Chapter 1 – Introduction to Financial Accounting

Learning Objectives:

After studying Chapter 1, you should be able to

- Discuss the different classifications of financial transactions
- Define an equity investor and a debt investor and understand the difference
- Discuss the role of the Securities and Exchange Commission
- Name the Big Four accounting firms and define the term "independent auditor"
- Define corporate governance
- Discuss GAAP and IFRS and the concept of rules-based versus principles-based
- Discuss the roles of the board of directors and the audit committee
- Discuss the basics of Sarbanes-Oxley
- Discuss how legal liability and corporate ethics work to help strengthen corporate governance
- Define the words in bold in this chapter

"**Accounting**" is the recording of business transactions, the preparation of reports summarizing these transactions, and the analyzing of financial information. The reports prepared from the accounting system are called "**financial statements**", and they may be made available to individuals both inside and outside the company. Because information in the financial statements is often the basis for decisions by analysts outside the company, it is important that the statements be prepared impartially, objectively, and in accordance with established standards. The term "**financial accounting**" refers specifically to the records and related reports that are available to people outside of the company.

We will take an overview approach to financial accounting in this course. Accounting is based on debits and credits, but these will not be used in this course. You will learn about debits and credits and the basics of an accounting system when you take the first Principles of Accounting course, A201. Instead, the approach used in this course is an overview called "**impact on the financial statements**". This is looking at the financial statements from the top down and paying particular attention to how various transactions impact the financial statements.

Classifications of Business Operations:

Every business transaction can be classified into one of three types: financing activity, investing activity, or operating activity. "**Financing activities**" are those transactions that raise funds for the company to operate or expand. "**Investing activities**" are the transactions in which the company is investing in assets that it will keep in the business to use in its operations. "**Operating activities**" are all of the other

transactions that a business engages in which cannot specifically be classified as financing or investing. Examples of operating transactions are the payment of rent, salaries, and insurance expenses.

Financing Activities:

Imagine a company which is just starting in business. The first thing it needs to do is raise money to begin operations. There are two basic methods a company can use to raise money to help finance its operations: (1) equity and (2) debt.

The term "**equity**" refers to ownership. When a company sells equity, it is selling ownership in the company. The owners of a corporation are the stockholders. So for a corporation to sell ownership, it sells shares of stock. Purchasers of the stock are called "**equity investors**" (or "**stockholders**" or "**shareholders**"). When equity investors buy stock in the company, they are buying ownership of the company.

Buying stock in the company entitles the holders to two basic rights, the first of which is to vote for the "**directors**" of the company. All the directors together form the corporation's "**board of directors**". The job of the directors is to represent the stockholders' interest to management and to protect the stockholders' investment.

The second right the stockholder has is to receive dividends from the company if they are paid. Dividends are payments made from the corporation to its stockholders. The company is usually not legally required to pay dividends but will often do so if it has sufficient cash which it is not expecting to need for its operations.

Notice that, as owners, equity investors have no guarantee that they will receive their investment back. There are two ways an equity investor can make money on his or her investment: (1) by receiving dividends from the company or (2) by selling their stock at some time in the future at a higher price. Typically neither of these is guaranteed. While the stockholder is in a position to benefit if the company does well, he or she also bears the risk if the company fails.

The other way a company can raise funds is by using "**debt**". This refers to borrowing money from investors or banks. The company will have to sign a contract agreeing to repay the borrowed money plus interest. Those who loan the company money are called "**creditors**" of the business. One important way in which creditors are different from stockholders is that creditors have the legal right to receive back the money loaned, called the "**principal**", as well as interest payments on this money for the period of time the loan is outstanding. "**Interest**" is the amount that the creditor is charging the borrower.

The specific requirements of the loan are spelled out in an agreement called a "**loan contract**". These contracts specify a "**maturity date**" (the date by which the loan is to be repaid), interest that will accrue, and "**collateral**". The term "collateral" refers to the assets that are pledged by the borrower to the creditor if the borrower is not able to repay the loan. The requirements (or "**terms**") specified in loan contracts may vary. For example, creditors may require that interest payments are made periodically or may allow no interest to be due until the principal is due.

Notice that equity investors differ in substance from debt investors. Equity investors become owners of the business, but debt investors do not. Equity investors may benefit if the company is successful and the stock price increases, but they may also be hurt if the company is not successful and the stock price drops. Creditors do not have this type of participation in the results of the company's operations. They have the right to receive the principal and interest back, but nothing more.

Both equity and debt investors are interested in the financial statements issued by the company. They want to see the success of the company over the last year. Has management made good decisions on how to use their money? Does it look like the company will continue to be successful in the future? Is their investment in this company still a good investment? If the financial statements show that management has not been successful during the past period, stockholders may try to vote in new management. If creditors see that management has not been successful, they will become worried about the risk of "**default**", which is the term for the company being unable to repay its loans. Loan agreements will often call for harsher terms if certain items on the company's financial statements fall below specified levels. Examples of the harsher terms might be higher interest rates or requirements of additional collateral if the financial statements do not show the creditor's minimum acceptable level of success.

Investing Activities:

Companies will often need to purchase land, buildings, and equipment to help them operate the business. These are called "**fixed assets**". Transactions that are classified as investing activities are purchases made of property that is (1) likely to last a number of years and (2) expected to be used in the operations of the business rather than sold as part of the company's general operations. Generally, the assets included in the category are relatively expensive and expected to last for more than a year.

The term "investing activities" typically only applies to purchases and not rentals. For example, if a company rented the building where it conducted its operations and was required to pay a few months' rent in advance, this is considered an operating activity and not an investing activity.

Also, the category of investing activities generally does not include any items that were purchased for resale. For example, if a consulting firm purchases a building for its offices, this purchase is an investing activity. However, if a real estate firm purchases a building which it bought with the intention to resell at a profit and if the real estate firm is in this line of business, this purchase is not considered an investing activity. Instead, it is an operating activity, which is covered next.

Operating Activities:

In general, everything that cannot specifically be classified as a financing activity or an investing activity is classified as an operating activity. This includes any transactions that are related to running the business and marketing the company's product. There are a wide variety of transactions included in this category, such as salaries and wages, rent, utilities, insurance, and purchases of goods to be resold.

The Business Cycle:

The business cycle is universal among all businesses. First, a company needs start-up money, which may be obtained from owners ("stockholders") or by borrowing ("creditors"). The company uses these funds to invest in fixed assets which it will use to operate. The goal of management should be to use these funds and investments to run the operations of the business to the best of its ability.

As the company earns additional cash from its operations, it is required first to pay any amounts to creditors that are due. If there is still cash left after the debts currently due are paid, management may choose how to use the remaining cash. The basic choices are (1) to invest in more fixed assets or other types of investments, or (2) elect to pay dividends to the owners of the business, or (3) hold on to the extra cash for use in the future.

The Setting of Financial Accounting:

A Little History… In the 1930's, shortly after the market crash in 1929, the government realized that stockholders needed assurance that the financial statements issued by companies were reporting the truth. This had become more important than ever because the country had grown and new technology meant that many investors were no longer located near their investments. In response to this requirement the "**Securities and Exchange Commission**", or the "**SEC**", was established. The basic purpose of the SEC is to maintain fair and truthful capital markets. The SEC's coverage only extends to "publicly-held corporations". A corporation is "**publicly-held**" if its stock is traded on an exchange, such as the New York Stock Exchange or NASDAQ.

The SEC requires corporations to file a "**Form 10K**" annually (audited financial report) and a "**Form 10Q**" quarterly (unaudited financial reports covering the most current quarter). These are SEC forms that help analysts analyze and compare various companies. These forms are available on-line for all publicly-held companies at the SEC's Electronic Data Gathering, Analysis, and Retrieval site (www.sec.gov/edgar).

In addition, the SEC requires that all publicly-held companies prepare annually a financial statement, called an "**annual report**", which must be audited by an outside, independent auditor. These annual reports are available on the company's website. The annual reports are required to include the four standard financial statements: (1) balance sheet, (2) income statement, (3) statement of stockholders' equity (or statement of retained earnings), and (4) statement of cash flows. (We will begin covering these statements in the next chapter.) In addition, the annual report typically includes a letter from the president of the company discussing management's performance to date and what the company hopes to accomplish in the future. Another component of every annual report is the notes. "N**otes to the financial statements**" give additional information supporting the data in the financial statements. The cover sheet of the financial statements is required to be a letter from the company's independent auditors which states the auditor's opinion as to whether or not the auditors have found the financial statements to have been prepared in accordance with the required accounting standards.

Both the Form 10K and the financial statements included in the company's annual report are required to be audited by an "**independent auditor**". An independent auditor, also called an "**external auditor**", is

an accounting firm that specializes in "**public accounting**". Public accounting means the company is in business to provide accounting services to other companies. The external auditors performing the audit must be independent of the company they are auditing. Auditors are independent if they (1) are not employees of the company they are auditing and (2) do not own a substantial investment in this company.

In performing the audit, the auditors examine the financial statements that management has prepared and issue an opinion to be the cover sheet to the financial statements. This opinion is available to all who access the financial statements, including the stockholders, creditors, and any other interested parties. This outside opinion lends credibility to the financial statements.

There are many public accounting firms in the United States and around the world. The most widely known of all the accounting firms are called the "**Big Four**". These firms are the largest of all the public accounting firms. They are international and are responsible for much of the public accounting work done in the world. You need to know the names of the Big Four accounting firms, which are:

Deloitte
Ernst & Young (E&Y)
KPMG
PricewaterhouseCoopers (now, "pwc")

For many years the requirements of the SEC seemed to be a sufficient control on publicly-held companies. However, significant financial disasters have occurred in the past few decades, and many of these have had fraudulent financial data at the core of the problem. Enron and WorldCom are two of these, and their collapse has shown how important it is for the financial statements to be credible. Even with the requirements of the SEC, these companies and several others found a way to get around the rules and issue fraudulent statements for a period of years before they were discovered. Most investors have little to go on other than company's published financial statements, and billions of investment dollars are at stake. Literally, the economy of the world is at least in part dependent on reliable, truthful financial statements being published by corporations.

Corporate Governance: The term "**corporate governance**" refers to the mechanisms in place within a company which inspire managers to report the truth in their financial statements. Society exerts several pressures on management which encourage them to maintain strong corporate governance. One of these is the reputation of the managers and the business. In business (as in the rest of life) it is important to have a good reputation, and generally neither managers nor auditors want to risk damaging theirs.

The second way strong corporate governance is encouraged by society is with the threat of legal liability. In recent years managers have increasingly been held responsible when their company breaks the law.

The third societal force for maintaining strong corporate governance is ethics. An ethical company is one that operates and reports in a clear and truthful manner. It is simply the right thing to do. Most

successful companies have found that being ethical is also the most profitable way to operate. It is incumbent on management to set an ethical tone and high standards for its employees to follow.

Generally Accepted Accounting Principles (GAAP): When firms based in the United States prepare their financial statements, they are required to use the set of rules called "**Generally Accepted Accounting Principles**", or "**GAAP**". These are the accounting standards that have been formally in use in the United States since the formation of the SEC in the early 1930's. GAAP gives direction on how to account for both common and uncommon transactions of companies. Some examples of guidance that GAAP gives for common transactions are (1) how quickly purchases are to be expensed, (2) when should assets on the balance sheet be recorded at their cost and when should they be recorded at their fair value, and (3) when revenue can be considered "earned".

From time to time companies will also enter into more unusual transactions and will need to know how to account for them. GAAP covers these as well. An example of a more unusual transaction is the purchase of a piece of equipment which was bought by using an old piece of equipment as a trade-in along with cash and possibly other assets as well.

The goal of GAAP has always been to establish rules so that outside readers of financial statements can trust that statements from different companies will be comparable. Because GAAP gives specific directions for how to account for all types of transactions, it is called a "**rules-based**" system. It has grown as the variety of transactions in which companies engage has increased. In the summer of 2009, a GAAP "**codification**" project was completed, and the purpose of this is to make GAAP easier to navigate.

The SEC requires that publicly-held companies based in the United States prepare financial statements using GAAP. External auditors verify this and report on it in their annual audit report accompanying the financial statements.

GAAP is the responsibility of an organization called the "**Financial Accounting Standards Board**" ("**FASB**"). When the Board makes a change to the standards, it does so only after receiving input from anyone who might be interested, which includes the SEC, Congress, the While House, other government agencies, public hearings, and letters from individuals. Even though the use of GAAP in the United States is mandated by the federal government through the SEC, the FASB (which is responsible for creating GAAP) is a private institution.

International Financial Reporting Standards (IFRS): Companies based in most other countries use a different set of standards, called the **"International Financial Reporting Standards**" ("**IFRS**"). These are the responsibility of an organization called the "**International Accounting Standards Board**" ("**IASB**"). These international standards are relatively new but are gaining momentum in countries around the world. IFRS is now used in more than 100 countries.

One main difference between IFRS and GAAP is that IFRS gives substantially less guidance and relies on interpretation to be handled on an individual basis by the preparers of the statements and their external auditors. Because of this, IFRS is considered a "**principles-based**" standard. U.S. GAAP also contains the

underlying principles, but while IFRS stops there, GAAP goes on to prescribe the exact way the principles should be applied.

In late 2007, the SEC decided that companies based in countries using IFRS but whose stock was also traded on a U.S. exchange could file in the U.S. using IFRS. Now, the SEC is being pressured by some U.S.-based companies who want approval to use IFRS to file their financial statements. Their argument is that the flexibility of IFRS may give foreign firms an advantage.

The FASB and IASB have been working hard to develop standards to merge GAAP and IFRS while keeping the best of both. The most likely result in the future is that there will be a convergence of the two methods, probably under the name of IFRS, and this one new set of standards will be used worldwide.

It may come as a surprise to you that accounting standards could differ much, but GAAP and IFRS are quite different. Besides the basic difference between being "rules-based" versus "principles-based", there are theoretical differences in the underlying principles as well. Since we only have time to skim over the top of accounting in this introductory course, we will not encounter any of the real differences between these two sets of standards. However, in your next accounting course you will start covering concepts that require different treatment depending on the standard in use.

Types of Reporting Entities: "**Reporting entities**" are those organizations that prepare financial statements. One type of reporting entity is a profit-seeking business (also called "**company**" or "**firm**"). Many of these businesses are large and could be subdivided into smaller segments or subsidiaries.

There are other reporting entities whose purpose might not be to make a profit. Examples of these are governmental entities, such as cities, states, and school districts. Also included in this category are charitable organizations and foundations. In this course we will only cover accounting as it is applied to profit-seeking corporations.

Profit-seeking entities can be categorized in many ways, and one common classification is by type of business: (1) service, (2) retail, and (3) manufacturing. Service businesses are those whose main source of revenue is their knowledge and abilities, rather than a product. Examples of service businesses are medical practices, law offices, and accounting firms. Some large service companies are Federal Express, Verizon Wireless, and Google.

Retail firms are companies that buy inventory from manufacturers or wholesalers and resell it to consumers at a higher price. We are all familiar with a wide variety of retail firms, which include stores such as K-Mart, Radio Shack, Macy's, and Kroger's.

Manufacturing companies are those businesses which purchase inventory, process it in some way, and sell a different product than they had originally purchased. Examples of manufacturing companies are Coca-Cola, IBM, and Ford Motor Company.

We will talk more about these types of businesses throughout the course. When analyzing financial statements, it is important to have a good understanding of the industry in which the company operates. It is helpful to compare the company you are analyzing to other companies in the industry.

Capital Markets:

The "**capital markets**" are the networks that exist for raising money. Many types of markets, including public markets (called "**exchanges**"), exist to facilitate the transfer of debt and equity investments. The largest of these public exchanges is the New York Stock Exchange (NYSE), but there are many others throughout the world.

The public exchanges allow for bidding on debt and equity securities, and the prices vary based on investors' expectations about the future performance of the issuing company. One important tool investors use in determining these expectations is the financial statements of the issuing company.

Corporations will often invest in the stock of other corporations. This buying and selling of stock is facilitated by public markets, but it is also possible to buy and sell a company's stock even if that company's stock is not traded on a public exchange. Debt issuances in the form of bonds allow an investor the chance to purchase the debt of a company.

Overseers of Management:

There are two groups which are in a position to oversee management. These are the board of directors and the audit committee.

Board of Directors: Members of the "**board of directors**" are elected by the stockholders to represent their interest in overseeing management. The board of directors meets with management periodically to determine company policies, decide if dividends should be paid, and review the performance of the company's officers as well as determine their compensation. The board has the ability to fire top management as well as hire replacements.

Audit Committee: The "**audit committee**" is a subcommittee of the board of directors. This committee's main responsibility is to select the audit firm that will perform the annual audit and to make sure that the audit was performed in a professional manner. A strong audit committee helps strengthen corporate governance. However, the independent audit firms are well aware that their fee is paid by management, and in many situations, management preference may help determine which firm will get the job the following year. Because of this, it is important for the audit committee to remain as independent as possible and to keep the best interest of the stockholders firmly in mind. If company management or the audit committee has considerable disagreements with its audit firm, these differences must be reported to the SEC in a "**Form 8K**".

Sarbanes-Oxley:

"**Sarbanes-Oxley**" is an act that was passed in 2002 in response to several corporate scandals which resulted in billions of dollars in losses to stockholders and debt holders. The losses were incurred because of deception by top corporate management as well as external auditors who overlooked obvious problems. As a result, inaccurate financial statements were published and were relied upon by innocent investors. The purpose of this Act was to ensure that frauds of this type could not happen

again, and it did this by trying to boost corporate governance and restoring lost faith in the financial accounting system. This Act established (1) more controls on management, (2) more responsibility on the Audit Committee and the Board of Directors, and (3) stricter requirements for the external auditors. The Act placed more emphasis on the quality of the company's "**internal controls**". The internal controls of a company are the procedures and policies in place which have the purpose of protecting the company's assets and helping to ensure the financial statements are correct.

Legal Liability:

Management, the board of directors, and external auditors all have a legal as well as a moral responsibility to act in the best interest of the stockholders. The stockholders are the owners of the business and, because in many instances they are not near the company and do not have sufficient expertise, they must rely upon others to protect their interest. Also, they trust the external auditors to do a thorough audit and to report the truth in their cover letter regarding their findings.

If any of these groups do not follow through on their required responsibilities to the stockholders, they can be sued. Sarbanes-Oxley has made management and external auditors more responsible for the information contained in the financial statements. This has made it easier to bring legal action against management and external auditors, and as a result, in the United States litigation has steadily increased each year. This potential for litigation plays an important role in keeping corporate governance strong.

Ethics:

Because of recent corporate scandals that found management and independent auditors to be dishonest and because of a general distrust that has developed among stockholders, management, and auditors, many companies have recently instituted new policies to emphasize the importance of ethical behavior in their company. Business schools have added ethics to their curriculum. The American Institute of Certified Public Accountants (AICPA) and many other professional organizations have professional codes of ethics by which their members must abide. All of these are to encourage employees to do the right thing. The truth, however, is that strong ethical behavior in a business is one of the best assets a corporation can have. And it all starts with the "**tone at the top**", which is the term for the ethical tone set by top management.

Research has proven that an emphasis on ethics is good for business. Investors prefer to deal with a company that has a good reputation. Some of the qualities that help a company maintain a good reputation are high quality in their products and service, ethical behavior both inside and outside the company, and clear, accurate financial statements. Another benefit is that ethical companies are involved in less litigation.

In the same way that ethical behavior is good for companies, it is also good for audit firms. Companies prefer to work with external auditors who have a good reputation and who are involved in less litigation. Ethical firms of all types are more likely to be sought after by stockholders, creditors, employees, and customers.

Chapter 2 - Financial Statements

Learning Objectives:

After studying Chapter 2, you should

- Know and identify the four basic financial statements
- Understand the accounting equation
- Know the classifications of the accounts on the Balance Sheet
- Understand how the Balance Sheet accounts carry over from one period to the next
- Understand the classifications on a simple Income Statement
- Understand the differences between accrual and cash-basis accounting
- Know the four basic components of the Statement of Retained Earnings
- Be able to discuss how income flows through the statements to the Balance Sheet to bring it into balance at the end of the period
- Know the order in which the statements must be prepared
- Understand the purpose of the Statement of Cash Flows
- Understand the categories found in the Statement of Cash Flows

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According to both GAAP and IFRS, every company has to present four financial statements at least once a year. These are:

1) Balance Sheet
2) Income Statement
3) Statement of Retained Earnings
4) Statements of Cash Flows

The first three of these statements work together in that they are dependent on each other. The Statement of Cash Flows stands alone, so we will cover it separately. Usually these statements are prepared at the end of a period—such as the end of the month, quarter, or year—however, they could be prepared at any time.

Balance Sheet:

The Balance Sheet is the backbone of accounting. This financial statement ties the company's records together and gives readers outside the company a picture of its status.

The Balance Sheet is based on the accounting equation:

Assets = Liabilities + Equity

You can think of assets as what the business owns, liabilities are what the business owes, and equity is the portion of the assets that the company owns outright. On the left side of this equation are the assets, which are a listing of everything the business owns. For all of the assets of a company, the company either owns them "**outright**" (meaning no debt is associated with these assets) or owes something on them (has a debt). The amounts that you owe are called your liabilities, and the portion of the assets that you own outright is your equity.

Another way to look at the accounting equation is to list everything the company owns (its assets) and subtract the amount owed to others (its liabilities). The result is the equity, or the owner's interest in the company's assets. Looking at the accounting equation in this manner changes the equation as follows:

Assets – Liabilities = Equity

Surprisingly enough, all of accounting is based on this simple formula, which is much more powerful than it seems at first glance.

The accounting system is based on the concept of "**double-entry bookkeeping**". This term means that there are always at least two entries for each transaction of a business. This concept is crucial to keeping the accounting equation in balance. The double-entry bookkeeping system is based on the concept that, for every transaction, there are at least two accounts impacted by that transaction and therefore must be adjusted to correctly state the company's books.

Assets are usually divided into one of four types: current assets, long-term investments, fixed assets, and intangibles. "**Current assets**" include cash and other assets that are expected to be converted into cash (or used up) in about one year or less from the Balance Sheet date. Common current asset accounts include items such as cash, accounts receivable, inventory, and prepaid items, such as prepaid insurance or prepaid rent.

"**Long-term investments**" are assets purchased by the company to be held as an investment. These assets are not to be used in the operations of the business. Common examples of long-term investments are stock investments and bond investments.

"**Fixed assets**" (also called "**Property, Plant, and Equipment**") are assets that are purchased by the business to be used in its operations but are expected to last longer than one year and are not to be resold in the ordinary operations of the business. Examples of fixed assets are equipment used in the operations of the business, buildings used by the business, and the land on which the building sits.

The last category of assets is "**intangible assets**". The term "**intangible**" means that the asset has no physical substance. You cannot touch or feel it. Examples of intangible assets are patents, copyrights, trademarks, and goodwill. In this class we will not be covering details of intangible assets, but you do need to know that they exist, and that they are Included on the balance sheet.

There are two kinds of liabilities: current and long-term. "**Current liabilities**" are debts that expected to become due within one year of the Balance Sheet date. This category includes accounts such as accounts payable, wages payable, and utilities payable.

"**Long-term liabilities**" are amounts that the company expects it will not need to pay until after one year from the date on the Balance Sheet. Examples of these are notes payable (which typically are loans from a bank) and bonds payable. These are classified as long-term liabilities until they are within one year of the maturity date, and then they are reclassified as current liabilities.

The remaining category of a Balance Sheet is equity. "**Equity**" is a measure of the portion of a company's assets that are owned outright, meaning that the company does not owe for this portion of its assets. In a corporation, the owners are those who hold company stock, and they are called the "s**tockholders**" or "**shareholders**". In corporations, the equity accounts are called "**stockholders equity**". Stockholders' equity can always be divided into at least two categories: common stock and retained earnings. As you go further in accounting, you will learn about other accounts that are also a part of stockholders' equity, but in this course these are the only two equity accounts we will cover.

To be an owner of a corporation, an investor must purchase shares of stock. "**Common stock**" is the name of the basic type of stock that all corporations must have. The amount of money received when the company originally sells shares of ownership to various investors is the amount shown in the common stock account. When stock is issued and in the hands of investors, it is called "**outstanding**". Investors may sell the shares to other investors, but this action is independent of the company. The company only receives payment when it originally sells the stock, and it is this transaction that is recorded on the company's books. Although there are other transactions that can occur in the common stock account, they are beyond the scope of this course. For our purposes, once stock is issued, the balance in the common stock account will not change unless more stock is issued.

"**Retained earnings**" are the total profits of the company (minus any losses) and minus any amounts that have been paid to stockholders over the lifetime of the company. When the company first starts in business, its balance in retained earnings is zero. At the end of its first year in business, the net income earned during the year increases retained earnings. If dividends were paid to stockholders during the year, this amount is deducted from retained earnings. The title of this account means exactly what it says: earnings (or profits) of the company which has been retained (held), meaning has not been paid to the stockholders in the form of dividends.

Dividends are payments that a company makes to its shareholders. Usually the company is not under a legal obligation to make these payments, but it might decide to pay dividends if it has excess cash that it does not expect to need in its operations. Paying dividends is one way the company can give a return to its investors. The other way the investors can get a return on their investment is if they eventually sell their stock for more than they paid for it.

At the end of the period the Balance Sheet is prepared after the Income Statement and the Statement of Retained Earnings have been completed. This is because numbers from these statements impact the ending Balance Sheet. After you complete a Balance Sheet, always check to see that it is in balance. That

is, the total assets must equal the total of liabilities plus stockholders equity. If it is not in balance, you know you have made a mistake somewhere. To find your error, first check you totaling. It that is correct, go back through your entries to make sure you have correctly recorded both sides of each.

Two things about the Balance Sheet make it unique among the financial statements. One is that the Balance Sheet is a picture at a point in time. Because of this, it is called a "snapshot" of the business. It has this title because it is a listing of the assets, liabilities, and equity of the business at a specific point in time. The Balance Sheet is prepared at the close of business typically on the last day of the month, quarter, or year.

The other unique characteristic of the Balance Sheet is that the ending balances reported on one Balance Sheet roll over to become the beginning balances for the next period. So, for example, the ending balances at December 31, 2015 become the beginning balances at January 1, 2016. This is because the company still has the same assets, the same liabilities, and the same equity at the beginning of the new period as it did at the end of the old period.

At the end of this chapter is a Balance Sheet for the fictional company, Springfield Repair Services Corporation. Look over this carefully. Pay particular attention to the format of the Statement and the types of accounts. Notice the asset accounts are typically listed first and are usually listed in their order of "**liquidity**". The liquidity of an asset is a measure of how fast it is expected to be converted into cash. The definition of "**current assets**" is assets that are expected to either be used up or converted into cash within about one year, so the current assets are listed at the top of the assets. Cash is usually listed at the top of the current assets since it is the most liquid of all assets.

Following the current assets is typically the "**Property, Plant, and Equipment**". These are the fixed assets the company owns. This company did not own any long-term investments or intangible assets, but if it did, these would also be in separate categories. Notice that at the end of the listing of assets is the total of all the company's assets, and this figure is usually double underlined.

The bottom half of the Balance Sheet is the right-hand side of the accounting equation: liabilities and stockholders' equity. "**Current liabilities**" are those debts that are expected to be paid within one year, and typically they are listed first. Below that are "**long-term liabilities**", those debts which are not expected to come due within the next 12 months. At the end of the liability section is a total of all liabilities (all debts) the company owes.

After liabilities is the "**stockholders' equity**" section of the Balance Sheet. When this company originally issued its common stock, it received $10,000 for it, and this amount is still showing on the Balance Sheet, classified as "common stock". In addition, the "retained earnings" account is also shown in the stockholders' equity section of the Balance Sheet. The amount of retained earnings comes directly from the ending balance of retained earnings computed on the "Statement of Retained Earnings". The total of the stockholders' equity section of the Balance Sheet is important because it is an approximation of the portion of the assets that belong to the stockholders, who are the owners of the company. In addition, the total liabilities plus the total stockholders' equity should equal the total assets. Be sure to look over the Balance Sheet for Springfield Repair Services Corporation at the end of this chapter.

Income Statement:

In its most basic form the structure of the Income Statements is as follows:

Revenues
-Expenses
Net income

"**Revenues**" are amounts the company earns by doing what it is in business to do. This could be the fee income that comes from selling a service, such as is done by medical practices or law or accounting firms. Or, it could be from the sales associated with buying a product and reselling that same product for a higher price, such as is done by a retailer. Or, the revenue could be sales that come from a company which has purchased raw materials, processed the materials in some way, and sold a different product than had originally been purchased. This is the process of manufacturing companies.

Under both GAAP and IFRS the revenues shown on the income statement are the total amount earned from the sales made during the period, whether or not cash was received. It is possible (and, for many companies, likely) that no cash changes hands at the time of sale. This is a sale on credit. The selling company accepts a promise to pay from the purchasing party. Often these companies (the selling companies) will send an "**invoice**" at the end of the period. This invoice is a listing of all charges the purchaser made during the period and the total amount now due to the seller.

Recording revenue when it is earned regardless of when cash is received is called the "**accrual method of accounting**". Opposing this is the "**cash basis of accounting**", which means that revenue is recorded only when cash is received. While many small companies use the cash basis, all publicly-held and many privately-held companies are required to use the accrual method. We will cover only accrual accounting in this course.

"**Expenses**" are amounts that were used up during the period in order to generate the revenue. There is a wide array of expenses, including such things as the cost of products sold, payroll, insurance, taxes, utilities, rent, and supplies. Just as is true with revenues, under the accrual method of accounting, expenses are recorded as an expense on the Income Statement when they are incurred, regardless of when they are paid. Both GAAP and IFRS require any expenses that were "incurred" during the period to be recorded on the Income Statement in that period. An expense is "**incurred**" when it is used up.

IFRS and GAAP require accrual accounting because it gives a more accurate picture of the results of the company's operations. The accrual method attempts to show revenue in the period it was earned. Expenses that were incurred in the earning of that revenue are shown as deductions. This is the accounting convention known as "**matching**", which means that expenses are shown as deductions from the associated revenue.

On the Income Statement, the revenues are listed at the top of the Statement followed by a listing of expenses. The amount that is left after expenses have been deducted from revenues is called either "**net**

income" (if it is a positive figure) or "**net loss**" (if it is a negative figure). Other names for net income are "**net profit**" or just "**profit**" as well as "**earnings**".

There are two concepts to be aware of regarding the Income Statement. One is that the Income Statement always covers a period of time. It reports the net income the company earned over a period of time, such as over a month, a quarter, or a year. This differs from the Balance Sheet which is prepared as of a certain date and gives the company's status as of that date.

Another concept about the Income Statement that differs from the Balance Sheet is that at the end of the period, the numbers on the Income Statement are eliminated, and the starting figures on the Income Statement for the next period are zero. This is necessary because readers of the next period's financial statements will want to know the income for that period and do not want prior period revenues or expenses to be included.

The reason for the differences between these two statements relates to the nature of the accounts listed on each statement. The accounts listed on the Balance Sheet carry over to the next period. They are things such as cash, inventory, and accounts payable. The accounts listed on the Income Statement are revenues that have been earned and expenses that have been incurred during the prior period. These amounts are not relevant to the next period.

There is a sample Income Statement for Springfield Repair Services Corporation at the end of this chapter. Notice that revenue is the top line, followed by a list of expenses organized by the type of expense. The bottom line is the "net income". The word "net" is typically used to mean that something has been subtracted out. "Net income" means that it is the income that is remaining after expenses have been deducted from revenue.

Statement of Retained Earnings:

The account "retained earnings" is a component of the section of the Balance Sheet called stockholders' equity. (The other component is "common stock". The common stock account is increased only when the company sells its own common stock.) The concept of "retained earnings" often gives beginning students trouble, because it is a little vaguer than the other accounts. It is the total of the all of the net incomes earned by the company over all the years it has been in business (minus any net losses) and minus any amounts paid out in dividends over all the company's years of operations.

So, even though the title is a little cumbersome, it says exactly what it is. Retained earnings is the earnings of the company (since it has been in business) that have been retained in the business, which means that they have not been paid to the stockholders as dividends. The purpose of this Statement is to show the changes that have occurred in this important account during the period. The structure of the Statement of Retained Earnings is as follows:

Beginning retained earnings
+Net income (or minus net loss)
-Dividends
=Ending retained earnings

This Statement starts out with beginning retained earnings, which is the balance of retained earnings at the end of the prior period. The retained earnings account is a Balance Sheet account, and all of the ending balances of one period on the Balance Sheet carry over to become beginning balances for the next period. If this period is the company's first year in business, the beginning retained earnings balance will be zero.

After the beginning retained earnings balance is recorded, the next line shows the company's net income (or loss) for the period brought down from the bottom of the Income Statement. This is added to beginning retained earnings. If the company had incurred a net loss, the amount of the loss (which also would have come from the bottom line of the Income Statement) would be deducted.

The third line of this Statement is the amount of dividends paid during the period. If dividends were paid, the amount paid is deducted here. Remember for most companies, the payment of dividends is optional. Companies vary widely in their philosophy on paying dividends. Some companies pay dividends every year and try hard to keep the amount consistent from year to year. Other companies pay dividends sporadically and of varying amounts. Still other companies will go for years without paying dividends at all.

Notice the difference between the treatment of dividends and the treatment of expenses. Dividends paid are not an expense of the company, and because of this, they are not deducted on the Income Statement.

If no dividends were paid in the current period, a zero would be placed on the third line of this Statement of Retained Earnings. Totaling these three lines gives the ending retained earnings balance.

After the ending retained earnings balance has been computed on the Statement of Retained Earnings, it is carried forward to the ending Balance Sheet. The total of ending retained earnings and the common stock account make up the stockholders' equity section of the Balance Sheet. Bringing retained earnings to the Balance Sheet should bring the Balance Sheet into balance. The Balance Sheet is "in balance" when total assets equal total liabilities plus stockholders' equity.

Notice that the Income Statement is a computation which arrives at the amount of net income for the period. After the net income has been determined and is shown at the bottom of the Income Statement, this figure is carried forward to the Statement of Retained Earnings to be included in the computation of ending retained earnings. When ending retained earnings is computed, this amount is carried forward to the ending Balance Sheet to bring that Statement into balance. In this way, these three statements are tied together. Because of this, it is important that, when preparing these three statements, **always prepare the Income Statement first, then the Statement of Retained Earnings, and then the ending Balance Sheet**. You must do it in this order to balance the ending Balance Sheet.

Statement of Cash Flows:

The Statement of Cash Flows is the fourth financial statement. This Statement does not tie into the other statements, so it can be prepared at any time, although it is often done at the same time as the rest of the Statements. This Statement is a reconciliation that takes the reader from the beginning cash to the ending cash by adding in cash receipts and subtracting out cash payments made during the period. You can think of this Statement as similar to a bank statement in that it explains the change in the cash account from the beginning to the ending balance by looking at the impact of all the transactions during the period.

For the organization of this Statement, we go back to Chapter 1 and the types of transactions: financing activities, investing activities, and operating activities. All transactions of the company are divided into these categories and shown in this manner on the Statement of Cash Flows. This is a logical classification of cash transactions which is informative to the reader. There are several different formats to this Statement, and the one we will cover in this class is as follows:

Cash, beginning of period

+/- Operating cash flows
+/- Financing cash flows
+/- Investing cash flows

Cash, end of period

For each transaction, if cash was decreased, then the amount paid is deducted on this statement. If cash was increased, the amount received is added. You will know if you have accounted for all the cash transactions (and have not accounted for any non-cash transactions) if the amount you have for "Cash, end of period" on this statement agrees with the amount shown on the ending Balance Sheet.

The Statement of Cash Flows is different than the other three statements in that this is the only Statement prepared on the cash basis. It is necessary to use the cash basis for this Statement because it is the cash account that is being analyzing. In preparing this Statement, look only for those transactions that had an impact on cash. For example, a sale on account increases revenue (Income Statement) and increases accounts receivable (assets on the Balance Sheet), but has no impact on the Statement of Cash Flows at the time of sale. When the cash is collected, then operating activities will be increased on this Statement.

In a manner similar to that of the Income Statement, the amounts recorded on the Statement of Cash Flows also fall away at the end of the period. The ending cash amount at the end of this period will become the beginning cash for the next period. All other numbers on this Statement will begin the next year at zero.

Summary:

At the end of the period when "financial statements" are required to be prepared, it is the Balance Sheet, Income Statement, Statement of Retained Earnings, and Statement of Cash Flows that must be produced. Remember that the first three must be done together and the order **must** be (1) Income Statement, (2) Statement of Retained Earnings, and (3) Balance Sheet. The Statement of Cash Flows can be prepared at any time.

An ending Balance Sheet that is in balance is always a good thing, but it doesn't mean that you have done everything perfectly. It does mean that you have balanced every entry for every transaction you recorded. It also means that your math is correct on all of the statements. However, you could have recorded a transaction to the wrong account, and your Balance Sheet might still be in balance. Also, you could have missed recording a transaction altogether and your Balance Sheet would still be in balance.

In addition to the four basic financial statements mentioned above, every complete financial report will also include "**notes**". These have additional data to supplement the information in the formal statements. The purpose of the notes is to give the reader additional information which does not have a place on the formal statements. There is no prescribed format for the notes, but they should be clear to a reader who is not familiar with the company.

The more knowledge you have about accounting, the more understandable financial statements will be. The purpose of this class is to give you the beginnings of how to understand financial statements. As you go further in accounting and other business courses, the information contained in financial statements will become even clearer to you.

Be sure to take a few minutes and look at the financial statements on the following pages.

Springfield Repair Services Corporation
Balance Sheet
31-Dec-15

ASSETS			
Current assets:			
Cash		$240	
Accounts receivable		$85	
Prepaid insurance		$90	
Total current assets			$415
Property, plant, and equipment:			
Building	$22,000		
Less: Accumulated depreciation	($4,600)	$17,400	
Equipment	$10,000		
Less: Accumulated depreciation	($2,200)	$7,800	
Land	$4,200	$4,200	
Total property, plant, and equipment			$29,400
TOTAL ASSETS			$29,815
LIABILITIES & STOCKHOLDERS' EQUITY			
LIABILITIES:			
Current liabilities:			
Accounts payable	$200		
Wages payable	$140		
Utilities payable	$80		
Unearned revenue	$125		
Total current liabilities		$545	
Long-term liabilities:			
Long-term notes payable	$12,000		
Interest payable	$480		
Total long-term liabilities		$12,480	
TOTAL LIABILITIES			$13,025
STOCKHOLDERS' EQUITY:			
Common stock		$10,000	
Retained earnings		$6,790	
TOTAL STOCKHOLDERS' EQUITY			$16,790
TOTAL LIABILITIES & STOCKHOLDERS' EQUITY			$29,815

Springfield Repair Services Corporation
Income Statement
For the Year Ending December 31, 2015

Revenue		$44,000
Expenses:		
Wage and salary expense	$22,000	
Utilities expense	$650	
Insurance expense	$1,200	
Property tax expense	$860	
Equipment rental expense	$4,000	
Depreciation expense	$1,250	
Less total expenses		($29,960)
Net income		$14,040

Springfield Repair Services Corporation
Statement of Retained Earnings
For the Year Ending December 31, 2015

Beginning balance, January 1, 2015	$ 15,000
Plus: Net income	$ 14,040
Minus: Dividends paid	$ (22,250)
Ending balance, December 31, 2015	$ 6,790

Springfield Repair Services Corporation
Statement of Cash Flows
For the Year Ending December 31, 2015

Beginning balance, January 1, 2015		$1,900
Operating activities:		
Plus revenue collected	$42,000	
Minus payments for insurance	($1,250)	
Minus payments for wages and salaries	($21,860)	
Minus payments for utilities	($1,240)	
Minus payments for property taxes	($860)	
Minus payments for equipment rentals	($4,000)	
Net cash flows from operating activities		$12,790
Financing activities:		
Plus long-term borrowing	$12,000	
Minus payment of dividends	($22,250)	
Net cash flows from financing activities		($10,250)
Investing activities:		
Minus purchase of land		($4,200)
Ending cash balance, December 31, 2015		$240

Chapter 3 - Common Transactions and Their Impact on the Financial Statements

Learning Objectives:

After studying Chapter 3, you should

- Understand the concept of "double-entry bookkeeping"
- Know how to account for the common transactions covered in this chapter
- Understand how to prepare basic financial statements
- Understand how accrual accounting is applied in the accounting records

Most companies tend to have many of the same types of transactions, and in this course we are going to look at how these transactions impact the financial statements.

The first transaction a corporation typically has is selling its stock to those who will become owners, or stockholders. For example, assume that potential stockholders of a corporation agree to pay a total of $20,000 to buy corporate stock. To record this transaction, the account "common stock" on the Balance Sheet is increased by $20,000. Recall that in double-entry bookkeeping, there is always a need for at least two entries. In this case the other side of this entry is to increase cash by $20,000. The Balance Sheet is still in balance because we have $20,000 in assets (cash) and $20,000 in stockholders' equity (common stock).

	Balance Sheet Accounts			**Income Statement Accounts**	
	Cash	Notes Payable	Common Stock	Revenue	Expenses
Transaction #1	$20,000		$20,000		

Assume now that the company decides to borrow $10,000 from the bank. For accounting purposes, this loan is called a "**note payable**". Now the company has a liability (a debt) called "note payable" of $10,000 on its Balance Sheet, and cash has increased again, now to $30,000. The Balance Sheet is still in balance with total assets (cash) of $30,000, and liabilities of $10,000 plus stockholder's equity of $20,000. Nothing has impacted the Income Statement yet—both of these transactions were recorded only on the Balance Sheet. To keep things simple in this first example, we are assuming there is no interest on the loan. In actual practice, there would always be interest. We will deal with that fact of life in later chapters and examples.

	Balance Sheet Accounts			Income Statement Accounts	
	Cash	Notes Payable	Common Stock	Revenue	Expenses
Transaction #1	$20,000		$20,000		
Transaction #2	$10,000	$10,000			

Now assume that the company, a lawn maintenance company, earns and receives $5,000 for work completed. This is revenue to the company because it is an amount the company earned by doing what it is in business to do, and the revenue earned is shown on the Income Statement. The other side of this entry is to increase cash again.

	Balance Sheet Accounts			Income Statement Accounts	
	Cash	Notes Payable	Common Stock	Revenue	Expenses
Transaction #1	$20,000		$20,000		
Transaction #2	$10,000	$10,000			
Transaction #3	$5,000			$5,000	

After recording this entry, the Balance Sheet by itself is no longer in balance. Revenue was increased but it is an Income Statement account and the only account that was increased on the Balance Sheet was cash. Even though the Balance Sheet is not in balance, the company's books as a whole are in balance. The Balance Sheet will not come into balance again until the end of the period when we bring it back into balance to prepare financial statements.

Finally, assume the company pays the workers $2,000 for the work they did to generate the revenue. This will be recorded on the Income Statement as an expense because it was a cost the company incurred in generating the revenue of the period. This expense of $2,000 is recorded as wages expense on the Income Statement and the amount paid reduces cash on the Balance Sheet. This payment increases the total expenses (Income Statement) and decreases the total assets (Balance Sheet).

	Balance Sheet Accounts			Income Statement Accounts	
	Cash	Notes Payable	Common Stock	Revenue	Expenses
Transaction #1	$20,000		$20,000		
Transaction #2	$10,000	$10,000			
Transaction #3	$5,000			$5,000	
Transaction #4	($2,000)				$2,000
Totals	$33,000	$10,000	$20,000	$5,000	$2,000

While the $2,000 payment to the workers *increased* expenses, since the total expenses will be deducted from revenue to arrive at net income, the income statement as a whole was *decreased* by the $2,000 expense. Net income will be reduced by $2,000 as a result of this expense, and total assets are reduced by $2,000 as well.

Notice that each of these transactions impacted two accounts. It is this double-entry approach that maintains the equality of the accounting equation. From this information, we can prepare the financial statements. Always start with the Income Statement, which for our example would look as follows:

Gregory's Lawn Maintenance Service, Inc.
Income Statement
For the Current Month

Revenue	$5,000
Wage expense	-$2,000
Net income	$3,000

Remember that the Income Statement covers a period of time, in this case one month. It is a listing of the revenue earned during the period minus the expenses incurred in order to earn that revenue. Once the Income Statement is complete, the net income amount will flow to the Statement of Retained Earnings. Since this is this company's first period in business, the balance in beginning retained earnings is zero. Assuming that no dividends were paid this month, the Statement of Retained Earnings would look as follows:

Gregory's Lawn Maintenance Service, Inc.
Statement of Retained Earnings
For the Current Month

Retained earnings, beginning of month	$0
Plus net income during the month	$3,000
Minus dividends paid during the month	$0
Retained earnings, end of month	$3,000

Notice that the net income computed on the Income Statement is brought forward to the Statement of Retained Earnings. Because of this, it is always necessary to prepare the Income Statement before preparing the Statement of Retained Earnings.

In this case, the ending balance in retained earnings is the same as the net income. However, when this Statement is prepared for the next month, this won't be true. The balance of retained earnings at the end of this month ($3,000) will become the beginning retained earnings at the start of the next month.

Now that the Statement of Retained Earnings is prepared and we have determined the ending retained earnings balance, we can bring that amount forward to the Balance Sheet. Retained earnings is a stockholders' equity account, and the ending Balance Sheet would look as follows:

Gregory's Lawn Maintenance Service, Inc.
Balance Sheet
End of Current Month

Assets:		
Cash	$33,000	
Total assets		$33,000
Liabilities & Stockholders' Equity:		
Liabilities:		
Notes Payable	$10,000	
Total liabilities		$10,000
Stockholders' Equity:		
Common stock	$20,000	
Retained earnings	$3,000	
Total stockholders' equity		$23,000
Total liabilities and stockholders' equity		$33,000

To determine if the Balance Sheet is in balance, compare total assets to the total of liabilities plus stockholders' equity. Our Balance Sheet is in balance because our total assets of $33,000 equal our total liabilities plus stockholders' equity of $33,000. Liabilities and stockholders' equity are very different types of accounts, but their totals are added together on the Balance Sheet to show that the Statement is in balance.

Notice how these three statements are connected. The net income from the Income Statement flowed through to the Statement of Retained Earnings. The ending balance of retained earnings flowed through to the end-of-the-period Balance Sheet, putting it into balance.

The last of the four statements is the Statement of Cash Flows. The purpose of this Statement is to reconcile the beginning cash to the ending cash and to show the reader how it changed. Since this is the first period of business for this company, it has a beginning cash of zero. The Statement of Cash Flows would look as follows:

Gregory's Lawn Maintenance Service, Inc.
Statement of Cash Flows
For the Current Month

Cash, beginning of month		$ 0
Cash Flows from Operating Activities:		
Plus cash received from revenue	$5,000	
Minus cash paid for wages	(2,000)	
Net cash flows from Operating Activities		3,000
Cash Flows from Financing Activities:		
Plus cash received from sale of stock	$20,000	
Plus cash received from note	10,000	
Net Cash Flows from Financing Activities		30,000
Cash, end of month		$33,000

This Statement classifies transactions by their type: operating, financing, and investing. If the company's cash increases as a result of a transaction, the amount received is a plus (added in) on this Statement. If the company's cash decreases as a result of a transaction, the amount paid is a minus (subtracted out) on this Statement.

In this company there were no cash inflows or outflows from investing activities during this period. Examples of transactions that would be classified as investing activities are buying or selling land, buildings, and equipment that are to be used in the business and meant to last for a period of years. Since this Statement is the impact on the cash account, transactions are classified as "investing cash outflows" if the company is purchasing one of these assets or "investing cash inflows" if the company is selling one of these assets.

There are two entries under cash flows from financing activities. This category includes transactions with stockholders and borrowing or repaying loans. Typical transactions with stockholders are when the corporation sells stock ("financing cash inflow") and when it pays dividends ("financing cash outflow"). Our company's first transaction was to sell stock to stockholders so it is listed as a cash flow from financing activity.

Besides transactions involving stockholders, the other type of transaction that is classified as a financing cash flow is borrowing or repaying a loan (but not interest). In this example, $10,000 was borrowed during the month, so it is shown as an increase to cash flows from financing activities. (It is an increase because cash was received.) When this amount is repaid, the repayment will be shown as a subtraction from cash flows from financing activities.

There was no interest paid on the loan in this example, but if interest had been paid, it would have been classified as a cash flow from operating activities. This is true even though the interest is associated with

the note payable. The repayment of the note is a financing cash flow, but the payment of interest associated with a note is an operating cash flow.

Cash inflows and outflows occurring as a result of the company's everyday operations are classified as "cash flows from operating activities". This category is increased by cash coming in from revenue, such as when the company makes a sale and receives cash. Another example is when the company collects the money from a sale that it made earlier. When a sale is made on "account" (on credit), the cash inflow occurs at the time of collection, not at the sale.

When the company pays out cash for operating activities, the amount paid is subtracted as a "cash flow from operating activities". Examples of this type of payment are cash paid for inventory, salaries, or utilities.

Now assume it is the beginning of month 2. Recall that the Balance Sheet amounts from the end of month 1 will carry over to become beginning balances for month 2. The accounts listed on the Balance Sheet are called "permanent accounts" because they will continue to roll over.

The balances in the Income Statement accounts will begin the new period at zero. The Income Statement amounts from the prior period do not get carried over because they have been netted together and included in retained earnings, which is a section of the stockholders' equity section on the Balance Sheet. The accounts listed on the Income Statement are called "temporary accounts" because they will continually be zeroed out at the end of each period so the next period can start with a clean slate.

Do not make the mistake of thinking that the balance in retained earnings is a fund of cash. The amount of cash the company has is shown as an asset in the cash account. The amount in retained earnings added to the amount in the common stock account is the total stockholders' equity for the company. This is an estimate of the owners' portion of the company's assets. This means that it is an estimate of the portion of the company's assets that are owned outright by the company.

Following are the beginning balances for month 2:

	Balance Sheet Accounts							Income Statement Accounts	
	-- Assets ---			-- Liabilities ---		Stockholders' Equity			
	Cash	Accounts Receivable	Supplies	Wages Payable	Notes Payable	Common Stock	Retained Earnings	Revenue	Expenses
Beg. Balances	$33,000				$10,000	$20,000	$3,000		

These beginning balances came from the Balance Sheet amounts at the end of month 1, and we can easily see that assets equal liabilities plus stockholders' equity. The Balance Sheet must always begin each period in balance.

In this month Gregory's company earned $12,000 in total revenue, but as of the end of month 2, the Company had received payment of only $2,000 of the amount earned. The company is expecting the balance of $10,000 to be received during the first few days of month 3.

Notice in the summary (at the top of page 30) that the full amount earned during month 2 of $12,000 is the amount that is recorded as revenue. This is true even though only part of that amount, only $2,000, was received in cash. The cash account is increased by $2,000, and the $10,000 that is still owed to the Company is recorded as an "account receivable". The balance in accounts receivable shows the amount of revenue the Company has earned but has not yet received. Recording the revenue earned rather than the cash received is called "**accrual accounting**". Because the account receivable is expected to be received the following month, it is classified as a current asset. The entry was to increase revenue on the Income Statement by $12,000, increase the cash account on the Balance Sheet by $2,000, and increase accounts receivable which is also on the Balance Sheet by $10,000. This entry required three parts, but when all three are recorded, the company's books as a whole are still in balance.

It is important to notice here that it was not the receipt of cash that caused the revenue to be reported. Instead the Income Statement was increased by the full amount of revenue that was earned during the period, whether or not the cash was received. Using accrual accounting to record the revenue actually earned gives a clearer picture of the operations of the company during the period. It also makes the Balance Sheet more accurate by showing that cash went up by the $2,000 collected plus the company now has an additional asset of $10,000 which is the amount owed to the company by a customer.

	Balance Sheet Accounts							Income Statement Accounts	
	-- Assets ---			-- Liabilities ---		Stockholders' Equity			
	Cash	Accounts Receivable	Supplies	Wages Payable	Notes Payable	Common Stock	Retained Earnings	Revenue	Expenses
Beg. Balances	$33,000				$10,000	$20,000	$3,000		
Transaction #1	$2,000	$10,000						$12,000	

Also during month 2, the Company incurred $6,000 in wages expense. Of this amount, $5,000 was paid during month 2 and the remaining $1,000 will be paid in the first few days of month 3. Wages expense on the Income Statement should reflect the total amount of expense incurred during the month, which is $6,000. This is true even though that wasn't the amount paid out in cash. It is the fact that the expense was *incurred* during the month that causes the transaction, not how much was paid out in cash.

Besides showing that wages expense (on the Income Statement) was $6,000, the amount that was actually paid reduces the cash balance on the Balance Sheet. So, the cash account is reduced by $5,000. At this point our entry is out of balance until we find a place to record the other $1,000 that is owed at the end of month 2 but has not yet been paid. This $1,000 should be recorded as wages payable, which is a liability account on the Balance Sheet. Recording these three amounts puts our books in balance and correctly states both the Income Statement and the Balance Sheet.

Recording the amount of expenses that were incurred during the period rather than the amount of cash paid out is "accrual accounting". Because the $1,000 which is still owed is expected to be paid within the next year (actually the next few days), it is classified as a current liability. Again, the transaction required three entries, and the company's accounting records taken as a whole are still in balance.

	Balance Sheet Accounts							Income Statement Accounts	
	-- Assets ---			-- Liabilities ---		Stockholders' Equity			
	Cash	Accounts Receivable	Supplies	Wages Payable	Notes Payable	Common Stock	Retained Earnings	Revenue	Expenses
Beg. Balances	$33,000				$10,000	$20,000	$3,000		
Transaction #1	$2,000	$10,000						$12,000	
Transaction #2	($5,000)			$1,000					$6,000

At the end of month 2, the Company purchased $500 in supplies to use in the business on a big job that it will be working on in month 3. At the time of purchase all of the supplies are an asset and this amount goes into an asset account called simply “supplies”. Cash was reduced by $500 to reflect the fact that cash went down by this much when the supplies were purchased, and the supplies account was increased by the same amount. This purchase was just an exchange of one asset, cash, for another asset, supplies. Because this transaction did not involve any revenue earned or expenses incurred, only the Balance Sheet was impacted.

	Balance Sheet Accounts							**Income Statement Accounts**	
		-- Assets ---		**-- Liabilities ---**		**Stockholders' Equity**			
	Cash	Accounts Receivable	Supplies	Wages Payable	Notes Payable	Common Stock	Retained Earnings	Revenue	Expenses
Beg. Balances	$33,000				$10,000	$20,000	$3,000		
Transaction #1	$2,000	$10,000						$12,000	
Transaction #2	($5,000)			$1,000					$6,000
Transaction #3	($500)		$500						
Totals	$29,500	$10,000	$500	$1,000	$10,000	$20,000	$3,000	$12,000	$6,000

Now we can prepare the statements for month 2. Remember to start first with the Income Statement, which will look like this:

Gregory's Lawn Maintenance Service, Inc.
Income Statement
Month 2

Revenue	$12,000
Wage expense	-$6,000
Net income	$6,000

The Income Statement reflects activity during the current period. After this is prepared, you can move on to the Statement of Retained Earnings, which will look as follows:

Gregory's Lawn Maintenance Service, Inc.
Statement of Retained Earnings
Month 2

Retained earnings, beginning of month	$3,000
Plus net income during the month	$6,000
Minus dividends paid during the month	$0
Retained earnings, end of month	$9,000

The ending balance of retained earnings from the first month rolls over to become the beginning balance of retained earnings for month 2. The net income from the month 2 Income Statement is added to that to arrive at retained earnings at the end of month 2 of $9,000. This amount goes to the ending Balance Sheet for month 2 to bring it into balance.

Gregory's Lawn Maintenance Service, Inc.
Balance Sheet
End of Month 2

Assets:		
Cash	$29,500	
Accounts receivable	$10,000	
Supplies	$500	
Total assets		$40,000
Liabilities & Stockholders' Equity:		
Liabilities:		
Wages payable	$1,000	
Notes payable	$10,000	
Total liabilities		$11,000
Stockholders' Equity:		
Common stock	$20,000	
Retained earnings	$9,000	
Total stockholders' equity		$29,000
Total liabilities and stockholders' equity		$40,000

Once again, we can see that bringing over the ending retained earnings brought the Balance Sheet into balance. This is true because the total assets equal the total liabilities plus stockholders equity. In class we will go through the examples as they impact the financial statements directly. There will be many examples posted, and it will help you greatly in your understanding for you to spend some time working through these.

Chapter 4 – End-of-the-Period Adjustments

Learning Objectives:

After studying Chapter 4, you should

- Understand the purpose of end-of-period adjustments
- Know how to adjust the supplies account at the end of the period
- Understand prepaid amounts and how they are adjusted at the end of the period
- Understand the concept of depreciation and how it applies to buildings and equipment
- Understand the impact of depreciation on the Balance Sheet and the Income Statement
- Understand the concepts of principal and interest on a loan
- Understand how to accrue interest and the impact on the Balance Sheet and Income Statement

To ensure the financial statements are accurate, it is often necessary to make some adjustments to the accounts before preparing the statements. Adjustments are prepared after all of the transactions for the period have been recorded. To determine which accounts need an adjustment, go through each Balance Sheet account to see if the ending balance is correct. If the ending balance is wrong, an adjustment needs to be made. Below are some accounts that typically need end-of-the-period adjustments.

Supplies:

When supplies are held by a business, a count must be taken or estimation made of the supplies still on hand at the end of the period. The asset account, called simply "supplies", must be adjusted to reflect the dollar amount of supplies remaining. The other side of this entry goes to the Income Statement account, "supplies expense" to reflect the amount of supplies used during the period. The amount of the adjustment is the amount needed to bring the asset account to its correct balance.

For example, assume a company started the period with no supplies and purchased $800 worth during the period. At the time of purchase, cash was decreased by $800 and the asset account "supplies" was increased by $800. At the time of purchase, the transaction was an exchange of one asset for another.

Some of these supplies were used during the period and, at the end of the period when a count is taken, the count shows that only $240 worth is still on hand. An adjustment must be made in the amount of $560 to reduce the amount shown on the Balance Sheet from $800 to the actual balance of $240.

The adjustment reduces the account balance of supplies on the Balance Sheet, but the Income Statement must also reflect that the company had supplies expense for the period of $560. So, the other side of the adjusting entry goes to the Income Statement account, "supplies expense". This entry,

reducing the asset account by $560 and increasing the expense account by $560, correctly shows the expense during this period on the Income Statement and also correctly shows the balance of supplies still on hand as $240 on the Balance Sheet.

Prepaid Amounts:

Some types of expenditures are typically required to be paid in advance. When you make the payment for these, it is all an asset. You give up the asset cash and receive the asset of having prepaid an upcoming expense. These are expenses that get used up as time goes by, such as rent and insurance.

Assume you purchase business insurance for the next six months at a cost of $600. On the date you buy the insurance, you have a $600 asset. At the end of the first month, however, one-sixth of this asset, or $100 of it has expired. At this time you only have five months of coverage left as a prepaid asset, so you need to reduce the balance in your asset account by $100 to correctly reflect the $500 of prepaid insurance that is remaining at the end of the month.

In addition, you need to show $100 as insurance expense during this month. This was a cost that was incurred in order to generate the revenue this period. The adjustment at the end of the period is to decrease the prepaid insurance asset account by $100 and to increase insurance expense to $100. Doing this correctly states both the Balance Sheet and the Income Statement.

Fixed Assets:

The category "**fixed assets**" includes assets that were purchased to be used in the business (not intended for resale) and are expected to last at least for several years. This category includes equipment, buildings, and land the business uses in its operations. When these assets are first purchased, the transaction is an exchange of cash for a fixed asset. For example, if a piece of manufacturing equipment was purchased for $20,000 in cash, the cash account would be reduced by $20,000 and the equipment account would be increased by $20,000.

At the time the company purchases the fixed asset, it is worth the purchase price. However, as time goes by, the asset declines in value. This happens as a result of wear and tear or possibly obsolescence on the asset. When a building or a piece of equipment is purchased, management must estimate the asset's (1) expected useful life and (2) the value of the asset at the end of its useful life. This estimated ending value is called its "**salvage value**".

Assume that management estimates that the piece of equipment mentioned above which was purchased for $20,000 will have an expected useful life of 10 years and no salvage value at the end of that life. Assume also that the purchase was made on January 1, 2015. If we are preparing financial statements for the year 2015, as of December 31, 2015 we no longer have a new asset worth $20,000. Instead, we have an asset that has had a year of use and is now worth some amount less than the amount we paid for it. We need a way to show that the asset has declined in value. Also, because we would have used this asset to generate revenue during the year 2015, we need to show that a portion of the asset's cost was an expense of this period.

Accountants developed "**depreciation**" as a way to account both for the decline in fixed assets as well as to show that part of the decline is due to use in this period. Depreciation is *not intended to be reflective of the value of fixed assets.* Instead it is a way to methodically allocate the cost of using the asset to the Income Statement as an expense over the life of the asset.

There are several different types of depreciation methods from which management may choose, but the only method we cover in this course is called "**straight-line depreciation**". Under the straight-line method of depreciation, we subtract the salvage value from the purchase price (which leaves us with an amount called the "**amount to be depreciated**"). Divide this remainder evenly over the period of time we expect to be using the asset. For this asset which has an expected life of ten years, no salvage value, and which was purchased on January 1, 2015, we can say that by December 31, 2015, one-tenth of the asset has been used. This would mean that we should take depreciation for 2015 of $2,000, which is the depreciable amount of $20,000 x 1/10.

This $2,000 would be shown as an expense called "depreciation expense" on the Income Statement. This correctly allocates the expense against the revenue earned during this year. The other side of this entry is to show the decrease in the carrying value of the asset. This is done by adding a line below the equipment account on the Balance Sheet called "accumulated depreciation-equipment". The accumulated depreciation account is always a negative and is subtracted from the fixed asset account above it. It is called a "**contra-asset**" account because it is "opposed to" or against the asset account. It is usually reflected on the Balance Sheet as follows:

Equipment	$20,000
Accumulated depreciation-equipment	(2,000)
Net equipment	$18,000

Below the line for accumulated depreciation, is another new line titled "net equipment". When you see the word "**net**", it usually means that something has been subtracted out. In this case, the "**net carrying value**" of the equipment is $18,000. That means that $18,000 is the amount shown as the net asset for this equipment on the books of the company at the end of 2015.

Companies are required to show all this information for fixed assets on their financial statements. They show the original purchase price of the fixed assets minus the accumulated depreciation that has been deducted over the years and the net amount of equipment. Notice that this is different from what is shown for prepaid expenses. For prepaid expenses the only amount shown in the Balance sheet is the amount that is still prepaid at the end of the period. The additional information is required for fixed assets because they are normally large investments the company has made, and this information gives the reader of the financial statements a little more insight into the company than if had just presented the net amount of $18,000. With this presentation, the reader can estimate how old the company's equipment is and when it might need to be replaced, as well as get an idea of how much the company has invested in fixed assets.

Because the expected life and the salvage value are just estimates by management, these are often incorrect and sometimes the estimates are off by a substantial amount. You should know that there are systems in place to make corrections to these estimates as the need arises, but those adjustments are beyond the scope of this course.

Take the same example and assume now that the $20,000 piece of equipment was purchased by the company on July 1, 2015 instead of January 1, 2015. Assume also that management still estimates the equipment will last 10 years and will have no salvage value at the end of its useful life. The depreciation for a full year would still be $2,000, but the company only owned the asset for one-half of 2015. The depreciation adjustment for 2015 would only be one-half of a full year's depreciation, or $1,000. Depreciation expense for 2015 would be $1,000 and accumulated depreciation on the end-of-the-year Balance Sheet would be $1,000, so the net carrying value at December 31, 2015 for this piece of equipment would be $19,000.

Let's take this last example (assuming the equipment was purchased on July 1, 2015) one step further and look at the impact on the financial statements at the end of the next year, 2016. For the financial statements for the period ending December 31, 2016, the company would make the depreciation adjustment for 2016 which was a full year of use. For the year 2016 the adjustment would be for $2,000, which is the depreciable amount of $20,000 divided by its expected life of 10 years.

At the beginning of 201, the Income Statement amounts for 2015 would have fallen away so that the beginning Income Statement amounts for 2016 would start out at zero. The Balance Sheet amounts, however, would have rolled over from the end of 2015 to become the beginning balances for 2016. So, the accumulated depreciation account on the Balance Sheet would start at ($1,000) and the depreciation expense account on the Income Statement would start at $0. When the adjustment for 2016 is made, accumulated depreciation is increased by $2,000 and depreciation expense on the Income Statement is increased to $2,000. Accumulated depreciation at the end of 2016 will be $3,000 and the presentation would look like the following on the Balance Sheet:

Equipment	$20,000
Accumulated depreciation-equipment	(3,000)
Net equipment	$17,000

This process of recording the depreciation expense every year and steadily increasing accumulated depreciation will continue until the asset is either "**fully depreciated**", meaning that accumulated depreciation equals the depreciable amount of the asset, or until the asset is sold. The entries involved in the sale of assets are beyond the scope of this course. Notice that the amount on the Income Statement will never be higher than $2,000 per year.

Both buildings and equipment are subject to depreciation. These assets are first recorded on the Balance Sheet at their purchase price, and depreciation deductions (based on the depreciable amount)

are taken over the expected useful life of the assets to steadily reduce their net carrying value. Notice however that *land is never depreciated*. It is the only fixed asset on which depreciation is not taken. Land is not man made and so does not get used up in the same way as buildings and equipment.

Interest Expense:

When funds are borrowed, the repayment includes two components: principal and interest. The principal is the amount borrowed. Interest is the amount the borrower pays to the lender for the privilege of using the money. Interest is an expense to the individual or company borrowing the money, and it is revenue to the individual or company which made the loan. Interest is usually set as a percentage of the amount borrowed, and the amount of interest owed increases as time goes by and the loan is still outstanding.

The loan agreement will state when the principal and interest payments are due, and the loan repayment may be structured in any manner that is agreed upon by the two parties. Some common examples of the structuring of loan repayments are (1) partial payments of both principal and interest are due every month, *or* (2) interest payments are due quarterly and the principal repayment is due at the end of the loan period *or* (3) all of the interest and all of the principal may be due at the end of the loan period.

When a company borrows money, the interest that will be due on that borrowing is an expense that accrues (or builds up) as time passes. On the day the company borrows money, it don't owe any interest. After one month has gone by, it still owes the principal amount plus now one month's interest. The company owes this amount even if payments are not yet due. The amount that is owed must be shown as a liability on the Balance Sheet.

On your accounting records, you record as a liability the principal (amount borrowed) at the time the money was borrowed. The entry for this transaction is to increase cash and increase the account "note payable", both of which are Balance Sheet accounts. So, at the time of borrowing, the impact of the transaction is to increase assets and increase liabilities. Notice that the principal amount borrowed does not have any impact on the Income Statement.

As time passes, you also have to record that now you owe interest as well. Interest owed on money borrowed is an expense to the company. As interest is accrued, it is reported as an expense that goes on the Income Statement and an additional liability on the Balance Sheet.

For example, assume your company borrows $10,000 on January 1, 2015, and that you will need to repay this on January 1, 2016, along with $1,200 in interest. The entry on January 1, 2015 is to increase cash by $10,000 and increase the liability account, "notes payable" by $10,000. This liability is classified as a short-term liability because it is due in exactly one year. At the time of borrowing, there is no interest to record because no time has passed.

Let's assume that your company is preparing quarterly financial statements at March 31, 2015. Because the interest is $1,200 per year, by dividing this amount by 12, we know that the amount of interest per

month is $100. When we prepare the financial statements at March 31st, three months have gone by. At this time, we now not only owe $10,000 in principal but now we also owe $300 in interest.

To correctly state the financial statements, we need to make an adjustment to reflect the fact that we incurred interest expense during the period and also that we now owe more than just the principal. This adjusting entry records $300 as interest expense (Income Statement account) for the quarter and $300 as interest payable (a current liability account on the Balance Sheet). Notice that this entry causes both the Income Statement and the Balance Sheet to be correctly stated. The $300 in interest expense was an expense of the period and needs to be matched on the Income Statement against the revenue that it was used to earn. The Balance Sheet is correctly stated because it shows the additional liability of interest that we now owe along with the principal.

So, at this point we have two liability accounts on the Balance Sheet associated with the loan. The principal amount of the loan is shown in the account, “note payable”. The interest owed on this loan as of the date of the Balance Sheet is shown in the account, “interest payable”.

Let’s change this example and take it one step further. Assume that your company borrowed $10,000 on January 1, 2015, and the principal will not be due until January 1, 2018. Assume the interest is still $100 per month and it is due with the principal on January 1, 2018. You are now preparing annual financial statements for your company at December 31, 2015. You will have already recorded the transaction of borrowing the money, which occurred on January 1, 2015 and would have increased the cash account by $10,000 and increased the notes payable account by $10,000.

At December 31, 2015, you will need to record interest expense for the entire year. The transaction will be to increase interest payable by $1,200 ($100 x 12 months) and to increase interest expense by the same amount. This records the amount of expense that was incurred (even though it was not paid) during the period and shows the increased liability of the company as a result of having held the loan throughout 2015. Both of these liabilities would be classified as long-term because they are not due until after one year from the date of the Balance Sheet.

At December 31, 2016, you will need to make an adjustment for interest expense for that year. It will be the same adjustment that was made at the end of 2015—increase interest payable by $1,200 ($100 x the 12 months of 2016) and show interest expense of $1,200. Because the 2015 Income Statement amounts would have been closed out at the end of 2015, the beginning balances on all the Income Statement accounts at the beginning of 2016 would be zeroes. The amount showed for interest expense for 2016 would be only the expense incurred during that year, $1,200. The Balance Sheet amounts at the end of 2015 would have rolled over to become the beginning balances at January 1, 2016. Because of this, the adjustment that was made at the end of 2015 of $1,200 will still be on the Balance Sheet at the end of 2016. When you make the adjustment for interest expense for the year 2016, the interest payable account will now show a balance of $2,400, which is $1,200 from 2015 and $1,200 from 2016.

Notice that the financial statements now correctly reflect reality. The Balance Sheet shows that the company has a principal liability of $10,000 (carried over from when the original transaction was recorded on January 1, 2015), plus it shows another liability for interest of $2,400 ($1,200 for 2015 and

$1,200 for 2016). This is correct because the company has held the borrowed money for two years, so it owes two years of interest. If the company was to repay the loan and the interest owed at December 31, 2016, it would owe a total of $12,400, just as the Balance Sheet reflects.

The annual Income Statement is correctly stated as well. It shows interest expense of $1,200, which is the amount of interest incurred during 2016. So on the Income Statement, you are showing one year's interest expense again one year's revenue.

Taking that to the next year, the same adjustment would be made—interest expense would be $1,200 again and the interest payable account would be increased by $1,200. This would bring the interest payable account up to $3,600 on December 31, 2017.

The loan plus interest is due on January 1, 2018, so one of the company's first transactions at the beginning of 2018 would be to pay back the loan plus interest. This will be a total of $13,600; $10,000 return of principal plus $3,600 in interest. The entry to record this transaction will be to reduce cash by $13,600, reduce the note payable account by $10,000 (which leaves it at zero), and to reduce the interest payable account by $3,600 (which leaves it at zero). The entry to record the repayment only impacts Balance Sheet accounts, reducing assets and liabilities. The Income Statement has been correctly adjusted annually for the interest expense incurred each year.

Chapter 5 - Adding a Few Complications

Learning Objectives:

After studying Chapter 5, you should

- Understand the concept of cost of goods sold and gross profit
- Know the two entries required when a company sells an item of inventory
- Understand how a gain or loss on sale of an investment is shown on the Income Statement
- Know the entry required when a company has a gain or loss on sale of an investment
- Understand the concept of unearned revenue

The Income Statement that we covered earlier was in its most basic form:

Revenue
-Expenses
Net income (loss)

This is the format for Income Statements used by companies in the service industry. Companies that sell their knowledge and abilities are considered in the service industry. Examples of these companies are consulting firms of all types, doctors' offices, lawyers, accountants, etc.

Companies that sell a product present a slightly different Income Statement. For these companies it is helpful to offer the reader of the Financial Statements a little more information. Companies that sell a product include retailers, wholesalers, and manufacturing firms.

Cost of Goods Sold:

The format for an Income Statement for a company that sells a product is:

Sales
-Cost of goods sold
Gross profit
-Operating expenses
Net income (loss)

There are several things that you should notice about this Statement. One is that the top line is now called "**sales**" rather than "**revenue**" or "**fee income"**. Both fee income and sales mean revenue but the word "sales" is generally applied to companies selling a product, while "fee income" is generally applied to companies selling their knowledge and abilities.

The next line, "**cost of goods sold**", is the cost to the company to purchase or manufacture the products that were sold during the period. So, the top line of this Income Statement is the total the company earned for selling the products it is in business to sell, and the second line is the amount the company paid for, or had invested in, the products it sold.

The third line is the difference between sales and cost of goods sold and is called "**gross profit**". This is how much is left over after the cost of the products sold has been subtracted out. This is just a subtotal in the middle of the Income Statement, but it is an important figure. A company's gross profit must be sufficient to cover all of its other types of expenses with hopefully some left over for net income.

The terms "**inventory**" and "**cost of goods sold**" only refer to the products the company is in business to sell. The "inventory" account is an asset account and the "cost of goods sold" account is an expense account. When inventory is purchased by a company, the asset account inventory is increased and either cash is decreased or a liability account called "**accounts payable**" is set up to record the fact that this amount is now owed. The account "accounts payable" is only used to record purchases of inventory made on account. When inventory is received before payment is made, the inventory is said to be purchased "**on account**".

For example, assume a company purchases $4,000 of inventory and agrees to pay for this purchase no later than the 10th of the following month. The entry would be to increase the inventory account (an asset account) and to increase the accounts payable account (a liability account). Notice that this transaction only impacted the Balance Sheet. What the company owns (its assets) increased and what the company owes (its liabilities) also increased.

If these are the only transactions during the month, then at the end of the month the inventory account has a balance of $4,000 and the accounts payable account has a balance of $4,000. When the company pays the balance due, it will reduce the asset cash by $4,000 and also reduce the liability accounts payable by $4,000.

Another point to notice about the recording of this transaction is that, once it is recorded, the two parts of the transaction are split. The inventory is an asset on the Balance Sheet and may be sold before or after the payment is due to the company's supplier. Also, the liability may be paid at any time without impacting the fact that the inventory is an asset on the Balance Sheet.

When inventory is sold, **two balancing entries must be made**. The first entry is to record the sale, and the second entry is to reduce the inventory account. Assume that one-fourth of the inventory purchased above was sold for $2,800. First, the sale is recorded. If the sale was paid in cash, the Income Statement account "sales" is increased and the asset account cash is increased, both by the sales price of $2,800. If the sale was made but the cash has not yet been received, the Income Statement account sales would still be increased by $2,800 but on the Balance Sheet, instead of increasing cash, the account "**accounts receivable**" would be increased. The "accounts receivable" account is only used for sales made "**on account**", meaning that the sale was made but the cash has not yet been collected.

This treatment of recording the revenue on the Income Statement before the cash is collected is another example of accrual accounting. When the cash is later received, we will reduce the asset accounts receivable by $2,800 and increase cash by $2,800. The Income Statement is correctly impacted when the sale is made, not when the cash is collected.

The other balancing entry that must be made at the time of sale is to show that we no longer have $4,000 of inventory, but that we were required to use up $1,000 of that inventory in order to earn the $2,800 sale. To show this, the Income Statement account "cost of goods sold" is increased by $1,000 and the asset account "inventory" is decreased by $1,000. "**Cost of goods sold**" is the name of the account on the Income Statement that records the cost of the inventory that has been sold. This treatment of making a second entry to transfer the cost of the inventory sold to the Income Statement at the time of sale correctly matches the revenue earned from the sale with the cost of the inventory that was sold. Also, it leaves the Balance Sheet correctly stated in that the inventory which was sold has been removed and a balance of $3,000 of inventory remains.

If we were to determine our gross profit at this time, it would be as follows:

Sales	$2,800
-Cost of goods sold	-1,000
Gross profit	$1,800

This means that this sale gave us $1,800 in gross profit to go towards covering our other expenses of operating the business and hopefully leaving us some for net income. This increase in gross profit is also the amount of increase in our assets. Either cash or accounts receivable went up by $2,800 and inventory went down by $1,000.

Gains and Losses on Sales of Investments:

The purpose of the Income Statement is to show clearly to readers outside the company the amount of income the company earned during the period. Typically the majority of the revenue will come from the company doing what it is in business to do. If there was a gain or loss on an investment which the company made that was not related to the operations of the business, this gain or loss needs to be shown on the Income Statement but it needs to be set out separately. In this case, this Income Statement would have two additional lines and look like this:

Sales revenue
-Cost of goods sold
Gross profit
-All other operating expenses
Net income (loss) from operations
+/-Gain or loss on sales of investments
Net income (loss)

An investment is an asset that the company purchased which is not being used in the operations of the business. For example, if the company purchased land that it is not using in the business and then sells the land for a gain or loss, the amount of this gain or loss is a part of net income and should be recorded on the Income Statement. However, it needs to be made clear to the reader of the financial statement that this gain or loss is not expected to be a recurring part of net income and was not generated by the normal operations of the company.

When an investment is sold, there is only one balancing entry. Assume your company purchased land for $8,000 in cash and then decided to sell the land when it received an offer of $11,000. When the land was first purchased, it was an exchange of one asset for another. At that time the asset account land was increased by $8,000 and the asset account cash was decreased by $8,000.

Now that you are going to sell the land, you will need to reduce the land account by $8,000 because you are selling all of the land. Do not reduce the land account by the amount of cash received. If you did that in this case, you would leave your balance in the "land" account at a negative $3,000! That obviously is not correct. Your goal is to make the Balance Sheet as correctly stated as possible. Since you sold all of the land that you owned, you want the land account to have a zero balance. Your entry to the land account is to reduce it by $8,000.

A second part of the entry is to record the actual amount of cash received. In this case, you will increase the asset account cash by $11,000. Because you have reduced one asset account by $8,000 and increased another asset account by $11,000, your entry is out of balance by $3,000. This $3,000 goes in an Income Statement account called "**gain on sale of investment**". Then when you prepare the Income Statement, it will be shown on the next to last line of the statement, showing the reader that this transaction did occur, but also making it clear that the net income for the period received a $3,000 boost that was not from the regular operations of the business but rather a good investment the company made.

Assume again that your company owned the piece of land that it had purchased for $8,000, but now decides to sell one-half of the land for $3,500. Be very careful not to reduce the asset account land by $3,500. That is the amount of cash received, but because we sold one-half of the land and because we want the Balance Sheet to be as correct as possible, we need to reduce the asset account land by *one-half of the amount originally paid for the land*, or $4,000. This will leave a $4,000 balance in the land account which is correct because we still own the other half of the land.

We still need to record the actual amount of cash received of $3,500 into the cash account. After we have reduced the asset account land by $4,000 and increased the asset account cash by $3,500, we have $500 left to account for to complete this entry. This $500 goes to an Income Statement account called "**loss on the sale of investment**". It will be shown on the next to last line of the Income Statement, coming right after the line "**net income from operations**". Again, this is to let the reader know that the $500 was a loss that was incurred by the company, but it was not from the results of operations.

Unearned Revenue:

Many times payments are made by a customer before the service or product is received. One example of this is tuition. You pay tuition ahead of the time you receive the service. Another example is magazines subscriptions. When you subscribe to a magazine, you are usually required to pay at least one year ahead of time, and the magazine will encourage you to subscribe for a longer period of time.

When a company receives cash ahead of providing the service or product, this amount cannot be shown as revenue. The goal of accrual accounting is to show the revenue that has been *earned* during the period. When a company receives advance payments, just that fact that cash was received is not enough to allow it to be considered earned. The proper recording of this transaction is to increase cash by the amount of cash that was actually received, and the other side of this entry is to increase a liability account called "**unearned revenue**".

It may seem odd that this is classified as a liability, but it does accurately show the transaction. If the sale is not completed, the customer will be entitled to receive the cash back. Assume you have a house-sitting business and take care of people's houses while they are away on vacation. You ask that your customers pay one-third of the total before leaving and the remainder when they return. If you were to receive $50 from one of your customers who then is unfortunately in an accident before leaving and cancels the trip, you would owe the $50 back to the customer.

Assume now that the customer is not in an accident and does go on the trip. You take care of her house and charge her a total of $150, $50 of which you have already received and $100 that is still owed to you. One entry that you will need to make is to reduce the liability account unearned revenue by $50 (because now you have earned that amount) and increase the Income Statement account revenue by $50. This entry shows that the $50 received early has now been earned. Also, you now have an additional $100 of revenue which should also be recorded on the Income Statement. The entry to record this is to increase revenue on the Income Statement by $100 and to increase the Balance Sheet account accounts receivable by $100.

If this was your only transaction for this company, the end result would be that you show cash of $50, accounts receivable of $100, and revenue of $150. When you receive the balance you are due from this customer, you will reduce "accounts receivable" by $100 and increase "cash". Notice the Income Statement is only impacted when the revenue is actually earned. Receiving the cash either early or late impacts only the Balance Sheet.

Unearned revenue can be confusing, but it is important to understand because it is relatively common in practice. Remember that the only way unearned revenue can exist is if the company receives payment (actually receives the cash) ahead of earning the revenue. It can be thought of as the opposite of accounts receivable. A company has an account receivable if it earned the revenue but has not yet received the cash. A company has unearned revenue if it received the cash but has not yet earned the revenue.

Only two transactions happen with unearned revenue. One is that the company receives the cash ahead of having earned it. The asset cash is increased and the liability unearned revenue is increased. When the revenue is later earned, sales in increased on the Income Statement and unearned revenue on the balance sheet is decreased.

Chapter 6 - Analyzing Accounts

Learning Objectives:

After studying Chapter 6, you should

- Understand how accounts receivable are used and what makes the balance go up and down.
- Understand the inventory and cost of goods sold accounts. Know what causes the inventory account to increase and decrease.
- Understand prepaid accounts and what causes them to increase and decrease.
- Understand long-term assets and how these accounts are impacted by sales and purchases.
- Understand the accounts payable account and how it relates to inventory. Know what causes increases and decreases in both of these accounts.
- Understand the notes payable account and the interest payable account and how they are increased and decreased.
- Understand some of the other common payable accounts and how they are impacted by transactions of the business.
- Understand the common stock account and what increases it.
- Know how to prepare a Statement of Retained Earnings and understand how it fits into the accounting cycle. Know the possible causes of increases and decreases in the retained earnings account.

To understand financial accounting, it is important to think about how the accounts are impacted by transactions. For example, when the "cash" account increases, it is because cash has been received. When it decreases, it is because cash has been paid out.

Accounts Receivable:

When the account "accounts receivable" increases, it is because a sale has been made for which the cash has not yet been collected. The entry is to increase the Income Statement revenue account (typically called either "fee income" or "sales") and to increase the Balance Sheet account accounts receivable. So at the time of the sale, the Income Statement and the Balance Sheet are both increased.

When accounts receivable decreases, it is because all or part of the amount owed to the company has been collected. When the cash is collected, accounts receivable is reduced and cash is increased. This is just an exchange of one asset, the receivable, for another asset, cash, and only the Balance Sheet is impacted. You have already recorded this as revenue on the Income Statement at the time it was earned.

When analyzing accounts receivable, think of the account in this manner:

Beginning balance + sales – cash collected from sales = ending balance

This is the flow of the accounts receivable account. At the beginning of each period, the balance is the amount you are owed from your customers. The balance is increased as you make more sales on account and decreased as you collect from your customers. The ending balance is the amount you are still owed.

Assume you know the ending balance of accounts receivable at the end of the prior year was $24,000 and the ending balance at the end of the current year was $30,000. You know also that there were transactions during the period that made the account go up as well as transactions that made it go down. Assume you also know that sales on account during the period were $90,000. These sales would have increased the account balance. The account balance was decreased every time cash was collected. If you were trying to answer the question, "How much cash was collected during the year?" you could set up the following equation:

$$\$24,000 + \$90,000 - X = \$30,000$$

Then, just solving for X shows that cash collected must have been $84,000. This must be correct because it is solving for the amount how much accounts receivable was reduced by during the period, and cash collected on account is what reduces the balance in accounts receivable.

This way of analyzing the problem will give you the correct answer whether or not all sales of the company were made on account. If we add in all sales (which could have included some sales which were paid immediately in cash), we will get all the cash collected (which will include both collections from customers paying on account as well as purchases for cash).

Alternatively, if we had been given the amount of cash collected, then we could have determined the total revenues by solving for the amount that had increased the accounts receivable. Because accounts receivable is closely related to unearned revenue, when analyzing accounts receivable, always look to see if there is also any unearned revenue.

Inventory:

When the asset account "inventory" increases, it is because inventory has been purchased. Recall that the term "inventory" is only used when referring to the products that the company is in business to sell. Often inventory will be purchased "**on account**", which means that it is not paid for at the time of receipt but is paid later when an invoice is submitted by the selling company. Companies are often allowed to purchase on account because they may purchase many products from the same suppliers and could receive shipments as often as several times a day.

A purchase of inventory on account is recorded by increasing the asset account inventory and increasing the liability account accounts payable. The company has increased what it owns, but it has also

increased what it owes. This transaction increases the totals at the bottom of the Balance Sheet because both total assets and total liabilities have increased.

If the inventory had been purchased with cash, the transaction would have been an exchange of one asset for another, and the entry would be to increase inventory and to decrease cash. Because these are both asset accounts and the increase is one is offset by the decrease in the other, the Balance Sheet totals would not have changed.

When the inventory account decreases, it is usually because inventory has been sold. When inventory is sold, the inventory account on the Balance Sheet is decreased by the cost of the inventory sold, and the Income Statement expense account cost of goods sold is increased by the same amount. The account called "cost of goods sold" is the expense account associated with the sale of inventory. This account shows the cost the company had in the inventory that was sold during the period.

Recall that it is the selling of inventory that requires two separate, balancing entries. One entry is recorded at the company's original cost in the inventory. This entry reduces the asset account inventory and increases the Income Statement account cost of goods sold. The purpose of this entry is (1) to show that the company no longer has as much of the asset inventory on hand and (2) to deduct on the Income Statement the expense of the cost the company had in the inventory that was sold.

The other entry is to record the sale, and this entry is made at the sales price. A revenue account on the Income Statement is increased and an asset account on the Balance Sheet (either cash or accounts receivable) is increased. The purpose of this entry is (1) to show on the Income Statement the revenue that was earned as a result of the sale, and (2) to show that assets have increased by the sales price.

Here is the flow of the inventory account:

Beginning inventory + inventory purchased – cost of goods sold = ending inventory

The beginning inventory is the amount of inventory you had at the start of the period. This account is increased when you buy more inventory and decreased when you sell inventory. Your ending inventory is the amount you have left at the end of the period.

If the beginning balance in inventory is $12,000 and the ending balance is $11,000, then we only need to know either the amount of inventory purchased *or* the amount of inventory sold in order to determine the missing figure. In this case, assume that $48,000 of inventory was sold during the period. This means that the account was reduced by $48,000. To determine how much inventory was purchased, use the following formula:

$$\$12{,}000 + X - \$48{,}000 = \$11{,}000$$

Solving for X shows that $47,000 worth of inventory must have been purchased during the period.

If the amounts for any of the components of inventory are missing, you can solve for it if you know the other three amounts.

Accounts Payable:

The liability account "accounts payable" increases when inventory is purchased *on account,* which means that the inventory was received before payment was made. When inventory is purchased on account, both the asset inventory and the liability accounts payable are increased. Notice that this purchase on account increases the totals on the Balance Sheet, and there is no impact on the Income Statement.

When the payable is paid, both the asset cash and the liability accounts payable are reduced. This transaction of paying a liability decreases the totals on the Balance Sheet, and again there is no impact on the Income Statement.

If, at the end of the period the balance in the accounts payable account has increased over what it was at the end of the prior period, there have been more purchases of inventory on account during the period than there have been payments. If the balance has decreased, there have been more payments on accounts payable than there were purchases on account.

Be careful of the phrase "**on account**". It can refer to a sale in which the cash has not yet been collected (accounts receivable), or it can refer to a purchase that has not yet been paid (accounts payable). Pay attention to the context in which this term is used to be sure you are handling the transaction correctly.

This is the flow of the accounts payable account:

Beginning balance + inventory purchased – amounts paid for inventory = ending balance

The beginning balance is the amount you owed your suppliers of inventory at the end of the prior period. (You had received the inventory but had not yet paid for it.) Add in the inventory purchased, which is the inventory you bought during the current period. Subtract out any payments you made for inventory, and the end result is the amount you owe your suppliers of inventory at the end of the period.

If you know the amount of any three of these components, you can solve for the missing number.

Notice that for purposes of analysis, you want to include the entire inventory purchased in this formula, whether or not the purchase was originally made on account. You want to do this because you want the component "amounts paid for inventory" to include everything you paid, whether or not you ran that through the accounts payable system.

Relationship between Inventory and Accounts Payable:

Because the accounts payable account is only used for purchases of inventory and because we are showing all of the purchases of inventory as having gone through the accounts payable system, we can use these two accounts together to take the analysis one step further:

Inventory:
Beg. balance + inventory purchased –cost of goods sold = ending balance

Accounts payable:
Beg. balance + inventory purchased – payments on account = ending balance

Notice both of these accounts are increased by inventory purchases. If we are given the amount of inventory sold (cost of goods sold), we can use the amount of inventory purchased to determine the payments on account. To make this determination requires two steps. First analyze the inventory account to arrive at the amount of inventory purchased. Plug this figure for inventory purchased into the accounts payable analysis and determine the payments made on account during the period.

For example, assume these beginning and ending balances for inventory and accounts payable:

	Inventory	Accounts Payable
Beginning	$26,000	$ 8,000
Ending	23,000	10,000

Now assume that you know cost of goods sold was $46,000, and the question is how much in payments on account was made to suppliers during the period? To approach this problem, your only choice is to use the information given. Since you are given cost of goods sold, you have to analyze the inventory account first because that it is the only account on the Balance Sheet that is impacted by cost of goods sold. The formula is:

$26,000 + X - $46,000 = $23,000

Solving this gives the amount of inventory purchased of $43,000. Now that you have the amount of inventory purchased during the period, you can use it to analyze accounts payable and determine the payments made on account:

$8,000 + $43,000 - X = $10,000

Solving this gives the amount paid to suppliers of $41,000 which is the answer to the problem.

Or, the computation could go the other way. If you are given the payments on account and asked to compute the amount of inventory sold, you can first analyze the accounts payable account to arrive at the amount of inventory purchased. Use that amount to analyze the inventory account and determine the amount of inventory sold.

For example assume the same information except that you are given that $50,000 was paid to suppliers and are asked to compute the cost of goods sold. First analyze accounts payable and use the resulting inventory purchased amount to analyze the inventory account to arrive at cost of goods sold.

$8,000 + X - $50,000 = $10,000

Since this shows that total purchases during the period were $52,000, you can use this figure to determine cost of goods sold through the inventory equation:

$26,000 + $52,000 - X = $23,000

Solving this shows that cost of goods sold for the period must have been $55,000.

Prepaid Accounts:

Most businesses will have some future expenses that must be prepaid. Examples of typical prepaid items are rent and insurance. Both of these usually require payments to be made in advance, and these are examples of assets that expire as time goes by.

When the balance in a prepaid account increases, it is because more has been purchased. At the time of purchase, it is an exchange of cash for the prepaid item.

As time goes by, part of the prepayment expires and is no longer an asset. The portion of the prepayment that expires is an expense of that period and should be taken out of the asset account and shown as an expense on the Income Statement. You would use an end-of-the-period adjustment to make this entry.

Assume on October 1, 2015, your company pays $1,200 for insurance covering one year. At the time of purchase, your company has exchanged one asset for another. The entry at this time is to reduce the cash account by $1,200 and to increase the prepaid insurance account by $1,200.

When your company prepares annual financial statements at December 31, 2015, three months of this insurance will have expired. To correctly state the financial statements, you need to reduce the asset account so that the Balance Sheet shows nine months of prepaid insurance remaining and to record the portion of insurance that has expired as an expense of this period on the Income Statement. To do this, reduce the asset account prepaid insurance by $300 (leaving a balance of $900) and increase insurance expense by $300. The amount of $300 was determined by dividing the amount paid for one year of $1,200 by twelve months to get $100 a month as the charge for insurance. At the end of December, three months of insurance have been used, which is $100 times 3 months, or $300.

Prepaid accounts follow this general flow:

Beginning balance + Amounts paid – Portion expiring during period = ending balance

The beginning balance is the amount that you had prepaid during the last period that had not yet expired at the end of that period. The balance in this account increases when you pay for more. At the end of the period, you make an end-of-the-period adjustment to take out the portion that has expired and show it as an expense of the period. The amount remaining is the amount that is still prepaid at the end of the period.

Long-term Assets:

Examples of these assets are in the category called "fixed assets", which typically includes land, buildings, and equipment. When the amount shown on the Balance Sheet for these assets (the amount directly to the right of the account title) increases from one period to the next, more fixed assets were purchased during the period. When the fixed asset balance decreases from one period to the next, some fixed assets were sold during the period.

Recall that depreciation deductions decrease the "**net amount**" of fixed assets, and the term "net carrying value" refers to the original cost of the asset minus accumulated depreciation. The term "**directly to the right**" refers to the original cost of the fixed asset. As the fixed assets are used and depreciation is recorded (for assets other than land), the depreciation recorded is recorded in the contra-asset account, "**accumulated depreciation**". The presentation on the Balance Sheet is the original cost minus the accumulated depreciation.

Recall also that when a long-term asset is sold, the account balance is reduced by the original purchase price of the asset, *not* the amount of cash received. In our class the only fixed asset we sell is land because it doesn't have the complication of depreciation. The entry for the sale of land is to reduce the land account by the amount that had originally been paid for that segment of land, increase the cash account by the amount of cash actually received, and to record the difference as either a "gain" or "loss" on the next to last line of the Income Statement. Be sure to notice the difference between this treatment for sales of investments and the treatment of two balancing entries for the sales of a company's inventory. The reason for this treatment for the sale of investments on the Income Statement is to separate this transaction from the revenue and expenses that were incurred by the business in its general operations.

The flow of the land account is as follows:

Beginning balance + land purchased – original cost of land sold = ending balance

The beginning balance is the amount you paid for land in prior periods. Add to that the cost of any land purchased during this period. If any land was sold during the period, subtract out your original cost for that land, and the ending balance is your cost in the land you have remaining at the end of the period.

Notes Payable and Interest Payable:

The notes payable account is a liability that increases as funds are borrowed. If your company takes out a loan in the amount of $10,000, the entry would be to increase the asset cash and increase the liability notes payable. This entry increases both assets and liabilities on the Balance Sheet, and the fact that the company now has borrowed money has no impact on the Income Statement.

Interest will accrue on the note as time goes by. At the date the money was borrowed, there was no interest due. The longer the loan is "**outstanding**" (the money is held by the borrower), the more

interest will accrue. Assume in the above example that a note payable in the amount of $10,000 was borrowed on July 1, 2015 and a total of $12,000 must be paid back on July 1, 2017. At that time the loan will have been outstanding for a total of two years, and besides the principal, the company will also owe $2,000 in interest. Any amount repaid over and above the amount borrowed is interest.

When the principal portion is repaid, there is again no impact on the Income Statement. Both the asset cash and the liability note payable are reduced. While the principal portion of the loan only impacts the Balance Sheet, the interest incurred is an expense on the Income Statement. In this example, the interest that must be paid as a result of holding the money for two years is $2,000.

Interest is a cost that builds up as time goes by, and this interest will have been building up over two years (from July 1, 2015 to July 1, 2017). Accrual accounting requires you to show interest expense in the period it is incurred. Since the interest expense is $2,000 for two years, it is $1,000 per year, or $500 per six month period. When your company prepares its financial statements as of December 31, 2015, it will need to accrue $500 as the interest that is an expense associated with 2015.

The entry to accrue interest is to increase interest expense account on the Income Statement by $500. This reflects the amount of interest incurred during 20015 and correctly charges this amount against the revenue earned in that period. The other side of this entry is to increase the liability interest payable by $500 to show the balance due as of December 31, 2015. This entry correctly states the Balance Sheet because as of December 31, 2015, the company now owes not only the $10,000 borrowed but also $500 of interest expense.

So, when the liability account interest payable increases, it is because more interest has accrued than has been paid. If it decreases, it is because more interest has been paid than has accrued during the period. The entry when interest is paid is to decrease the asset account cash and to decrease the liability account interest payable.

The flow of the notes payable account is as follows:

Beginning balance + funds borrowed – amounts repaid = ending balance

The flow of the interest payable account is:

Beginning balance + interest incurred – amount paid = ending balance

Other Payable Accounts:

There are many other possible payable accounts that a company can have on its Balance Sheet. One common such account is “salaries and wages payable”. This account results from employees having worked and the company owing them their pay checks at the end of the period. This is common because the end of the period might be in the middle of the week and the pay date not until Friday. The entry is

at the end of the period is to increase the account salaries expense and to increase the liability account salaries payable.

Another common liability account is utilities payable. Utilities are usually paid after they have been used, but the expense needs to be recorded in the period in which the utilities were used. Often the invoice will be received at the end of the month and will be due the next month. Increasing the expense account utilities expense and increasing the liability account utilities payable correctly states the Income Statement and Balance Sheet at the end of the period. It shows the expense that was incurred during the period and also shows that there is an additional liability now because the utilities payment will be paid within a few days into the next period. As was true for salaries payable, the liability account utilities payable and the asset account cash will both be decreased when a payment is made.

Any account that is labeled a "payable" is always a liability. Recall that a liability always means that a debt is owed that has not yet been paid. Because of this, all payable accounts are increased by additional debt and decreased when they are paid.

Other payable accounts follow the same flow as interest payable:

Beginning balance + costs incurred – amounts paid = ending balance

Common Stock:

The first transaction of a corporation is to issue stock to the owners in exchange for an asset, typically cash. This transaction increases the cash account and increases the stockholders' equity account called common stock. In practice, there are other types of stock besides common stock. A company may choose to have several classes of preferred stock. We will only cover common stock in this class.

The company could also issue additional stock at a later point in time or it could buy back some of its stock that is outstanding.

Retained Earnings:

Retained earnings is increased when the company earns net income (or decreases when the company incurs a net loss). It is also decreased when the company pays dividends to its stockholders. Remember the name of the account "retained earnings" means earning of the company (its net income) that have been retained, meaning not yet been paid out in dividends. When dividends are paid, the amount of earnings that have been retained declines. Paying dividends is a way of rewarding the company's investors with an immediate return.

When the company first begins business, its retained earnings balance is zero. At the end of the first period, the net income (or net loss) from the Income Statement is closed into retained earnings on the

Statement of Retained Earnings. This gives the retained earnings account its first balance. Any dividends paid are deducted out and the remainder is the retained earnings balance at the end of the period. Recall that the meaning of "retained earnings" is the amount of income minus any losses the company has earned during its lifetime in business and minus any dividends it has paid out also during its lifetime in business. That is the reason for the title "retained" (which means "held") "earnings" (which means "net income").

The balance at the bottom of the Statement of Retained Earnings is brought forward to the end-of-the-period Balance Sheet to bring it into balance. Once this is done, all revenue minus all expenses and all dividends paid have been brought over to the stockholders' equity section of the Balance Sheet. It is because all of these figures have been netted together and "stored" on the Balance Sheet that it is not necessary to keep beginning balances on the Income Statement.

To analyze retained earnings, compare the ending balance of this period with the ending balance of the prior period. If the balance at the end of the current period in the account retained earnings is greater than the balance in this account in the prior period, then you know that the company earned a net income during the period and that, if dividends were paid out, the amount paid out was less than the amount of net income. However, if the balance at the end of this period is lower than the prior period, the company may have incurred a net loss during the period or it may have paid out more in dividends that it earned in net income or both of these might have occurred during the period.

The flow of the retained earnings account is the same as is shown on the Statement of Retained Earnings:

Beginning balance + net income – dividends paid = ending balance

The beginning balance of retained earnings is the ending balance from the prior year. Remember that retained earnings is all of the net incomes from the company from all the year it has been in business minus the dividends paid. In this formula, we are doing the same thing for this year by adding in this year's net income and subtracting out any dividends paid this year.

Chapter 7 – More Analysis

Learning Objectives:

After studying Chapter 7, you should

- Understand how to determine each of operating, financing, and investing cash flows by looking at two consecutive balance sheets.

Cash flows can often be determined from the other financial statements with a small amount of additional information. Look at the following financial statements:

	2014	2015
Cash	$1,000	$2,600
Accounts receivable	$8,200	$7,000
Inventory	$4,500	$5,200
Prepaid rent	$1,200	$1,000
Equipment	$24,000	$24,000
Accumulated depreciation	($4,600)	($6,200)
Land	$12,000	$14,000
	$46,300	$47,600

	2014	2015
Accounts payable	$8,400	$3,300
Unearned revenue	$1,200	$2,000
Utilities payable	$4,500	$7,000
Notes payable	$14,000	$16,000
Interest payable	$3,200	$4,000
Common stock	$12,000	$12,000
Retained earnings	$3,000	$3,300
	$46,300	$47,600

In the left hand column is a listing of the company's assets. Under 2014 are the balances in those accounts at the end of 2014, and the 2015 column has the balance at the end of 2015. The next column is a listing of the liabilities and stockholders' equity accounts and then the balances for each of those accounts at the end of 2014 and 2015.

Notice that the two 2014 columns make up the 2014 balance sheet, and the two 2015 columns make up the 2015 balance sheet. We can use these two balance sheets to determine the cash flows for the year 2015 because the ending balances for 2014 become our beginning balances for 2015.

Operating Cash Flows:

To determine the amount of operating cash flows from these balance sheets, think of the structure of the Statement of Cash Flows. It follows this pattern:

Beginning cash balance
+/- Operating cash flows
+/- Investing cash flows
+/- Financing cash flows
Ending cash balance

If you are given the investing cash flows and the financing cash flows, you can set the operating cash flows as x and solve for that.

For example, if this company's investing cash flows during the year were $6,000 and financing cash flows were ($2,000), you could solve for the operating cash flows as follows:

$1,000 +x +$6,000 – $2,000 = $2,600
X = ($2,400)

In this example, the beginning cash is $1,000, x is the operating cash flow, $6,000 is the investing cash flow, and ($2,000) is the financing cash flow. Setting this equal to the ending cash balance of $2,600 and solving for x, gives the operating cash flow of ($2,400).

Financing Cash Flows:

Financing cash flows consist of transactions with bankers for just the principal amount and transactions with stockholders. You can get the transactions with bankers by comparing the beginning notes payable balance with the ending balance. In this case, the ending balance of $16,000 is $2,000 greater than the beginning balance of $14,000. This means that the end result at the end of the year was that the company borrowed $2,000. (It may have borrowed more than that during the year and paid part of it back. We are only concerned about the end result.) This means there was a $2,000 financing cash inflow from bankers.

Recall that interest paid is an operating cash flow. We cannot tell if any interest was paid during the year, but we do not need to know this because it is not included in financing cash flows.

Transactions with stockholders consist of the company issuing common stock and paying dividends. To determine if there were any cash flows from common stock during the year, compare the beginning balance of common stock with the ending balance. If it was the same, no stock was issued during this year so there were no cash flows for issuing stock. If it increases, the difference between the beginning balance and the ending balance is a financing cash inflow. In this case, the stock account both began and ended the year at $12,000, so there were no cash flows from issuing stock.

The only other financing cash flow is for dividends paid. If the company paid cash dividends during the year, the amount paid is a financing cash outflow. The amount of dividends paid is buried in retained earnings. Recall that the changes in retained earnings from the beginning to the end of the period are that net income increases it and dividends paid decreases it. If you are given net income, you can solve for the amount of dividends paid.

To determine the amount of financing cash flows:

+/- change in notes payable
+ change in common stock
- dividends paid
Financing cash flows

Investing Cash Flows:

In A100 the only investing cash flows are related to buying and selling fixed assets. When a fixed asset (land, buildings, or equipment) is purchased, the amount paid is an investing cash outflow.

As depreciation is recorded, the net carrying value of the asset on the balance sheet will decrease, but there is no payment of cash. Because cash is not impacted, there is no deduction on the Statement of Cash Flows for depreciation.

When the company sells a fixed asset, the selling price is an investing cash inflow. (In A100 to avoid the complication of depreciation, we will only sell land.) When land is sold, there are three amounts to be aware of: the original cost of the land, the sales price, and the gain or loss upon sale. When land is sold, reduce the land account by the original cost of the land. When you purchased the land, you reduced cash and increased the land account by the purchase price. So, when you sell the land, it is that original purchase price that you want to take out of the land account.

Increase the cash account by the sales price. (In A100, we assume land is always sold for cash.) The difference between the original cost and the sale price is a gain or loss, which is shown at the bottom of the income statement. If the sales price is higher than the original cost, you have a gain that increases net income. If the sales price is lower than the original cost, you have a loss that decreases net income. The gain or loss is shown below the subtotal "net income from operations" at the bottom of the income statement. This is done to separate this sale of a fixed asset from the operations of the business. This separation lets the reader of the financial statements know that the company had this gain or loss during the period, but it was not part of the normal operations of the company. (In A100, the normal operations of a company will always be something other than buying and selling land.)

To determine the amount of investing cash flows:

+ change in the equipment and building accounts
+ amount received from the sale of land
- amount paid for additional land purchased
Investing cash flows

Using the two financial statements presented earlier, assume you were given the additional information that land that had been purchased in a prior year for $2,000 was sold for a $500 gain. To determine the investing cash flows, look at the fixed asset accounts. There are no buildings on this company's financial statements, and the equipment account did not change from the end of the prior period to the end of this period. This means that there were no cash flows for either of those types of assets.

The land account started at $12,000 and ended at $14,000. The land we sold this year was purchased in a prior year for $2,000. This $2,000 of land would have been included in the $12,000 beginning of the year balance but not in the $14,000 end of the year balance. To determine the amount of land we purchased during the year, analyze the account as follows:

$12,000 + x - $2,000 = $14,000

Solving for x gives $4,000, which is the amount paid for land during the current year. This is an investing cash outflow. There was also an inflow from the other plot of land that was sold this year. We had originally purchased it for $2,000 and sold it during this year for a $500 gain, so the sales price on this land must have been $2,500.

To determine investing cash flows for this problem:

-$4,000 – cost of land purchased
+$2,500 – sales price of land sold
($1,500) – Investing cash flows

Keep in mind when you are looking at land sold that the original cost of the land is the amount that reduces the land account. However, it is the sale price that increases cash.

Chapter 8 – Analyzing Financial Statements

Learning Objectives:

After studying Chapter 8 you should

- Understand analyzing financial statements across time.
- Understand analyzing financial statements with industry averages.
- Know how to prepare common-size financial statements.
- Understand the debt to equity ratio and know how to calculate.
- Understand the return on equity ratio and know how to calculate.
- Understand the current ratio and know how to calculate.
- Understand the asset turnover ratio and know how to calculate.
- Understand the basic earnings per share and know how to calculate.

The information a company publishes in its financial statements is its representation of its status to the world. The "world" includes professional financial analysts, stockholders, debtors, and suppliers and customers of the company as well as competitors of the company and many others who have various reasons to be interested in the condition of the company. Many of these readers of financial statements have little or no other means of understanding the financial condition about the company. Because of this and because there is a large volume of information contained in the financial statements, analysts of all kinds have developed a few standard approaches to analyzing the data to help them focus on the important points.

Analysis Across Time:

It is important to look at the current year's financial statements and make some comparisons with statements from prior years. This helps the reader to answer questions such as:

- Is the company buying increasing amounts of assets?
- Is the debt or equity of the company increasing?
- How has net income changed?
- How has the gross profit of the company changed?
- How much of the company's earnings has it maintained and how much as it paid out as dividends?

Answers to questions such as these as well as many others help the reader understand the intentions and the effectiveness of management. Looking across time gives the reader a feeling for the trend in which the company is moving.

Analysis Within the Industry:

It is helpful to look at the financial statements of other businesses in the same industry. These competitor companies face many of the same obstacles and their financial data can provide valuable insight as to how they operate and how successful their choices have been. Some things which can be discovered about the competitor companies from looking at their financial statements are:

- Are major assets purchased or leased?
- Are the majority of their assets financed with debt or with equity?
- How high is their gross profit?
- Do they pay dividends?
- Are they continually investing in more fixed assets?

Common-Size Financial Statement:

Financial statements are called "common size" when percentages have been included. These are helpful to the reader in making comparisons, both over time and with other companies in the same industry. Typically both the Balance Sheet and the Income Statement are made common size.

The Balance Sheet usually will have total assets set at 100%. Then, all other accounts on the Balance Sheet have their percentage of the whole listed next to the dollar amount. These percentages let the reader know at a glance, for example, what percentage cash is of total assets. To make this calculation, the balance of cash is divided by the total assets. Another percentage that is often of particular interest is the percentage of current assets to total assets. This is determined by dividing the amount of current assets by total assets. The percentages of all individual asset accounts should add to 100%, which is the percentage of total assets.

On the other side of the Balance Sheet, liabilities plus stockholders' equity is the same amount as total assets, so it is also set at 100%. Often of special interest on this side of the Balance Sheet is what percentage total liabilities are to total liabilities plus stockholders' equity. To determine this, divide total liabilities by total liabilities plus stockholders' equity.

The Income Statement is usually made common size by setting total revenue at 100%. Each expense has a percentage next to it which shows its percentage of total revenue. For example, the cost of goods sold percentage is an important one for analysts. This is determined by dividing cost of goods sold by total revenue. Another percentage of interest particularly for service businesses (where the majority of expenses is usually in salaries) is the percentage of salaries and wages expense compared to total revenue. This is determined by dividing the amount of salaries and wages expense for the period by the revenue for the period.

The net income percentage is also important to readers of financial statements. This is computed in the same way--the net income of the company divided by the total revenue. This percentage gives the percent of each dollar of revenue that remains as profit after all the expenses of a company have been paid.

Common-size percentages on the financial statements make the numbers more comparable. When comparing financial statements of a company to that same company's statements of prior years, these percentages make it easier to see where the company is expanding or contracting and if it is becoming more or less efficient. For example, if you see a company almost doubled its revenues and increased its gross profit by $12,000, it is easier to make comparisons between the two years if you have percentages that standardize these figures.

In addition, it is easier to make comparisons between other companies in the same industry if you have common-size percentages for all the companies you are comparing. The percentages standardize the figures and reduce the impact of the relative sizes of the companies. For example, you could easily compare the cost of goods sold percentage, various expense percentages, and the net income percentages of companies of all different sizes to see their relative efficiencies.

A copy of financial statements with common-size percentages for the Paintball Company (one of the problems assigned for you to work through in this course) is shown at the end of this chapter.

Debt-to-Equity Ratio:

The debt-to-equity ratio is a measure of a company's liabilities compared to its equity. This is a measure of how the company has financed its assets. Every company has a choice as to whether to finance its assets by borrowing money or by using its equity. The computation of the debt-to-equity ratio is:

$$\frac{\text{Average total liabilities}}{\text{Average stockholders' equity}}$$

The result of this formula is a comparison of how much the company uses debt as opposed to equity. The finance term for the extent a company uses debt is "**leverage**" and this ratio is considered a "**leverage ratio**". Some companies use considerably more debt than they do equity. This is often the case for companies that have requirements for expensive fixed assets. Other companies, for example consulting firms, may use almost no debt because their business requires few expensive assets.

Notice that the first word in both the numerator and the denominator is "average". Typically average figures are used on Balance Sheet amounts because end-of-the-year figures may not reflect the typical balances during the year. To compute this ratio, you need to get an estimate of the average total liabilities as well as the average stockholders' equity during the period. Most analysts do not have access to the details to compute this exactly, so there is a commonly-used shortcut. To get a rough estimate of the "average", take the beginning of the year balance plus the end of the year balance and divide by 2. Written out, the formula becomes:

$$\frac{(\text{Beginning total liabilities} + \text{ending total liabilities})/2}{(\text{Beginning stockholders' equity} + \text{ending stockholders equity})/2}$$

Notice that the numerator includes all liabilities, whether short- or long-term. Notice also that the denominator includes all stockholders' equity, which would mean both retained earnings and common stock.

Debt-to-equity ratios vary by industry and the policy of the management of each company. A company that uses a high percentage of debt compared to its equity would have a high debt-to-equity ratio. Companies that require a large amount of expensive fixed assets, such as manufacturing firms, tend to fall into this category and have ratios of 2.0 or higher. A ratio of 2.0 means the company has twice as much debt on its balance sheet as equity. A large amount of debt increases the risk of the company since the company must have sufficient cash to pay the loans back along with interest when these come due.

Businesses with low needs for expensive fixed assets, such as consulting firms, tend to have lower debt-to-equity ratios, often around .5, which means that the company has twice as much equity as debt.

Return on Equity:

The return on equity (ROE) ratio is a measure of how efficiently the company is using its equity. This is important to owners and analysts alike. This is calculated by the following formula:

$$\frac{\text{Net income}}{\text{Average stockholders' equity}}$$

The word "**return**" is often used to refer to net income, and remembering this will help you to remember this formula. This is a "**profitability ratio**" which means it is a ratio analysts use to measure the relative profitability of a company. Profitability ratios always compare net income to some number on the Balance Sheet. Doing this allows analysts to compare companies of different sizes.

The net income figure in the numerator refers to the net income taken from the bottom of the Income Statement. The denominator is the average of all stockholders' equity over the period. The above formula could be restated to read:

$$\frac{\text{Net income}}{(\text{Beginning stockholders' equity} + \text{ending stockholders' equity})/2}$$

This calculation for the denominator makes it a rough estimate of the average stockholders' equity during the period. Recall that the Income Statement figures are for one period only, so the numerator is the total net income for only the current period.

ROE is useful when comparing financial statements of various companies. It gives the percent of net income compared to the total amount of equity invested in the company and is a way to measure how efficiently the company is using the stockholders' investment. ROE's vary from one industry to another, and industries requiring large investments of fixed assets typically will have lower ROE's.

Current Ratio:

The current ratio is a commonly-used estimate of the company's ability to pay its debts. Whether or not a company can pay its debts in the coming year is important information for readers of the financial statements, because insufficient cash is the number one reason companies fail. This is called a "**solvency**" ratio, meaning it is a rough measure of the company's ability to remain solvent during the coming year.

The formula for the current ratio is as follows:

$$\frac{\text{Current assets}}{\text{Current liabilities}}$$

There are several things you should pay careful attention to regarding this formula. First, only the current assets are used in the numerator and only the current liabilities are used in the denominator. Recall the definition of current assets is cash plus any assets expected to be converted into cash or used up within one year. The definition of current liabilities is any debts that are expected to become due within one year. So, if a company had a current ratio of 1, its current assets are exactly the same amount as its current liabilities. A current ratio of greater than 1 means that there looks to be somewhat of a cushion. A current ratio of less than 1 means that there looks to be more debts coming due during the next year than there will be cash to cover these. Analysts typically want to see a current ratio comfortably above 1.0, but too high of a ratio may mean that the company is not doing a good job of investing its assets.

The other point you should be aware of is that, even though these accounts are both Balance Sheet accounts, you do not take an average of beginning and end of the year figures for this ratio. Instead, it uses only year-end amounts. The reason for this is that this ratio is forward looking. Its purpose is to get a rough estimate of whether or not the company will have the ability to pay its debts from where it is at the end of the year.

Inventory Turnover Ratio:

The inventory turnover ratio is a measure of how fast the company moves its inventory through the company. This is a test on the inventory as a whole, because individual items of inventory would move through the company at different rates. This ratio is one of a class called an "**asset turnover ratio**". The inventory turnover ratio is computed as follows:

$$\frac{\text{Cost of goods sold}}{\text{Average inventory}}$$

The numerator is cost of goods sold taken from the Income Statement, and the denominator is the average inventory taken from the beginning and ending Balance Sheets. This formula can be restated to the following:

$$\frac{\text{Cost of goods sold}}{(\text{Beginning inventory} + \text{ending inventory})/2}$$

In general, a high inventory turnover ratio means that the company is doing a good job of selecting inventory for resale and the company has a relatively small amount of inventory that it is having trouble moving. Since there is a high cost associated with holding inventory (it has to be stored, insured, kept dry, and the longer it is held the greater the possibility of it becoming obsolete or spoiling), analysts usually like to see high inventory turns.

The general rule is that a company which has a gross profit of 20% to 30% should try to achieve an inventory turnover ratio of 5 to 7 times per year. If a company has a lower gross profit percentage, it should try for a higher turnover ratio, and a company with a higher gross profit percentage in general does not need to have as high a turnover ratio. These are estimates or "rules of thumb" and the gross profit percentage as well as the inventory turnover rate for any particular company is governed to a large degree by the industry in which the company operates.

Earnings Per Share:

"Earnings per share" (EPS) is one of the most important figures on the financial statements. It is one of a miscellaneous category of ratios upon which analysts place a lot of reliance. The formula for earnings per share is as follows:

$$\frac{\text{Net income}}{\text{Average number of shares outstanding}}$$

The net income figure used in the numerator is from the bottom line of the Income Statement. The denominator is an average of the number of shares outstanding. The formula could be changed to the following:

$$\frac{\text{Net income}}{(\text{Beginning number of shares outstanding} + \text{ending number of shares outstanding})/2}$$

The word "outstanding" means that the shares have been issued and are in the hands of stockholders. In practice the number of shares that are outstanding varies, often daily. For our purposes in A100, you will be given the number of shares outstanding and that number will stay constant during each year. Notice also that the denominator in this formula is a number and not a dollar amount.

This formula determines what is called the "**primary earnings per share**". There is also "fully-diluted earnings per share" which is beyond the scope of this class and which you will cover in detail in more advanced classes.

"Earnings per share" is important to analysts because it is a return on each share of stock outstanding. In addition, it is easy to compare companies in different industries and of different sizes by using this one ratio.

EPS is the one ratio that is required to be on the face of the financial statements, and it goes on the Income Statement directly below net income. It is the most important of all ratios because it is often a crucial component in determining the value of a share of stock.

Vivian Winston

July 2015

Paintball Company
Common-size Financial Statements

End of Month 3

Our Company's Balance Sheet at the End of Month 3

ASSETS		
Current Assets:		
Cash	$ 12,300	52.1%
Accounts Receivable	3,000	12.7%
Inventory	700	3.0%
Prepaid Rent	800	3.4%
Prepaid Insurance	600	2.5%
Total Current Assets	$ 17,400	73.7%
Fixed Assets:		
Equipment	$ 2,400	10.2%
Accumulated Depreciation - Eqpt	(200)	-0.8%
Land	4,000	16.9%
Total Fixed Assets	$ 6,200	26.3%
Total Assets	$ 23,600	100.0%
LIABILITIES		
Current Liabilities:		
Accounts Payable	$ 500	2.1%
Total Liabilities	$ 500	2.1%
STOCKHOLDERS' EQUITY		
Common Stock	$ 10,000	42.4%
Retained Earnings	13,100	55.5%
Total Stockholders' Equity	$ 23,100	97.9%
Total Liabilities & Stkhldrs' Equity	$ 23,600	100.0%

Our Company's Month 3 Income Statement

Sales Revenue - Services	$ 5,200	88.1%
Sales Revenue - Mdse.	700	11.9%
Total Revenues	$ 5,900	100.0%
Cost of Goods Sold	300	5.1%
Gross Profit	$ 5,600	94.9%
Salary Expense	$ 800	13.6%
Rent Expense	$ 400	6.8%
Insurance Expense	$ 600	10.2%
Depreciation Expense	$ 100	1.7%
Net Income	$ 3,700	62.7%

Our Company's Month 3 Statement of Retained Earnings

Beginning Retained Earnings	$ 10,400
Net Income	3,700
Dividends	(1,000)
Ending Retained Earnings	$ 13,100