Deferred revenue
  - Land
  - Security deposits paid
  - Investment in the stock of another company
- 2. Prepare an expanded accounting equation worksheet for the Zeon Company to show the effect of the following transactions on the given dates our accounting period is January:
  - January 2 Investment of \$75,000 in cash into the business by stockholders.
  - January 4 Paid \$10,000 in cash toward a building whose total cost is \$90,000 with the rest being borrowed from the bank to be paid back in 5 years.
  - January 10 Bought inventory on credit for \$4,600
  - January 14 Paid cash wages to employees who worked in January for the business for \$850.
  - January 21 Sold merchandise for \$3,200 in cash. This merchandise (inventory) originally cost \$1,540.
  - January 30 Received a bill from the utilities company for \$290 for utilities used during January that will be due in February.
  - January 31 Paid cash dividends of \$50 to stockholders.
- 3. Prepare the income statement, statement of stockholders equity, balance sheet and cash flow statement for the month of January for Zeon.
- 4. Prepare an expanded accounting equation worksheet for the Zeon Company for February given what was done in January and the following transactions:
  - February 5 Paid \$450 in cash to the bank on the loan borrowed in January and paid \$300 in interest on that loan (total paid 750).
  - February 11 Paid the bill from the utilities company from January
  - February 12 Paid the accounts payable associated with the inventory purchased in January.
  - February 18 Sold merchandise to a customer for \$2,300 in cash. This merchandise originally cost \$1,090.
  - February 27 Received a bill from the utilities company for \$235 for utilities used during February that will be due in March.
  - February 28 Paid cash dividends of \$55 to stockholders.
- 5. Prepare the income statement, statement of stockholders equity, balance sheet and cash flow statement for the month of February for Zeon.

#### Research/Discussion

1. Find the financial statements for Harley Davidson at <a href="https://d18rn0p25nwr6d.cloudfront.net/CIK-0000793952/3d1dcda6-97b8-48e6-bb1e-db78509fdb91.pdf">https://d18rn0p25nwr6d.cloudfront.net/CIK-0000793952/3d1dcda6-97b8-48e6-bb1e-db78509fdb91.pdf</a> on page 57. If you were creating an accounting equation worksheet for Harley for 2023, list



- which accounts you would need in your worksheet and indicate the beginning balance if any that you would use to begin the worksheet for 2023.
- 2. Describe what trends you see in the financial information reported by Harley over the past three years specifically on the income statement.
- 3. For 2022 how much did the motorcycles and related products sold to dealerships cost for Harley to buy and make? What is Harley Davidson's other source of revenue?
- 4. Finding the revenue recognition footnote for Harley Davidson starting on page 65, next to motorcycles what is Harley's next largest revenue source? In reading the footnote about Harley's application of the revenue recognition model, what two adjustments does Harley make to the transaction price (amount expected to be received) when applying the model (second and third paragraph)? What liability account do they use to show amounts they expect to pay back to customers?

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# **CHAPTER OVERVIEW**

# 6: How are ratios used to help understand financial reporting?

- 6.1: How is the cash collection cycle reported?
- 6.2: What do ratios tell us about the liquidity of a company from its financial statements?
- 6.3: What do financial statements tell us about the ability to sell inventory and collect from customers?
- 6.4: What do the financial statements tell us about the profitability of a company?
- 6.5: End of Chapter Exercises

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## 6.1: How is the cash collection cycle reported?

#### Learning Objectives

After students complete this section they will be able to:

- Relate the cash collection cycle of a business to the accounting equation, internal controls, accounting standards and uncertainty
  presented in earlier chapters
- Explain the allowance method for estimating uncollectible accounts

Question: What is so important about the cash collection cycle for a business?

Cash is the life-blood of any operating business or organization. Without cash, a business cannot pay employees or pay for other items needed in the business. Business can come to a stand still when cash is scarce or non existent. In today's business world, most cash is no longer in the form of currency like 20 dollar bills or even written checks. Cash exists as electronic numbers in bank accounts that can be easily accessed using a variety of electronic payment forms. From 2014 to 2022, the number of checks processed in the United States went from 5.7 billion down to 3.3 billion while electronic forms of payment of all sorts increased from 104 billion transactions to 193 billion transactions. Businesses today operate in a primarily an electronic payment system but that does not make this electronic money any less important to the success of the business. Whatever form it takes, cash is key to continued operation and the ability to generate cash is key to a successful business.

Question: So would a business want to maximize the amount of cash it has whether as currency or electronic cash in the bank?

Business obtain assets in order to generate revenues which result in more assets. Here is the dilemma, while cash is an asset and a necessary one for paying bills and employees, it is not very useful in generating revenues. If a business has a pile of money (in a safe or in an online bank account) it will generate very little additional revenue. There may be some interest on the bank account but certainly not enough to justify keeping large amounts of cash in that bank account. Investors would not be very pleased to see this idle cash not being used to earn revenues and profits. If investors buy stock in a company and all that company does is take the money collected at put it in a bank account – then the investor could have done that on their own without stock ownership. Investors may want the company to have enough cash to pay dividends but they are not interested in piles of it going unused. Thus, businesses exchange at least some of their cash for more useful assets and expenses – those that are used to generate revenues – like equipment, buildings, wages and electricity.

If you thinking there must be a balance between having too much cash and having too little, you are absolutely correct. The term we use in accounting and business to describe this balance is *liquidity*. A business that has more than enough cash or can obtain that cash quickly is referred to as having high liquidity. A business that has less than enough cash is referred to as having low liquidity. Businesses try to have enough liquidity that they can respond to opportunities or challenges but not too much so that they are not generating the revenues and profits needed to reward investors. An example of this kind of decision – a company has the opportunity to purchase some new and improved equipment (will help them generate even more revenues than the existing equipment). They have cash in the bank that would allow them to pay for it because they have pretty high liquidity. If they exchange the cash for the equipment that will reduce liquidity right now but generate greater revenues going forward. If a crisis came up (or an even better opportunity) the cash may not be available because they spent it on the equipment. They could sell the equipment perhaps in an emergency but that would not be as easy as just getting the money from the bank account (the equipment is less liquid than cash).

Question: How does this concept of liquidity affect financial reporting?

In the structure of the balance sheet, liquidity influences how much of it is reported. The whole idea of current assets versus long term assets is related to liquidity. Current assets that provide benefit in the next year are separated because they are more liquid (more easily turned into cash) than long term assets. Current liabilities are going to require liquidity (cash to pay them) over the next year as opposed to long term liabilities where liquidity needs are further in the future. Typically cash is listed first as a current asset because it is the most liquid and further current assets are listed in the order in which they could be turned into cash on the balance sheet. Of course the cash flow statement is entirely concerned with where cash comes from for the business and what it is used for. It is the story of a company's liquidity situation over the course of an accounting period.

Question: More transactions involve cash than any other financial statement element and it is important in reporting as mentioned above. How do we know how much we have?



In chapter 4, we discussed internal controls and how they are designed to protect assets and ensure that financial information is reported correctly. The process involves a risk assessment to identify where our company is at most risk from mistakes and fraud. In most risk assessments with regard to assets and transactions, cash poses perhaps the largest risk. The sheer number of transactions and chances for mistakes makes it vulnerable. In addition, the idea that if any asset is going to be stolen by dishonest participants, it would be cash, makes the risk of loss high. If someone steals any other asset, they must convert it into cash to be able to spend it – this makes cash the favorite target of thieves.

Businesses then must be extra careful to establish internal control procedures that will ensure that cash is safeguarded and transactions are properly recorded. Since cash has become more electronic, the preferred control procedures should address this reality. Two signatures on paper checks is not effective when checks are not being used and has been replaced by controls like two factor authentication online (password and text to phone verification for example). Careful maintenance of strong passwords, review of exceptions and the assignment of duties to require large transactions to have a second sign-off help keep electronic cash secure. In retail establishments, cash transactions are handled by sophisticated computers which separate the cash and credit card record keeping from any handling of the physical cash. Many now do not even require an employee at the register so there is actually such separation of duties that a person is not even able to steal the cash or card information (because no one other than the customer even handles it). The overarching control on these transactions is the process of reconciliation where the business compares their records of transactions (deposits, cash transfers, etc.) with records kept by the bank or other financial institution. While this may be done using computers and even artificial intelligence instead of paper and pencil it still must be carefully thought through and implemented. Reconciliation is an effective deterrent to fraudulent transactions only if the individual overseeing the reconciliation is not also the person overseeing the actual recording of the transactions to be reconciled.

#### Check Yourself

Arneldo has a company credit card to facilitate small purchases and travel costs necessary in his role in his company. Each month, Arneldo is required to submit a record of the transactions he paid for from the card. This record is compared against the financial institution's statement sent directly to the company. For this to be an effective reconciliation internal control procedure, who should not complete this comparison?

- A. Arneldo
- B. Arneldo's supervisor
- C. Accounts payable clerk
- D. Controller

A is the answer. As long as the individual is properly trained as to the process, the only person who cannot complete the reconciliation is the one responsible for the transactions and still have the control procedure to be effective. Arneldo could always review his records and catch errors but as effective control that would help an observer trust the outcome, the reconciliation should be done by a separate individual or be completely automated.

Question: If cash is so important and we spend so much time tracking it, how does a company generate more of it?

While a business can borrow money from banks or sell stock to shareholders to get cash that can be used in the business, these sources are generally severely limited unless the business can show the ability to generate cash by selling goods or services to customers. The company must obtain goods (inventory) that customers want to pay for or hire employees or contractors whose services customers are willing to pay for. This obtaining of things to sell, convincing customers to agree to buy (revenue recognition) and then collecting cash from those customers is called the cash conversion cycle and is the primary way a business obtains cash. Obtaining goods or services from suppliers and employees requires cash and thus you start and end with cash (more than you started with) which is why it is referred to as a cycle but in truth it never really has a start and an end just like a wheel does not have a start and a end.

We want to focus on the step between convincing customers to buy a product and service and collecting cash in our bank account for our next illustration of our use of the accounting equation. For many businesses, a customer buying a product and paying for it is combined into one step. Retail stores, physical and online, sell products and collect the money at the same time. Customers pay with physical cash or using a debit card, credit card or other electronic payment system (i.e. Apple Pay). When the customer swipes their card or waves their phone money is transferred from their bank account to the account of the seller. With a credit card, the bank that issued the credit card provides the customer a loan so that the money can be transferred to the account of the seller. In all of these methods of payment, the seller has an increase in cash in their account. Signatures, PIN's and careful tracking provides



security over these transactions for both the buyer and seller. For most of the electronic payment forms, some sort of fee is charged by the company that processes the transaction. This means the seller does not get all of the cash that the customer is willing to pay. So when you swipe your major credit card for a \$100 purchase, Target or some other retailer will receive about \$98 with the other \$2 going to pay the credit card company and bank involved in making the loan for their service. When a major credit card (Visa, MasterCard, Discover, American Express) is used by a customer to make a purchase at Walmart, Walmart accounts for it just like a cash sale because Walmart gets the cash right away (due to the loan provided by the credit card company/bank).

Question: Why would a company accept only \$98 when the customer was willing to pay \$100?

Retail companies are willing to accept credit card payments even though it costs them, because they believe that the convenience that customers enjoy by getting an instantaneous loan will allow them to purchase more and thus increase revenues. A little less cash now to generate more revenues – seems like the trade off in liquidity discussed earlier. Some retail companies have started their own credit cards to avoid paying these fees. Then the retail company has to track all the transactions, send bills to customers and follow up with collecting the cash later. Most retail businesses have decided avoiding all of these issues and getting their cash right now is worth whatever fees the banks and credit card companies charge.

Companies that sell goods and services not to a retail customer but rather to another business (referred to as B2B) have found another way to make it convenient for their customers and not pay the fees the credit card companies charge. To increase revenues, they allow their customers to buy today on credit and pay later. This helps customers in two ways – they do not have to have the liquidity today that would allow them to pay for it and they can make one payment for a whole list of purchases over time rather than lots of small payments each time a purchase is made. This works so much better for B2B sellers who have hundreds of customers to track than it does for retailers with millions. If you think about it, the seller is actually providing a loan to the customer at the sale that allows the customer to obtain goods or services now and pay later. Because the seller has provided the goods or services, revenue can be recognized and recorded but instead of cash the seller records accounts receivable (going to receive cash in the future). By the way the buyer records an accounts payable but we will save that discussion for another time.

For those that sell on credit, they have to track all the sales individually by customer typically using an computerized accounting software designed for this function. They then have to follow up with each customer to collect cash payment when it is due. Generally, these sellers establish common terms for all customers like all amounts are due in 30 or 60 days. Imagine a long list of customers with each showing the amount the customer has purchased and not yet paid for. A total of this list of customers would be equal to the amount the company would show on their balance sheet. So a sale to customer A on credit would both increase how much customer A owes on the list as well as increase the total of the list (shown on the balance sheet). When customer A makes a payment it would both reduce the amount owed by customer A and reduce the total of the list (accounts receivable on the balance sheet).

	ASSETS =			LIABILITIES		+ STOCKHOLDERS EQUITY				
	CURRENT		CURRENT	LONG TERM	CAPITAL STOCK	EARNINGS		+ RETAINED		
Cash	Accounts Receivable Inventory					Revenue	<ul><li>Cost of</li><li>Goods</li><li>Sold</li></ul>	– Expenses	– Dividends	
Increase 98		Decrease 45				Increase 98	Increase 45			
	Increase 100	Decrease 45				Increase 100	Increase 45			
Increase 100	Decrease 100									

The first transaction illustrated above is the sale of an item that the customer paid \$100 for using a major credit card with a 2% fee. The item sold originally cost \$45. The second transaction is selling that same item to a customer on credit. When the credit customer makes a payment the last transaction would be recorded (maybe in a later accounting period). What is not easily shown in this format is that the changes to accounts receivable affect not only the total accounts receivable but also the individual customer's account.



Question: What are the risks of selling to customers on credit?

As mentioned earlier for retailers who set up their own credit cards, any business that sells something today and expects payment later is taking on all of the costs of tracking the detailed information about that customer so that collection can be done. Without some form of reminder (paper or electronic), customers will typically not pay the amounts they owe or at least will not do so very quickly. Having an efficient system to track which customers bought what and when and making sure that information is correctly communicated when requesting payment helps to reduce the risk of unhappy customers and non payment. Businesses are also concerned about the risk that customers who they sell to on credit will not pay on time or maybe not pay at all. To address this risk, companies set up internal control procedures that involve checking the history of potential customers to see if they have paid their bills on time in the past and setting appropriate terms for granting credit. Terms typically spell out when an amount a customer owes is due and may involve penalties for paying late and discounts for paying early. The terms may even vary based on the history of the company – one customer may be offered 60 days to pay for their purchases while another only 30 days because they do not have strong history of payment (the longer the terms are the less likely the customer will pay). Other customers we may refuse to sell on credit or only sell a few items at a time (low credit limit). All of this to lower the risk that customers will not pay without causing them to take their business to your competition because your credit policies are too strict.

Question: How is the risk of non payment for credit sales accounted for in the accounting equation?

To understand the application of GAAP to accounts receivable, we need to go back to our earlier discussion about uncertainty. We also need to remember that any company's accounts receivable balance on the balance sheet represents the total of a whole long list of customers and how much they owe our business at a particular point in time. For companies who sell much of their product on credit, accounts receivable can be a significant amount on the balance sheet. Investors want and GAAP requires that the amount on the balance sheet must be reported at net realizable value. That means a business reports what they expect to actually collect from customers. So Eli Lilly, a U.S. drug manufacturer, reported on its balance sheet dated December 31, 2022 accounts receivable (net) was \$6,896 million. This means that Eli has a huge list of customers and the amount that they owe and Eli expects to receive as of December 31 is almost \$6.9 billion. GAAP and Eli realizes that despite their efforts to check into the background of customers and to set appropriate terms for them, a few of them will end up not paying. An estimate of this amount has already been subtracted from the total amount customers owe and the remaining amount is put on the balance sheet (the term Net indicates that the estimate of uncollectible accounts has been subtracted). As an explanation on the balance sheet, Eli states that as of December 31, 2022 they estimated that \$16 million of the amounts customers owed will not be received.

#### **Key Term Usage**

The term "Net" in accounting means something has been subtracted. Hence net income has expenses subtracted, net receivables has the estimate of uncollectible accounts subtracted.

Question: Why would Eli Lilly sell to a customer who they thought would not pay them?

The answer is they wouldn't sell to that customer on credit. When they made the sale, they had researched the customer and found they were credit worthy. However things change between the time sales are made and when it is time to collect and those changes can impact the ability of the customer to pay. Therefore, accounting rules require that a company like Eli look at all those changes plus considering past history of customers in general not paying (remember the list of customers is probably in the thousands) to determine an estimate of how much they will not collect. This estimated dollar amount is referred to in accounting as an allowance for uncollectible accounts or allowance for bad debts or when we want to be short about it just **allowance**. Typically this is listed as a separate account on the chart of accounts and in our accounting equation worksheet. Now consider when Eli has a customer that has not paid the amount owed. Eli has followed up with reminders and maybe threatening letters and still no payment. At some point, it becomes clear that no matter what Eli Lilly does to collect, no payment will be received and they might as well give up on collecting. This could take several months – maybe even a year to go through this process. When they give up on collecting, it is referred to as a write off. This write off very often will be in a different accounting period from the original sale.

ASSETS =		LIABILITIES		+		STOCKHOLDERS EQUITY			
CURRENT		CURRENT	LONG TERM	CAPITAL + RETAINED STOCK EARNINGS		)			
Cash	Accounts Receivable	– Allowance				Sales Revenue	– COGS	– Bad Debt Expense	



Inc. 50,0	rease 000			Increase 50,000		
	Increa 600	ase			Increase 600	
Dec 150	Decrease Decrease 150	ease				

Illustrated above is the accounting equation focused on accounts receivable. Notice a separate column for the allowance for bad debts has been added but it is in the same section as accounts receivable (so that it is easily seen as related). It is also subtracted from accounts receivable as indicated by the minus sign in the heading. The first transaction is the recording of the sales of services to lots of different customers (we lumped them together to save time) for 50,000 on credit during the accounting period. To keep it simple, we did not show any of these amounts being collected from customers (that would increase cash and decrease accounts receivable). This means that at the end of the accounting period all \$50,000 is still owed to our business. We estimate that out of all the customers and all the amounts they owe, \$600 will not be collected. We increase the allowance (because it is subtracted the current assets decrease) and increase an expense labeled for bad debts or uncollectible accounts. The third transaction is how we show the write off of an account who owed us \$150. We take it off our list of customers and also take it out of our estimate (not an estimate any more).

If we reached the end of the accounting period, we would put the following amounts on our balance sheet:

Accounts Receivable \$49,850 represents the list of customers and the actual amounts they owe us

Less Allowance (450) the estimate of what we will not receive – parentheses indicates a minus or subtraction

#### Net Accounts Receivable \$49,400 the actual amount we expect to receive

When we start a new accounting period the amount in the Accounts Receivable column and the allowance column will carry forward (separately) and become the beginning amount for the new period. The FASB rules do not specify how a company should come up with their estimate but they do state that at the end of the accounting period the amount of the allowance should consider all available information about our customers to determine a good estimate of what will not be collected in the future. So a business is going to consider what amount is listed in the allowance column and increase or decrease it as needed according to all available information.

#### Real World Example

See Eli Lilly's reporting of Accounts Receivable on their 2019 balance sheet

https://youtu.be/W3rH2B\_0CK8

#### **Key Takeaways**

The cash collection cycle was used to illustrate the application of accounting principles, internal controls, financial reporting, estimates and the expanded accounting equation to two very important assets – cash and accounts receivable.

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# 6.2: What do ratios tell us about the liquidity of a company from its financial statements?

#### **Learning Objectives**

After completing this section, students will be able to:

- Calculate the current ratio and quick ratio from balance sheet information
- Explain how transactions may change the quick ratio and current ratio
- · Explain how the ratios communicate a company's liquidity

# Ratios are calculated comparisons between two or more dollar amounts on the financial statements that help us see and measure relationships

Question: What is shown by the current ratio?

Since the ability to meet obligations and pay bills when they are due is a key concept in maintaining liquidity for a business, it makes sense that one measure of that liquidity is to compare what is listed on a company's balance sheet for current assets with what is listed as current liabilities. The current assets are those resources available over the next year that the company controls and the current liabilities are those obligations that are due over the next year. Thus the formula for calculating the current ratio is:

#### **CURRENT ASSETS / CURRENT LIABILITIES**

A properly prepared balance sheet should have totals for both current assets and current liabilities making it fairly simple to calculate. The ratio is just that – a ratio. While it can be converted to a percentage it is generally not done that way. If current assets are 200 and current liabilities are 100, then the ratio would be 2.0 and the company could be described as having \$2 of current assets for every \$1 of current liabilities. That would give them the ability to meet their current obligations and have some extra assuming they are able to convert all of their current assets that are not cash into cash in a timely way to pay the bills. If current assets on the balance sheet are \$80 and current liabilities are \$100, the ratio would be calculated as .8. That could be described as having 80 cents of assets for every \$1 of current liabilities. This company would have little extra liquidity and must be careful to convert all assets into cash quickly as to be able to meet obligations. They are less liquid than the company with a current ratio of 2.0.

This kind of comparison can be done by comparing the liquidity of a single company over time (calculate the current ratio for 2023 and compare it to 2022) to see how it is changing. This is referred to as horizontal analysis – looking at a single company changes over time. Comparison are also made between two different companies by looking at one company's current ratio in comparison to another company's current ratio. This is usually most valuable when done with two companies that are in a similar industry or that have similar products or services.

Question: What is different with the quick ratio?

The quick ratio (also referred to as the acid test ratio) is also a measure of liquidity using the balance sheet of a company. The difference is what is included in the top number or assets side of the equation. The formula could be written out like this:

#### QUICK ASSETS / CURRENT LIABILITIES

When considering quick assets, remember that on a balance sheet, current assets are generally listed in order of liquidity with cash first. If you are looking at the current assets, quick assets are thought of as all those more liquid than inventory. So you may see quick assets defined as cash and cash equivalents, marketable securities or short-term investments and accounts receivable. You may also see quick assets defined as total current assets subtract inventory and any others listed afterwards.

So if a business' current assets were listed as follows

Cash	\$10
Cash Equivalents	5
Marketable Securities	20



Accounts Receivable	12
Inventory	15
Prepaids	4
Total	\$66

Quick assets could be found by taking 10 + 5 + 20 + 12 = \$47 or by taking \$66 - 15 - 4 = \$47. Two ways to get the same result. Using either way, the quick assets would be divided by current liabilities to get the ratio. The quick ratio is referred to the same way as the current ratio – a ratio of 1.5 can be described as having \$1.50 of quick assets for each dollar of current liabilities. You might notice that no matter what the situation the quick assets must be equal to or less than total current assets. That means that the quick ratio must be equal to or less than the current ratio.

Question: How would a business or transactions change the business's liquidity as measured by the current and quick ratio?

Examining the formula will help us understand what would change the ratios. Because current assets or quick assets are the top or numerator in the ratio, any transaction that increased current/quick assets without changing current liabilities will increase the current/quick ratio. Any transaction that decreases the current or quick assets without changing the current liabilities will decrease the ratio. So a sale of inventory that cost \$60 for \$100 in cash from a customer will increase cash by \$100 and decrease inventory \$60 so total current assets increased by \$40. The other side of the accounting equation shows an increase in retained earnings by \$40 as well. Since there is no effect on current liabilities and an increase in current assets, there would be an increase in the current ratio. Because cash is included in the quick assets and they increase, there is also an increase in the quick ratio.

What about the collection of accounts receivable from a customer. As we discussed earlier, when collecting cash owed to us from a customer, there is an increase in cash and a decrease in accounts receivable for the same amount. As both cash and accounts receivable are current assets, the total current assets stay the same and so does the current ratio. Because cash and accounts receivable are both quick assets, the total quick assets stay the same and so does the quick ratio.

What if you bought inventory with cash. This would increase inventory and decrease cash. As both of these are current assets, the total current assets would not change and thus neither would the current ratio. However, cash is included in the quick assets and inventory is not. Thus the decrease in cash would decrease the quick assets and the increase in inventory would not affect quick assets. Thus as cash decreased the quick assets, it would also decrease the quick ratio.

Increases or decreases to current liabilities that do not change current assets or quick assets will have the opposite effect on the current and quick ratio. An increase in current liabilities will decrease both the current ratio and quick ratio if there is no change on the assets side. A decrease in current liabilities will increase the ratio if assets remain unchanged. A company with \$150 of current assets and \$50 of current liabilities will have a current ratio of 3 but if you increase the current liabilities to \$75 the current ratio decreases to 2 = \$150/\$75.

What takes extra care is when a transaction affects both the current assets and current liabilities by the same amount. The first thought is if both went up by the same amount then the ratio would stay the same. An example will illustrate that this is not usually the case. Company A has current assets of \$350 and current liabilities of \$175 for a current ratio of 2 = \$350/\$175. Company A uses cash of \$50 to pay off accounts payable. This reduces current assets (cash) and current liabilities (accounts payable) each by \$50. The new current ratio is \$300 (350-50) / \$125 (175 – 50) = 2.4. The current ratio went up with the transaction. It is best to work through the specific numbers when contemplating the effect on the current ratio of a transaction that affects current assets and current liabilities by the same amount. The same goes for quick assets in calculating the quick ratio.

#### Real World Example

Harley current ratio.pdf

#### Check Yourself

Hero Company currently has current assets of \$5,500 and current liabilities of \$2,100. Hero purchases \$100 of inventory on credit. What will happen to Hero's current ratio with the purchase?

A. Will increase



- B. Will decrease
- C. Stay the same

Hero's current ratio before the transaction was 5,500/2,100 = 2.62 and the purchase made current assets go up by 100 to 5,600 and increased current liabilities by 100 to 2,200. So the new calculation is 5,600/2,200 = 2.55. The answer is B will decrease.

For the quick ratio, we do not have to recalculate the ratio. We know that inventory is not a quick asset so the purchase of inventory will not change quick assets but still increases the current liabilities. With the same quick assets and higher current liabilities the quick ratio will also decrease. To know exactly how much it will decrease would require the exact amounts of quick assets which was not provided.

#### **Key Takeaways**

An increase in current or quick assets that is more than the increase in current liabilities = increase in current/quick ratio	
A decrease in current or quick assets that is less than the decrease in current liabilities = decrease in current/quick ratio	
An increase in current liabilities that is greater than the increase in current or quick assets = decrease in current/quick ratio	
A decrease in current liabilities that is greater than the decrease in current or quick assets = increase in current/quick ratio	
No change to current/quick assets or current liabilities = no change in ratio	
Change to current/quick assets is the same amount and in the same direction as change in change in current liabilities means you will need to use an example to calculate.	

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# 6.3: What do financial statements tell us about the ability to sell inventory and collect from customers?

### **Learning Objectives**

When a student has completed this section, they will be able to:

- Calculate the accounts receivable turnover ratio and days sales in receivables ratio
- Calculate the inventory turnover ratio and days in inventory ratio
- · Explain what these ratios show about a business
- Explain how these ratios relate to overall liquidity of a business

Question: How do we measure the ability of a company to collect the amounts owed to them by customers?

From our earlier discussion, we learned that companies that sell to customers now and allow those customers to pay them later record the amounts owed by customers as accounts receivable on the balance sheet. For a company that chooses to sell on credit this way, the collection of the accounts receivable is an important part of the cash conversion cycle. Having customers that owe you does not allow you to pay your own obligations unless you can collect cash from those customers. Collecting this cash efficiently and at the same time keeping customers happy is the key to a successful and liquid company. So to measure this success, the accounts receivable turnover ratio compares the amount of sales on the income statement and the amount of accounts receivable (still not collected) on the balance sheet. Lots of sales with little accounts receivable indicates that a business is quickly collecting money from their customers. Lots of accounts receivable in comparison to sales shows that a business is not collecting quickly from customers.

For the accounts receivable turnover ratio we assume all sales are made on credit (probably only a good measure for a business that sells to other businesses and not retail) and the formula is:

#### SALES FOR YEAR / AVERAGE ACCOUNTS RECEIVABLE

AVERAGE ACCOUNTS RECEIVABLE = (ACCOUNTS RECEIVABLE AT BEGINNING OF THE YEAR + ACCOUNTS RECEIVABLE AT THE END OF THE YEAR)/2

For example if Arco, Inc. has sales on credit for 2023 of \$100,000 and accounts receivable at the beginning of 2023 is \$21,000 and accounts receivable at the end of 2023 is \$29,000, then average accounts receivable is \$25,000 (21,000 + 29,000)/2. The accounts receivable turnover will be \$100,000 / \$25,000 = 4 times. This is labeled as the number of times Arco collects their accounts receivable per year.

Another way to look at this is to calculate the days sales in receivables. This is simply:

#### 365/ACCOUNTS RECEIVABLE TURNOVER

So for our example 365 / 4 = 91 days. So we could say that Arco collects from customers on average 4 times per year and it takes them on average 91 days to collect from those customers. If Arco can increase sales without an increase in accounts receivable that would increase their accounts receivable turnover and reduce the average time to collect from customers. On the other hand if accounts receivable increase but sales stay the same that means their accounts receivable turnover is going down and the number of days to collect is increasing.

Question: So how does this calculation relate to the earlier ratios having to do with liquidity?

We remember that liquidity is the measure of a business's ability to meet its obligations and to perhaps take advantage of opportunities. The current ratio and quick ratio compare the assets available to the obligations owed by the business. The accounts receivable turnover and days sales in receivable ratios measure how quickly one of the assets used in the current/quick ratio is turned into cash. Two businesses each have \$1,000,000 of accounts receivable – the one who is collecting that money every 60 days or 6 times per year is more liquid than the other company who collects in 90 days or about 4 times per year.

Like our earlier comparisons, when comparing one company's accounts receivable turnover to another, it is important that both companies be in similar industries. It would not make much sense to compare a company that sells much of it product to other businesses on credit with a retail company that mostly does not sell on credit and would have few customers who owe them



money. Pepsi and Coke who sell most of their product to other businesses (you buy your soft drinks from a store or restaurant who bought from Pepsi or Coke) and those businesses would be the same type of customers. Thus a higher accounts receivable turnover would indicate more efficiency in collections and not just different types of customers.

Another thing to consider when comparing accounts receivable measures from one company to another and from one year to another is that collecting money quickly while making customers angry is not a winning strategy. So efficiency in collecting money is not about being a pest about payment with customers or being extra careful about who you sell to on credit. Much research has shown that the number one reason customers do not pay on time is related to billing errors and poor quality products. When quality products are delivered as promised and the amounts billed are as agreed and multiple ways to make payment are provided, customers for the most part pay what is owed on time and come back for more. Mistakes anywhere along the way tend to hold up the collection process. Thus sometimes the first indication that customers are not happy with a business is a decrease in accounts receivable turnover (unhappy customers pay their bills slower).

#### Real World Example

Calculate the accounts receivable turnover with Eli Lilly income statement and partial balance sheet.

#### ☐ Demonstrate Eli Lilly AR Ratios.pdf

What would the number of days in receivable for Eli Lilly for 2020 be? 365 / 4.7 times = 77.7 days to collect on average their accounts receivable.

Question: Before some businesses can think about collecting cash from customers, they must consider convincing customers to buy their product or service. How is that measured and reported?

Focusing on those businesses who purchase inventory with the plan of selling those items to customers, investors are very interested on how successful they are in selling that inventory. Like our earlier discussion, this is referred to as inventory turnover. This may be even more important than accounts receivable turnover. That is because having inventory stored somewhere has a lot more cost involved than having a list of customers that owe us. Costs to operate malls, warehouses and fleets of trucks are just a few of the costs that are involved in the storage, display and moving around of inventory items. As of January 31, 2023, Walmart showed over \$46 billion dollars of inventory on hand across the world. There are costs to track, insure and handle billions of items each year. Besides the complexity of getting all of those items to thousands of retail locations and into the hands of customers, Walmart must work very hard to identify which inventory items to include in their stores (what do customers want). Even an enormous store like Walmart cannot put every product available on their shelves. If they put products that customers do not want on the shelves, sales will be impacted and that inventory will be wasting space and expense without generating revenue. All businesses that stock inventory whether in a brick and mortar store or online must successfully anticipate customer demands so that items can be provided quickly and at a reasonable cost.

To measure success in having the right products in the right place to meet customer demand, we compare inventory on the balance sheet with cost of goods sold from the income statement.

Our formula is:

#### COGS FOR THE YEAR/AVERAGE INVENTORY FOR THE YEAR

#### AVERAGE INVENTORY = (BEGINNING OF THE YEAR INVENTORY + ENDING OF THE YEAR INVENTORY) / 2

This seems familiar because it is very much like the formula for accounts receivable turnover but uses COGS instead of sales and inventory instead of accounts receivable. It is measured in the times a business is able to turnover or sell through inventory in a given year. When a company correctly anticipates customer needs, the inventory does not stay on the shelves (physical or virtual) for very long and will turnover quickly. This means inventory at any given time is low relative to sales and thus a high turnover. The companion ratio is days sales in inventory:

#### DAYS SALES IN INVENTORY = 365 / INVENTORY TURNOVER

This ratio tells us on average how many days on average inventory sits in our business before being sold. So if inventory has a high turnover then the days in inventory will be low. A decrease in inventory turnover will result in a higher number of days that inventory sits.



For example if, BOLO, Inc. has COGS for 2023 of \$59,000 and inventory at the beginning of 2023 is \$7,200 and at the end of 2023 is \$9,600 our calculations for the inventory turnover would be:

Average inventory = (\$7,200 + \$9,600)/2 = \$8,400. Inventory turnover = \$59,000 / \$8,400 = 7 times per year.

This would indicate that on average items at BOLO are in the business for 365 / 7 = 52 days (rounded). To get a better understanding we could then compare that ratio to the calculation for 2022 or we could compare it to 2023 for a competitor of BOLO.

Question: Can a business's inventory turnover be too high?

So changes in either inventory or cost of goods sold will also change a company's inventory turnover. Increasing COGS by making more sales while keeping inventory the same will result in better/higher turnover. The same COGS but having lower inventory will also increase the turnover. This reduction in inventory can be taken too far though. In general, having lower inventory is a sign of efficiency but at some point too low of inventory will start to make customers unhappy. If the things they want are not on the shelves or in online warehouses, they can get frustrated and go elsewhere where the item is available. If every customer was willing to wait for whatever time it took to make and deliver items, then maybe zero inventory would be ideal. But getting customers to wait is not often a good strategy and neither is the inability to respond when there are emergencies or high demand – thus some inventory is usually needed and inventory turnover can be high but not too high.

#### **Key Takeaways**

Too low of inventory turnover may indicate excess inventory that is not what customers want and is costing lots of money to store and take care of

Too high of inventory turnover may indicate shortages and inability to respond to customer demands in a timely way

The higher the inventory turnover, the more liquid (turning inventory into sales that can be turned into cash) the company is

Real World Example

Calculating inventory turnover using financial statements from Lowe's, Inc.

#### □ Lowes inventory.pdf

Lowe's on average would have their inventory for 365 / 4.1 = 89 days. While most inventory at Lowe's is not perishable if kept too long, Lowe's is very much interested in having the correct items on hand for do-it-yourself homeowners and professional contractors. Inventory that sits too long could become obsolete as new models and technology comes out.

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## 6.4: What do the financial statements tell us about the profitability of a company?

#### **Learning Objectives**

When students have completed this section, they will be able to:

- Calculate the gross profit margin
- Calculate the net profit margin
- Calculate the return on investment/assets
- Explain how these ratios will change and how they describe a business's profitability

Question: When I read in the news about a company they focus on the ability of the company to make a profit? We know how to calculate net income but what does that really tell us about the company?

Earlier ratios focused on the efficiency and liquidity as measured primarily on the balance sheet. Those measures are very important but when most investors are considering what company to buy stock in they are looking at the company can create the best returns on their investments. The stockholders who own the company are anxious that whatever assets the company owns and controls are generating revenues that ultimately result in profit that will allow the company to pay the owners in the form of dividends or at least an increase in the value of their investment.

The first step in considering the success of a business in generating profit is to look at the amount of sales or revenue compared to the cost of the items or services sold. So Target to be successful must be able to sell for example women's handbags for more than it cost them to buy. If they cannot do that with women's handbags and thousands of other products, all the rest of their business efforts will not be helpful. Employee training, good store lighting and an easy to use website are all about getting customers to buy products at a higher price than what Target paid for those products. But it is not just physical products, the local auto mechanic must be able to get customers to be willing to pay more for their oil change than the mechanic shop pays the employee to do the oil change plus the parts used. So our first important calculation is entirely from information on the income statement:

GROSS PROFIT = SALES/REVENUE – COST OF GOODS SOLD OR COST OF SERVICES PROVIDED

#### GROSS PROFIT / SALES/REVENUE = GROSS PROFIT MARGIN OR PERCENT

So our example of Target's handbag. If Target buys it for \$30 and sells it for \$40 then the gross profit is \$10 = \$40 - \$30. Dividing the \$10 by \$40 = 25 % gross profit margin or percent. If we instead of looking at one individual item consider all Target's sales for a year and subtract the costs of all those items for that same year we would get the gross profit for Target overall. According to the income statement for Target for the year ending January 28, 2023, Target sold over \$107 billion dollars in merchandise. This merchandise cost Target just over \$82 billion. So 107 - 82 = \$25 billion in gross profit over the course of that year. The gross profit margin would be \$25/\$107 = 23.3%. So on average Target is able to sell for a 23.3% gross margin or they get to keep 23.3 cents of every dollar they sell to pay for other expenses and ultimately provide return to investors.

Without a healthy gross margin there will not be enough to pay for the myriad of other expenses needed to keep the business running. Investors want to see a healthy gross profit margin when compared to other chains (like Walmart) and compared to other years. A well managed business is constantly looking for ways to improve their gross profit. Looking at our handbag example, Target could find a more efficient way of buying or shipping the handbag so the cost goes from \$30 to \$29 (increase in gross profit margin) or raise the price to customers for the handbag with the same cost (probably will only work if customers are very happy with the product). Conversely, when products or services are not enticing to customers, Target or other stores may reduce the price to customers with the same cost for the product. This will decrease the gross profit margin (handbag reduced to \$35 generate only a \$5 gross profit and gross profit margin of 14%. These types of changes positive or negative will not be material if it is only a few items but if it happens on thousands of items, Target's measure of gross profit margin for the year could change such that investors will notice.

Question: What about the expenses other than the cost of the items purchased or the cost of services provided? Aren't they important too?



While the cost of goods or services is probably the most important expense on the income statement and probably the largest, it is important to consider and measure the effect of the other expenses as well. For example Target, on the income statement ending January 28, 2023 lists additional expenses of just under \$23 billion and other revenue not from sales of products of \$1.5 billion. This excludes income taxes which are typically listed last because they are for the most part out of control of the company. So for the income mentioned above, Net Income/profit before taxes is \$25 billion gross profit less \$23 billion of other expenses plus \$1.5 billion of other revenue = \$3.5 billion for the year. Taking that \$3.5 billion profit and dividing it by the Revenues (107 + 1.5) = 3.5/108 = 3%. This is referred to as the net profit margin. So out of all their sales Target is able to earn 3% after all expenses. This 3% can be used to pay income taxes, pay dividends to shareholders and grow the company so that the stock price will go up.

#### **Key Takeaway**

Gross profit just subtracts cost of the items sold or services provided

Net profit subtracts both the costs above and all other expenses except taxes

Some examples you see may subtract taxes to get net profit – that is important when comparing two companies.

Like our other ratios, investors may compare 2023's net profit margin to that of 2022 to see if Target was able to become more efficient in the use of its expenses and thus increase how much of their sales are available to investors or if they became less efficient. It is also straight forward to compare it to the same calculation for competitors. It is hard to think of a situation where investors would not consider a company with a higher net profit margin to be a better investment than a competitor with a lower net profit margin.

To improve their net profit margin, Target would need to lower expenses while keeping sales the same or increase sales while keeping expenses the same. Transactions that increase expenses or lower sales are going to have the opposite affect on the net profit margin.

Question: What else might be a good indication of the profitability of a business?

So far we have compared net profit and gross profit to revenues to see how successful the company is at selling products for enough to cover the cost of the items purchased and all other necessary expenses. Both of these involved only information provided on the income statement of the company. Looking at all the financial statements, we recall that the purpose for buying or creating assets is to generate revenues that result in profits. So comparing net profit to total assets would be our last calculation used to measure business profitability. Taking net profit before taxes as described above and dividing that by the total assets at the end of the year or perhaps using average total assets can give investors a good way to look at how good the business is at deploying their assets in a way that provides a return back to investors. Thus our formula is referred to as

Return on Investment or Assets

ROI OR ROA = NET PROFIT before taxes / AVERAGE TOTAL ASSETS OR ENDING TOTAL ASSETS

#### AVERAGE TOTAL ASSETS = (BEGINNING OF YEAR TOTAL ASSETS + ENDING OF YEAR TOTAL ASSETS) / 2

While the FASB is charged with setting accounting rules in the United States and the SEC enforces them on public companies, none of the ratios discussed are included in these rules. There is no set way of calculating them. We try to give you the most common formulas and alternatives here. When picking an alternative, the important thing is to be consistent from company to company and year to year.

Thus checking the financial statements for Target and specifically the balance sheet as of January 28, 2023, they report just over \$53 billion in total assets. The year before the total was \$54 billion. An average of the beginning of the year and end of year is (53 + 54) / 2 = \$53.5. Using the net profit before taxes as stated above our return on investment or return on assets = \$3.5/\$53.5 = 6.5%. This was using the average total assets. If just the ending total assets was used, the calculation would be \$3.5/53 = 6.6%. We could say that Target makes about a 6.5% return on the assets it purchased on behalf of investors. Those investors can then compare that to what return they might get if they entrusted their money in another business to use to buy assets.

**NOTE:** You should make note that traditionally, all of these profitability measures are expressed as a percentage when discussed while none of the liquidity or activity ratios described in earlier sections were shown as percentages.



### Real World Example

Follow along with the calculation of the profitability ratios from amounts reported on Lowe's financial statements

Lowes profitability.pdf

You could say that Lowe's generated a return of 18.0% on the assets purchases on behalf of investors and that could be compared to the return generated by Home Depot or other competitors.

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## 6.5: End of Chapter Exercises

#### Questions

- 1. What is liquidity as applied to financial information?
- 2. Why would a company share part of their revenue with a bank when a customer pays with a credit card?
- 3. How are credit card sales and credit sales different?
- 4. Who loans money to the customer when they pay with a credit card?
- 5. What do companies do to reduce the risk that customers will not pay them for purchases made on credit?
- 6. What is an allowance for uncollectible accounts?
- 7. Current assets are compare to what in the current ratio?
- 8. What is the difference between the current ratio and the quick ratio?
- 9. How would an increase in quick assets that does not affect current liabilities change the quick ratio?
- 10. How would you determine the change in current ratio if a transaction decreases current assets and current liabilities by the same amount?
- 11. What label is used on accounts receivable turnover?
- 12. What number is divided by accounts receivable turnover to get days sales in receivable?
- 13. What is the formula to calculate inventory turnover?
- 14. How is the average inventory calculated?
- 15. What is the difference between gross profit and net profit?
- 16. Net profit margin compares net income before taxes with what other financial statement element?
- 17. Improving return on investment/assets can be done by increasing net profit before taxes or reducing what?
- 18. Is there such thing as too high a net profit margin?

#### True/False

1.	Cash is the most important and most valuable asset for a company.
2.	A company with accounts receivable has a risk that they will not get paid.
3.	The estimate of how much accounts receivable will not get paid affects retained earnings.
4.	A reconciliation should be completed by the same person who originally recorded the transactions being reconciled.
5.	Borrowing more cash is a long term solution for a company needing cash to pay employees.
6.	The term Accounts Receivable, Net means that the allowance for uncollectible accounts has been subtracted.
7.	A purchase of prepaid insurance policy with cash will have no effect on the quick ratio
8.	The sale of inventory to a customer for more than the cost will increase the current ratio.
9.	A company can never be too liquid.
10.	The quick ratio is always higher than the current ratio.
11.	To calculate average accounts receivable for 2023, the Accounts Receivable amounts for 2022 and for 2023 are used.
12.	When inventory turnover goes up, days sales in inventory goes down.
13.	The longer it takes to sell inventory the better for a company.
14.	One number used for calculating the net profit margin is the same as for calculating return on investment/assets.
15.	Gross profit will always be higher than net profit before taxes.
16.	Cost of goods sold is not used in the calculation of any of the profitability ratios.
17.	Profitability ratios are never shown as percentages.

#### Multiple Choice

- 1. Cash is essential for a business to meet its obligations but it is not very valuable to the business because of the following:
- A. Cash is extremely liquid and easily transferred to others.
- B. Cash does not generate very good returns for shareholders.
- C. Cash is not liquid and thus could generate losses when it is used in exchange.
- D. Cash is mostly electronic in form and thus is never where you need it.
  - 2. What internal controls might a company put in place to help speed up the collection of accounts receivable?



- A. Check prices and shipping information to make sure that customers are billed only for what they received at the agreed upon price.
- B. Check the credit history of new customers to see what their track record is for paying their bills.
- C. Send reminders to customers about the due dates of their accounts receivable.
- D. All of the above could be effective internal controls to help speed up collections.
  - 3. The RST Company reports on their balance sheet Accounts Receivable of \$466 million net of an allowance of \$23 million. What percentage of the total amount owed by customers does RST estimate they will not collect?
- A. 4.9%
- B. 4.7%
- C. 4.3%
- D. 5.2%
  - 4. The RST Company reports on their balance sheet Accounts Receivable of \$466 million net of an allowance of \$23 million. If an analysis of the entire list of customers included in accounts receivable showed that the allowance for uncollectible accounts should be 7% of the total owed by customers, the RST would need to do which of the following on the accounting equation?
- A. Decrease revenues.
- B. Increase current liabilities
- C. Increase expenses
- D. Increase current assets
  - 5. Which of the following would not be included when calculating the quick ratio but would be when calculating the current ratio?
- A. Cash
- B. Current Liabilities
- C. Marketable Securities
- D. Inventory
  - 6. Which of the following transactions would always result in a decrease in the current ratio?
- A. Borrowing money from the bank to be paid off in 10 years and using that money to pay accounts payable this month.
- B. Selling inventory for \$100 that cost the company \$70.
- C. Recording a utility bill for costs this accounting period that will be paid next accounting period.
- D. Collection of cash from customers that had owed us accounts receivable from sales last accounting period.
  - 7. Which of the following could be a good reason why inventory turnover could be too high?
- A. Inventory that is too low could indicate shortages and the inability to satisfy customers.
- B. Companies do not want to move around the inventory in their warehouses too many times.
- C. Inventory that sits too long may need to be sold at a discount to customers.
- D. Obsolete inventory can take place when inventory is held in warehouses for too long.
  - 8. The average days in receivables for ABC, Inc. went from 64 in 2022 to 59 in 2023. Which of the following would be a valid explanation for this change?
- A. Inventory is selling more quickly for ABC.
- B. Accounts receivable turnover increased between 2022 and 2023.
- C. ABC, Inc. became less liquid in 2023 than they were in 2022.



- D. ABC should look at how to be more efficient in their collections of A/R so they can turn this around in 2024.
  - 9. When considering how efficient a company is at using their assets to generate revenues and profits, the best measure is:
- A. Gross profit margin ratio
- B. Quick ratio
- C. Return on investment/assets
- D. Net profit margin ratio
  - 10. Gross profit margin and net profit margin both use amounts reported only on which financial statement?
- A. Income statement
- B. Balance sheet
- C. Statement of equity
- D. Cash flows statement

#### Problems

- 1. If Puddle Incorporated had total Accounts Receivable at the end of 2022 of \$603 million and an allowance for uncollectible accounts of \$18 million show the effect of the following in the accounting equation worksheet for 2023:
  - Sales on credit of \$4,323 million during the year
  - Collection of accounts receivable of \$4,160 million during the year
  - Write off of uncollectible accounts of \$14 million during the year
  - An increase in the allowance for uncollectible accounts to 3% of total accounts receivable from customers

#### Required:

- a. Calculate how much customers actually owe to Puddle at the end of 2023.
- b. Calculate how much is estimated will not be collected by Puddle at the end of 2023.
- c. State how much expenses increased due to the estimate of uncollectible accounts.
- d. How much would Puddle show as the amount they actually plan to collect (Accounts Receivable, Net)
- 2. If ZZBest Corp. has current assets of \$24 million and current liabilities of \$14 million what is the impact on the current ratio of the following transactions? Each situation is independent.
- a. Purchase of inventory costing \$3 million on credit.
- b. Sell inventory costing \$2.5 million for a sales price of \$4.5 million on credit.
- c. Borrowing \$11 million in cash from bank that will be repaid in 5 years.
- d. Pay cash for a prepaid insurance policy costing \$1 million and covering one year.
- e. Pay cash for rent expense of \$3 million.

# Required: For each transaction indicate whether the current ratio went up or down or stayed the same and why (i.e. change in current assets, liabilities, etc.)

3. The following information was reported for Pepsi for 2022 – Sales \$86.3 billion and Accounts Receivable of \$10.2 billion – for 2021 Accounts Receivable was \$8.7 billion. For Coca Cola for 2022 – Sales \$43 billion and Accounts Receivable of \$3.5 billion – for 2021 Accounts Receivable was \$3.5 billion. With this information calculate the accounts receivable turnover and days sales in receivables for 2022 for both of these competitors.

#### Required:

- a. Based on your calculations, which company is doing a more efficient job of collecting from customers. Explain.
- b. Based on your answers which company is the most liquid? Why?
- c. How much would Pepsi have to increase sales while keeping accounts receivable the same to get days sales in receivable to be 30 days?



4. For Coca Cola, 2022 COGS was \$18 billion and 2021 COGS was \$15.4 billion. Their inventory at the end of 2022 was \$4.2 billion and at the end of 2021 it was \$3.4 billion and at the end of 2020 it was \$3.1 billion. With this information calculate the inventory turnover and days in inventory for 2022 and 2021.

#### Required:

- a. Based on your calculations, in which year did Coca Cola do a more efficient job of selling inventory? Explain.
- b. Based on your answers did liquidity for Coca Cola get higher or lower? Explain.
- c. How much would Coca Cola have had to reduce their inventory at the end of 2022 to increase the number for inventory turnover to 5 times a year?
- 5. During 2020, Twitter, Inc. (NYSE: TWTR) will be issuing (approximately) \$600 million of unsecured notes that will be due in 2027. Assume that on the day immediately before the note issuance, Twitter has current assets of \$4,500 million and current liabilities of \$2,370 million.

#### Required:

- 1. Will the notes be classified as assets or liabilities on Twitter's balance sheet? Will these notes be Notes Receivable or Notes Payable?
- 2. When Twitter issues these notes in 2020, will the notes be classified as current or long-term??
- 3. On the day that these notes are issued, will Twitter's current ratio be impacted? If so, will it increase or decrease?
- 4. Assuming no change in net income before taxes, what would the impact be on return on investment/assets? Would it increase or decrease?
- 6. For fiscal year ending September, 2021, Apple, Inc. had a gross profit margin ratio of 39.3%, a net profit margin ratio of 27.4% and return on investment/assets of 20.7% and the total assets as of the end of the year was \$ 351 billion. For the year ending September 2022, Apple reported the following amounts:

Sales \$394 billion

Cost of Sales \$224 billion

Expenses not including taxes \$51 billion

Total Assets at the end of the year \$353 billion

#### Required:

- 1. Calculate the three profitability ratios for Apple for year ending September 2022.
- 2. Using those ratios describe the change in profitability for Apple between 2021 and 2022.
- 3. Indicate how each of the profitability ratios calculated in 2 will be affected by the following independent transactions/changes if they happened during fiscal 2022:

Independent transaction or change in 2022		Gross Profit Margin Ratio	Net Profit Margin Ratio	Return on Investment/Assets
Apple pays \$10 billion in cash for an enormous new manufacturing facility in the United States to avoid tariffs on imported phones	Indicate in the box to the right whether the ratio increases or decreases or stays the same because of the change or transaction			
Costs for Apple's phones stays the same as in 2021 but Apple is forced to reduce the selling price of phones by 10% in 2022 because of competition				
Apple cuts its research and development expense by 20% but that does not change its sales or any of their other costs to make their products.				



#### Research/Discussion

#### Group Research

Identify the financial statements for a publicly traded company. The group will probably need the most recent year and the previous year annual report. Each member of the group choose one of the following ratios and calculate them for the most recent year and the year previous. Write a paragraph that indicates what the comparison shows about the liquidity, efficiency or profitability of company:

Current ratio and quick ratio

Accounts Receivable Turnover and Days Sales in Receivables

Inventory Turnover and Days in Inventory

Gross Profit Margin Percent, Net Profit Ratio and Return on Investment/Assets

#### Bankrupcy Research

Since J. Crew has filed for bankruptcy in May, 2020, find their financial statements at J Crew Quarterly Financial Statements

Using this last quarterly financial statement filing calculate the following:

Quick Ratio and Current Ratio as of November 2, 2019

Gross Profit Margin Ratio and Net Profit Margin ratio for 13 weeks ending November 2, 2019

Do these calculations indicate that J. Crew was having problems prior to the pandemic that forced them to close stores across the country in early 2020? Why would you think J. Crew would want to go to court to get protection from their creditors in 2020? What do you think needs to happen if J. Crew is going to continue to operate?

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