ACCT 151: PRINCIPLES OF FINANCIAL ACCOUNTING II

HACC, Central Pennsylvania's Community College

LibreTexts™

HACC, Central Pennsylvania's Community College

ACCT 151: Principles of Financial Accounting II

This text is disseminated via the Open Education Resource (OER) LibreTexts Project (https://LibreTexts.org) and like the thousands of other texts available within this powerful platform, it is freely available for reading, printing, and "consuming."

The LibreTexts mission is to bring together students, faculty, and scholars in a collaborative effort to provide an accessible, and comprehensive platform that empowers our community to develop, curate, adapt, and adopt openly licensed resources and technologies; through these efforts we can reduce the financial burden born from traditional educational resource costs, ensuring education is more accessible for students and communities worldwide.

Most, but not all, pages in the library have licenses that may allow individuals to make changes, save, and print this book. Carefully consult the applicable license(s) before pursuing such effects. Instructors can adopt existing LibreTexts texts or Remix them to quickly build course-specific resources to meet the needs of their students. Unlike traditional textbooks, LibreTexts' web based origins allow powerful integration of advanced features and new technologies to support learning.

LibreTexts is the adaptable, user-friendly non-profit open education resource platform that educators trust for creating, customizing, and sharing accessible, interactive textbooks, adaptive homework, and ancillary materials. We collaborate with individuals and organizations to champion open education initiatives, support institutional publishing programs, drive curriculum development projects, and more.

The LibreTexts libraries are Powered by NICE CXone Expert and was supported by the Department of Education Open Textbook Pilot Project, the California Education Learning Lab, the UC Davis Office of the Provost, the UC Davis Library, the California State University Affordable Learning Solutions Program, and Merlot. This material is based upon work supported by the National Science Foundation under Grant No. 1246120, 1525057, and 1413739.

Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation nor the US Department of Education.

Have questions or comments? For information about adoptions or adaptions contact info@LibreTexts.org or visit our main website at https://LibreTexts.org.

This text was compiled on 05/07/2026

TABLE OF CONTENTS

Licensing

1: How Does an Organization Accumulate and Organize the Information Necessary to Prepare Financial Statements?

- 1.1: A Review of the Essential Role of Transaction Analysis
- 1.2: An Introduction to Double-Entry Bookkeeping
- 1.3: Preparing Journal Entries
- 1.4: The Connection of the Journal and the Ledger
- 1.5: The Need for Adjusting Entries
- 1.6: Preparing Various Adjusting Entries
- 1.7: Preparing Financial Statements Based on Adjusted Balances
- 1.8: Chapter 1 Appendix – Financial Statement Preparation
- 1.9: End-of-Chapter Exercises

2: In a Set of Financial Statements, What Information Is Conveyed about Receivables?

- 2.1: Accounts Receivable and Net Realizable Value
- 2.2: Accounting for Uncollectible Accounts
- 2.3: The Problem with Estimations
- 2.4: Estimating the Amount of Uncollectible Accounts
- 2.5: End-of-Chapter Exercises

3: How Does a Company Gather Information about Its Inventory?

- 3.1: Determining and Reporting the Cost of Inventory
- 3.2: Perpetual and Periodic Inventory Systems
- 3.3: The Calculation of Cost of Goods Sold
- 3.4: Determining Inventory on Hand
- 3.5: The Necessity of Adopting a Cost Flow Assumption
- 3.6: The Selection of a Cost Flow Assumption for Reporting Purposes
- 3.7: Applying Cost Flow Assumptions to Determine Reported Inventory Balances
- 3.8: Reporting Inventory at the Lower-of-Cost-or-Market
- 3.9: End-of-Chapter Exercises

4: In a Set of Financial Statements, What Information Is Conveyed about Long Term Assets?

- 4.1: The Reporting of Property and Equipment
- 4.2: Determining Historical Cost and Depreciation Expense
- 4.3: Alternative Patterns for Calculating Depreciation
- 4.4: Recording Depreciation Expense for a Partial Year
- 4.5: Recording Expenditures That Affect Older Assets
- 4.6: Identifying and Accounting for Intangible Assets
- 4.7: The Balance Sheet Reporting of Intangible Assets
- 4.8: Recognizing Intangible Assets Owned by a Subsidiary

- 4.9: Accounting for Research and Development
- 4.10: End-of-Chapter Exercises

5: In a Set of Financial Statements, What Information Is Conveyed about Liabilities?

- 5.1: Basic Reporting of Liabilities
- 5.2: Reporting Current Liabilities Such as Gift Cards
- 5.3: Accounting for Contingencies
- 5.4: Accounting for Product Warranties
- 5.5: Debt Financing
- 5.6: The Issuance of Notes and Bonds
- 5.7: Pricing and Reporting Term Bonds
- 5.8: Accounting for Leases and Installment Notes
- 5.9: End-of-Chapter Exercises

6: In a Set of Financial Statements, What Information Is Conveyed about Shareholders' Equity?

- 6.1: The Issuance of Common Stock
- 6.2: Issuing and Accounting for Preferred Stock and Treasury Stock
- 6.3: The Issuance of Cash and Stock Dividends
- 6.4: The Computation of Earnings per Share
- 6.5: End-of-Chapter Exercises

Index

Index

Glossary

Detailed Licensing

Licensing

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

CHAPTER OVERVIEW

1: How Does an Organization Accumulate and Organize the Information Necessary to Prepare Financial Statements?

1.1: A Review of the Essential Role of Transaction Analysis
1.2: An Introduction to Double-Entry Bookkeeping
1.3: Preparing Journal Entries
1.4: The Connection of the Journal and the Ledger
1.5: The Need for Adjusting Entries
1.6: Preparing Various Adjusting Entries
1.7: Preparing Financial Statements Based on Adjusted Balances
1.8: Chapter 1 Appendix – Financial Statement Preparation
1.9: End-of-Chapter Exercises

1: How Does an Organization Accumulate and Organize the Information Necessary to Prepare Financial Statements? is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

1.1: A Review of the Essential Role of Transaction Analysis

Learning Objectives

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

1. Remember the meaning of "transaction" and provide common examples.
2. Explain "transaction analysis" and explain its importance to the accounting process.
3. Identify the account changes created by the purchase of inventory, the payment of a salary, and the borrowing of money as a review from Principles of Financial Accounting 1.
4. Understand that accounting systems can be programmed to automatically record expenses such as salary as it accrues.

Question: *Information provided by a set of financial statements is essential to any individual analyzing a business or other organization. The availability of a fair representation of a company's financial position, operations, and cash flows is invaluable for a wide array of decision makers. However, the sheer volume of data that a company such as General Mills, McDonald's, or PepsiCo must gather in order to prepare these statements has to be astronomical. Even a small enterprise—a local convenience store, for example—generates a significant quantity of information virtually every day. How does an accountant begin the process of accumulating all the necessary data so that financial statements can eventually be produced?*

Answer: As we learned in Principles of Financial Accounting 1, the accounting process starts by analyzing the effect of transactions—any event that has a financial impact on a company. Large organizations participate in literally millions of transactions each year that must be gathered, sorted, classified, and turned into a set of financial statements that cover a mere four or five pages. Over the decades, accountants have had to become very efficient to fulfill this seemingly impossible assignment. Despite the volume of transactions, the goal remains the same: to prepare financial statements that are presented fairly because they contain no material misstatements according to U.S. generally accepted accounting principles (U.S. GAAP).

For example, all the occurrences listed below are typical transactions that any company might encounter. Each causes some measurable effect on a company's assets, liabilities, revenues, expenses, gains, losses, capital stock, or dividends paid. The accounting process begins with an analysis of each transaction to determine the financial changes that took place. Was revenue earned? Did a liability increase? Has an asset been acquired?

Figure 1.1 Transactions Frequently Encountered

1) Buy inventory on credit for $2,000
2) Pay regular salary of $300 to an employee for work done during the past week; no amount had previously been recorded
3) Borrow $9,000 in cash from bank by signing a loan agreement
4) Make a sale of the inventory bought in (1) to a customer for $5,000 on credit
5) Pay $700 for insurance coverage for the next few months
6) Buy a new automobile for the company for a price of $40,000 by paying $10,000 in cash and borrowing the rest from the bank
7) Issue ownership shares to a new stockholder for cash of $19,000
8) Collect cash from customer on earlier sale in (4)
9) Pay cash for the inventory acquired in (1)
10) Pay $4,000 to rent a building for the next four months

In any language, successful communication is only possible if the information to be conveyed is properly understood. Likewise, in accounting, transactions must be analyzed so their impact is understood. A vast majority of transactions are relatively straightforward so that, with experience, the accountant can ascertain the financial impact almost automatically. In fact, computer software can be programmed to record most transactions with little human intervention. For transactions with greater complexity, the necessary analysis becomes more challenging. However, the importance of this initial step in the production of financial statements cannot be overstressed. The well-known computer aphorism captures the essence quite succinctly: "garbage in, garbage

out." There is little hope that financial statements can be fairly presented unless the entering of data is based on an appropriate identification of the changes created by each transaction.

Check Yourself

1. Which of the following would be an example of a transaction to be recorded in the accounting system?
   a. Purchase of supplies for cash
   b. Hiring a new sales manager
   c. Developing a new recipe for use in the production of cookies
   d. Sending out email notice to employees about a new health insurance option

The answer is a. While each of these events could be important to the company and especially to the individual(s) involved – only **a** involves a change to the amounts reported on the financial statements.

Transaction Analysis

To analyze transactions, an accountant must find the answers to three questions:

1. What accounts are affected?
2. By what amount are those accounts affected?
3. Are those accounts increased or decreased?

Question: *Transaction 1—A company buys inventory on credit for $2,000. How does transaction analysis work here? What accounts are affected by this purchase?*

Answer: Inventory, which is an asset, increases by $2,000. The organization has more inventory than it did prior to the purchase. Because no money has yet been paid for these goods, a liability for the same amount has been created. The term accounts payable is often used in financial accounting to represent debts resulting from the acquisition of inventory and supplies.

inventory (asset) increases by $2,000
accounts payable (liability) increases by $2,000

Note that the accounting equation described in Principles of Financial Accounting 1 remains in balance (Assets = Liabilities + Capital Stock + Retained Earnings). Assets have gone up by $2,000 while the liability side of the equation has also increased by the same amount to reflect the source of this increase in the company's assets.

Check Yourself

Which of the following would **NOT** be an example of an asset that would be recorded on the balance sheet of a company?

A. Cash

B. Buildings

C. Stockholders Equity

D. Inventory

The answer is C. All of the items listed are owned or controlled by the company to bring future benefit and thus qualify as assets. Stockholders equity represents the ownership of the business and is not an asset.

Question: *Transaction 2—A company pays a salary of $300 to one of its employees for work performed during the past week. No amount had previously been recorded by the accounting system for this amount. What accounts are affected by this salary payment?*

Answer: Cash (an asset) is decreased here by $300. Whenever cash is involved in a transaction, determining that change is a good place to start the analysis. Increases and decreases in cash are often obvious.

The cash balance declined here because salary was paid to an employee. Assets were reduced as a result of the payment. That is a cost to the company. Thus, a salary expense of $300 is reported. Recognizing an expense is appropriate rather than an asset because

the employee's work reflects a past benefit. The effort has already been carried out, generating revenues for the company in the previous week rather than in the future.

salary expense (expense) increases by $300 (this reduces retained earnings and stockholders equity)
cash (asset) decreased by $300

The continued equilibrium of the accounting equation does exist here although it is less obvious. Assets are decreased. At the same time, an expense is recognized. This expense reduces reported net income. On the statement of retained earnings, current net income becomes a component of retained earnings. The reduction in income here serves to decrease retained earnings. Because both assets and retained earnings go down by the same amount, the accounting equation continues to balance.

Question: *In Transaction 2, the company paid a salary of $300 that it owed to a worker. When does a payment to an employee reduce a salary payable balance?*

Answer: Costs such as salary, rent, or interest increase gradually over time and are often referred to as **accrued expenses** because the term "accrue" means "to grow." An accounting system can be mechanically structured to record such costs in either of two ways. The results are the same but the steps in the process differ.

- Some companies simply ignore accrued expenses until paid. At that time, the expense is recognized and cash is reduced. No liability is entered into the accounting system or removed. Because the information provided above indicates that nothing has been recorded to date, this approach is used here.
- Other companies choose to program their computer systems so that both the expense and the related liability are recognized automatically as the amount grows. For salary, as an example, this increase could literally be recorded each day or week based on the amount earned by employees. At the time payment is finally made, the expense has already been recorded. Thus, the liability is reduced because that debt is being paid.

A company can recognize an accrued expense (such as a salary) as incurred or wait until payment. This decision depends on the preference of company officials. The end result (an expense is reported and cash decreased) is the same, but the recording procedures differ. As will be discussed, if no entry has been made for such costs prior to the production of financial statements (the first alternative), both the expense and the payable do have to be recognized at that time so that all balances are properly stated for reporting purposes.

Check Yourself

If a company structures its accounting system such that employee wages are accrued each day as an employee works, when payment to that employee is made which is true?

A. Wages payable is decreased.

B. Wages payable is increased.

C. Wages expense is increased.

D. Wages expense is decreased.

The answer is A. Because the accounting system records the growing expense as the employee works, that increases the wages expense and wages payable as the work is done. When payment is made cash decreases and so does wages payable that has been increased all along.

Question: *Transaction 3—A company borrows $9,000 from a bank. What is the impact of signing a loan agreement with a bank or other lending institution?*

Answer: Cash is increased by the amount of money received from the lender. The company is obligated to repay this balance and, thus, has incurred a new liability. As with many transactions, the financial impact is reasonably easy to ascertain.

cash (asset) increases by $9,000
note payable (liability) increases by $9,000

Key Takeaway

Most organizations must gather an enormous quantity of information as a prerequisite for preparing financial statements periodically. This process begins with an analysis of the impact of each transaction (financial event). After the effect on all account balances is ascertained, the recording of a transaction is relatively straightforward. The changes caused by most transactions—the purchase of inventory or the signing of a note, for example—can be determined quickly. For accrued expenses, such as salary or rent that grow over time, the accounting system can record the amounts gradually as incurred or only at the point of payment. However, the figures to be reported are not impacted by the specific mechanical steps that are taken.

1.1: A Review of the Essential Role of Transaction Analysis is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

1.2: An Introduction to Double-Entry Bookkeeping

Learning Objectives

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

1. Explain the history of double-entry bookkeeping.
2. List the four steps followed in the accounting process.
3. Indicate the purpose of a T-account.
4. List the rules for using debits and credits.
5. Understand the reason that debits and credits are always equal.

Question: Transaction analysis determines the changes in account balances as the events of each day take place. Financial statements provide a formal structure to communicate the resulting balances periodically to an array of interested parties. Revenues, expenses, gains, and losses are presented on an income statement where they are combined to arrive at reported net income for the period. Total income earned and dividends paid by the company over its entire life are netted to compute the current retained earnings balance. Assets, liabilities, capital stock, and retained earnings are all displayed on a balance sheet. Changes in cash are separated into operating activities, investing activities, and financing activities and disclosed on a statement of cash flows. Notes offer pages of additional explanatory information. The amount of financial data that is readily available is impressive.

The accountant for a business of any significant size faces a daunting challenge in creating financial statements: gathering, measuring, and reporting the impact of the many varied events that occur virtually every day. As an example, for 2024, Xerox Corporation disclosed revenues of over $6.2 billion and operating expenses and other costs of $7.4 billion (resulting in a negative net income or net loss). At the end of 2024, the Kellogg Company reported holding $1.2 billion in inventory—which is a lot of cereal—and indicated that its operating activities that year generated a net cash inflow of nearly $1.8 billion. How can any organization possibly amass and maintain such an enormous volume of data so that financial statements can be produced with no material misstatements?

Answer: Over five hundred years ago, Venetian merchants in Italy developed a system that continues to serve in the twenty-first century as the basis for accumulating financial data throughout much of the world. Today, when every aspect of modern society seems to be in a constant state of flux, a process that has remained in use for over five centuries is almost impossible to comprehend. However, the **double-entry bookkeeping** procedures that were first documented in 1494 by Fra Luca Bartolomeo de Pacioli (a friend of Leonardo da Vinci) remain virtually unchanged by time. Organizations, both small and large, use the fundamentals of double-entry bookkeeping to collect the information needed to produce financial statements that are fairly presented according to the rules of U.S. GAAP.

Question: This assertion sounds like science fiction. It hardly seems believable that Xerox keeps up with over $6.2 billion in revenue (approximately $17 million per day) using the same methods that Venetian merchants applied to their transactions during the Renaissance. How can a five-hundred-year–old bookkeeping system possibly be usable by today's modern businesses?

Answer: State-of-the-art computers and other electronic devices are designed to refine and accelerate the financial accounting process but the same basic organizing procedures have been utilized now for hundreds of years. In simplest terms, accounting systems are all created to follow four sequential steps:

- Analyze
- Record
- Adjust
- Report

As explained previously, financial accounting starts by analyzing each transaction—every event that has a monetary impact on the organization—to ascertain the changes created in accounts such as rent expense, cash, inventory, and dividends paid. Fortunately, a vast majority of any company's transactions are repetitive so that many of the effects can be easily anticipated. A sale on credit always increases both accounts receivable and revenues. Regardless of the time or place, a cash purchase of equipment increases

the balance reported for equipment while decreasing cash. Computer systems can be programmed to record the impact of these events automatically allowing the accountant to focus on analyzing more complex transactions.

Question: *The second step in the accounting system is listed above as "record." At the beginning of this chapter, a number of transactions were presented and their impact on individual accounts determined. Following this analysis, some method has to be devised to capture the information in an orderly fashion. Officials could just list the effect of each transaction on a sheet of paper: increase inventory $2,000 and increase accounts payable $2,000; increase salary expense $300 and decrease cash $300. However, this process is slow and poorly organized. A more efficient process is required. What is the key to recording transactions after all account changes are identified?*

Answer: An essential step in understanding the accounting process is to realize that financial information is accumulated by **accounts**. Every balance to be reported in a company's financial statements is maintained in a separate account. Thus, for assets, an individual account is established to monitor cash, accounts receivable, inventory, and so on. To keep track of expenses, a number of additional accounts are needed, such as cost of goods sold, rent expense, salary expense, and repair expense. The same is true for revenues, liabilities, and other categories. A small organization might utilize only a few dozen accounts for its entire recordkeeping system. A large company could have thousands.

Based on the original Venetian model, the balance for each account is monitored in a form known as a **T-account** as displayed below. This structure provides room for recording on both the left side (known as the **debit** side) and the right side (the **credit** side).

One side of each T-account records increases; the other side indicates decreases. For over five hundred years, the following rules have applied.

The following are accounts where debits reflect an increase and credits a decrease:

- Expenses and losses
- Assets
- Dividends paid[1]

The following are accounts where credits reflect an increase and debits a decrease:

- Liabilities
- Capital stock
- Revenues and gains
- Retained earnings[2]

The debit and credit rules for these seven general types of accounts provide a short-hand method for recording the financial impact that a transaction has on any account. They were constructed in this manner so that the following would be true:

Debits must always equal credits for every transaction.

At first, the debit and credit rules might seem completely arbitrary. However, they are structured to mirror the cause and effect relationship found in every transaction. This is the basis of what the Venetian merchants came to understand so long ago: every effect must have a cause.

To illustrate:

- Assume an asset (such as cash) increases. As shown above, that is recorded on the debit side of the specific asset's T-account. What could cause an asset to become larger? A reason must exist. A liability—possibly a bank loan—could have been incurred (recorded as a credit); capital stock could have been issued to an owner (a credit); revenue could have been earned from a sale

(a credit); another asset could have been sold (a credit). The list of possible reasons is relatively short. All of the possibilities that can change an asset were reviewed in Principles of Financial Accounting 1. In each case, the debit (increase) to the asset is caused by an equal and offsetting credit.

- Assume an asset (such as cash) decreases. This change is recorded on the credit side of the asset's T-account. What might cause this reduction? An expense could have been paid (recorded as a debit); a dividend could have been distributed to shareholders (a debit); a liability could have been paid (a debit); another asset could have been acquired (a debit). Once again, the cause and effect relationship is reflected; the debits equal the credits. Each effect is set equal and opposite to every potential cause.

Think of debits and credits in terms of the Accounting Equation reviewed in Principles of Financial Accounting 1. Note the journal entries recorded below for the receipt of 10,000 in cash in exchange for capital stock in the business. The debit to cash increases the assets and the credit to capital stock increases the stockholders equity and keeps the equation in balance. The second journal entry shows the company getting a bill from the utilities company saying that the company owes 500 for utilities that have been used in past (expense). The credit to Accounts Payable increases the liabilities while the debit to Utilities Expense increases the expenses and decreases retained earnings/equity. The accounting equation is set up so that if you make the dollar amount of the debits equal the dollar amount of the credits in your entry – the accounting equation has to stay in balance.

Asset T accounts		= Liability T accounts		+ Equity T Accounts				
Cash		Accounts Payable		Capital Stock		+ Retained Earnings		
Debit	Credit	Debit	Credit	Debit	Credit		– Utilities Expense	
10,000					10,000		Debit	Credit
			500				500	

There are only seven types of accounts. Therefore, a mastery of debit and credit rules can be achieved with a moderate amount of practice. Because of the fundamental position of debits and credits within every accounting system, this knowledge is well worth the effort required.

Check Yourself

A company borrows $5,000 from the bank and deposits that money in their checking account. What T accounts would be affected and how?

Cash increases by $5,000 and the liability note or loan payable increases by $5,000. Cash is an asset account and thus is increased by a debit. Notes or loan payable is a liability and thus an increase is a credit. So the amount of the debit to cash is $5,000 and the credit to notes or loan payable is for $5,000. Thus the amounts of the debits and credits are equal. If you keep them equal then your accounting equation will also remain in balance.

Key Takeaway

Most companies participate in numerous transactions each day that must be examined and organized so that financial statements can be prepared. This process requires four steps: analyze, record, adjust, and report. Over five hundred years ago, double-entry bookkeeping was created as a mechanical process to facilitate this gathering and reporting of financial information. A T-account is maintained for each of the accounts (such as cash, accounts payable, and rent expense) to be reported by a company. The left side of the T-account is the debit side, and the right side is the credit. Expenses and losses, assets, and dividends paid increase with debits. Liabilities, revenues and gains, capital stock, and retained earnings increase with credits. Debits always equal credits because every transaction must have both an effect and a cause for that effect.

To visualize the effect of debits and credits using the accounting equation that was important in our earlier text:

ASSETS =		LIABILITIES		+ STOCKHOLDERS EQUITY							
Debits Increase	Credits decrease	Debits decrease	Credits increase	CAPITAL STOCK		+ RETAINED EARNINGS					
				Debits decrease	Credits increase	REVENUES		– EXPENSES		– DIVIDENDS	
						Debits decrease	Credits increase	Debits increase	Credits decrease	Debits increase	Credits decrease

Note that on the left side of the equal sign the increases are also on the left (debit) and on the right side of the equal sign the increases are also on the right except for expenses and dividends. The are just the opposite because they are subtracted from retained earnings rather than added. Gains and losses would work like revenues and expenses respectively.

[1]One method to keep track of these accounts initially is to remember them as the "DEAD" accounts: **d**ebits increase, **e**xpenses and losses, **a**ssets, and **d**ividends paid. Quickly, though, through practice, such mnemonic devices will not be needed.

[2]Changes in the balance reported for retained earnings normally do not come as a direct result of a transaction. As discussed previously, this account reflects all the net income earned to date reduced by all dividend payments. Income is made up of revenues, expenses, gains, and losses. Accounting recognition of revenues and gains (which increase with credits) lead to a larger retained earnings balance. Expenses, losses, and dividends paid (which all increase with debits) reduce retained earnings. Consequently, credits cause an increase in retained earnings whereas debits produce a decrease.

1.2: An Introduction to Double-Entry Bookkeeping is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

1.3: Preparing Journal Entries

Learning Objectives

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

1. Describe the purpose and structure of a journal entry.
2. Identify the purpose of a journal.
3. Define “trial balance” and indicate the source of its monetary balances.
4. Prepare journal entries to record the effect of acquiring inventory, paying salary, borrowing money, and selling merchandise.
5. Define “accrual accounting” and list its two components.
6. Explain the purpose of the revenue realization principle.
7. Explain the purpose of the matching principle.

Question: *In an accounting system, the impact of each transaction is analyzed and must then be recorded. Debits and credits are used for this purpose. How does the actual recording of a transaction take place?*

Answer: The effects produced on the various accounts by a transaction should be entered into the accounting system as quickly as possible so that information is not lost and mistakes have less time to occur. After analyzing each event, the financial changes caused by a transaction are initially recorded as a **journal entry.** A list of all recorded journal entries is maintained in a **journal** (also referred to as a **general journal**), which is one of the most important components within any accounting system. The journal is the diary of the company: the history of the impact of the financial events as they took place.

A journal entry is no more than an indication of the accounts and balances that were changed by a transaction.

Question: *Debit and credit rules are best learned through practice. In order to grasp the use of debits and credits, how should the needed practice begin?*

Answer: When faced with debits and credits, everyone has to practice at first. That is normal and to be expected. These rules can be learned quickly but only by investing a bit of effort. Earlier in this chapter, a number of transactions were analyzed to determine their impact on account balances. Assume now that these same transactions are to be recorded as journal entries. To provide a bit more information for this illustration, the reporting company will be a small farm supply store known as the Lawndale Company that is located in a rural area. For convenience, assume that the company incurs these transactions during the final few days of Year One, just prior to preparing financial statements.

Assume further that this company already has the account balances presented in Figure 4.3 “Balances Taken From T-accounts in Ledger” in its T-accounts before making this last group of journal entries. Note that the total of all the debit and credit balances do agree ($54,300) and that every account shows a positive balance. In other words, the figure being reported is either a debit or credit based on what makes that particular type of account increase. Few T-accounts contain negative balances.

This current listing of accounts is commonly referred to as a trial balance. Since T-accounts are kept together in a ledger (or general ledger), a trial balance reports the individual balances for each T-account maintained in the company’s ledger.

Figure 1.2 Balances Taken From T-accounts in Ledger

Lawndale Company Trial Balance (prior to recording new transactions)		
Account	Debit Balance	Credit Balance
Cash	$20,000	
Accounts receivable	9,000	
Inventory	8,000	
Insurance payable		$700
Accounts payable		2,600
Notes payable (long term)		10,000
Capital stock		12,000
Retained earnings (beginning of year)		7,000
Sales of merchandise		22,000
Cost of goods sold	12,000	
Rent expense	3,600	
Salary expense	1,000	
Insurance expense	700	
Totals	$54,300	$54,300

Question: *Assume that after the above balances were determined, several additional transactions took place. The first transaction analyzed at the start of this chapter was the purchase of inventory on credit for $2,000. This acquisition increases the record of the amount of inventory being held while also raising one of the company's liabilities, accounts payable. How is the acquisition of inventory on credit recorded in the form of a journal entry?*

Answer: Following the transactional analysis, a journal entry is prepared to record the impact that the event has on the Lawndale Company. Inventory is an asset that always uses a debit to note an increase. Accounts payable is a liability so that a credit indicates that an increase has occurred. Thus, the following journal entry is appropriate[2].

Figure 1.3 Journal Entry 1: Inventory Acquired on Credit

Inventory	2,000		(increase an asset—debit)
Accounts Payable		2,000	(increase a liability—credit)

Notice that the word “inventory” is physically on the left of the journal entry and the words “accounts payable” are indented to the right. This positioning clearly shows which account is debited and which is credited. In the same way, the $2,000 numerical amount added to the inventory total appears on the left (debit) side whereas the $2,000 change in accounts payable is clearly on the right (credit) side.

ASSETS		= LIABILITIES		+ EQUITY
INVENTORY		ACCOUNTS PAYABLE		
DEBIT	CREDIT	DEBIT	CREDIT	
2,000			2,000	

You also see the posting to the T accounts with **only** the T accounts needed arranged in the accounting equation format learned earlier. Notice that the posting to the debit and credit side increased both assets and liabilities to keep the equation in balance.

Preparing journal entries is obviously a mechanical process but one that is fundamental to the gathering of information for financial reporting purposes. Any person familiar with accounting procedures could easily “read” the above entry: based on the debit and credit, both inventory and accounts payable have gone up so a purchase of merchandise for $2,000 on credit is indicated. Interestingly, with translation of the words, a Venetian merchant from the later part of the fifteenth century would be capable of understanding the information captured by this journal entry even if prepared by a modern company as large as Xerox or Kellogg.

Question: *As a second example, the Lawndale Company pays its employees their regular salary of $300 for work performed during the past week. If no entry has been recorded previously, what journal entry is appropriate when a salary payment is made?*

Answer: Because no entry has yet been made, neither the $300 salary expense nor the related salary payable already exists in the accounting records. Apparently, the $1,000 salary expense appearing in the above trial balance reflects earlier payments made during the period by the company to its employees.

Payment is made here for past work so this cost represents an expense rather than an asset. Thus, the balance recorded as salary expense goes up by this amount while cash decreases. Increasing an expense is always shown by means of a debit; decreasing an asset is reflected through a credit.

Figure 1.4 Journal Entry 2: Salary Paid to Employees

Salary Expense	300		(increase an expense—debit)
Cash		300	(decrease an asset—credit)

In practice, the date of each transaction could also be included here. For illustration purposes, this extra information is not necessary.

Question: *Assume $9,000 is borrowed from a local bank when officials sign a new note payable that will have to be repaid in several years. What journal entry is prepared by a company’s accountant to reflect the inflow of cash received from a loan?*

Answer: As always, recording begins with an analysis of the transaction. Here, cash increases as the result of the incurred debt (notes payable). Cash—an asset—increases $9,000, which is shown as a debit. The company’s notes payable balance also goes up by the same amount. As a liability, the increase is recorded through a credit. By using debits and credits in this way, the financial effects are entered into the accounting records.

Figure 1.5 Journal Entry 3: Money Borrowed from Bank

Cash	9,000		(increase an asset—debit)
Notes Payable		9,000	(increase a liability—credit)

Check Yourself

Which of the following is NOT true with regard to journal entries?

A. The total of the amounts in the debit column must equal the total of the amounts in credit column.

B. The accounts that are affected by the transaction are listed.

C. The amounts listed are the amounts by which the accounts either increased or decreased.

D. All of the above are true.

D is the correct answer. A journal entry lists all the accounts affected by the transaction and the amount of the change is recorded in either the debit column or credit column of the entry depending on the direction of the change and the type of account. While all of the examples so far have the same number of accounts on the debit side as the credit side, what is really important is that the amount of the debits equals the amount of the credits.

Question: *In Transaction 1, inventory was bought for $2,000. That entry is recorded above. Assume now that these goods are sold for $5,000 to a customer on credit. How is the sale of merchandise on account recorded in journal entry form?*

Answer: As discussed previously, two events really happen when inventory is sold. First, the sale is made and, second, the customer takes possession of the merchandise from the company. Assuming again that a perpetual inventory system is in use, both the sale and the related expense are recorded immediately. In the initial part of the transaction, the accounts receivable balance goes up $5,000 because the money from the customer will not be collected until a later date. The increase in this asset is shown by means of a debit. The new receivable resulted from a sale. Revenue is also recorded (by a credit) to indicate the cause of that effect.

Figure 1.6 Journal Entry 4A: Sale Made on Account

Accounts Receivable	5,000		(increase an asset—debit)
Sales of Merchandise		5,000	(increase revenue—credit)

At the same time, inventory costing $2,000 is surrendered by the company. The reduction of any asset is recorded through a credit. The expense resulting from the asset outflow has been identified previously as “cost of goods sold.” Like any expense, it is entered into the accounting system through a debit.

Figure 1.7 Journal Entry 4B: Merchandise Acquired by Customers

Cost of Goods Sold	2,000		(increase an expense—debit)
Inventory		2,000	(decrease an asset—credit)

Question: *In the above transaction, the Lawndale Company made a sale but the cash will not be collected until some later date. Why is revenue reported at the time of sale rather than when the cash is eventually collected? Accounting is conservative. Thus, delaying recognition of sales revenue (and the resulting increase in net income) until the $5,000 is physically received might have been expected.*

Answer: This question reflects a common misconception about the information conveyed through financial statements. As shown above in Journal Entry 4A, recognition of revenue is not tied directly to the receipt of cash. One of the most important elements comprising the structure of U.S. GAAP is **accrual accounting**, which serves as the basis for timing the reporting of revenues and expenses. Because of the direct impact on net income, such recognition issues are among the most complicated and controversial in accounting. The accountant must always determine the appropriate point in time for reporting each revenue and expense. Accrual accounting provides standard guidance (in the United States and throughout much of the world).

Accrual accounting is really made up of two distinct components. The **revenue realization principle** provides authoritative direction as to the proper timing for the recognition of revenue. The **matching principle** establishes guidelines for the reporting of expenses. These two principles have been utilized for decades in the application of U.S. GAAP. Their importance within financial accounting can hardly be overstated.

Revenue realization principle. Revenue is properly recognized at the point that (1) the earning process needed to generate the revenue is substantially complete and (2) the amount eventually to be received can be reasonably estimated. As the study of financial accounting progresses into more complex situations, both of these criteria will require careful analysis and understanding.

Matching principle. Expenses are recognized in the same time period as the revenue they help create. Thus, if specific revenue is to be recognized in the year 2025, any associated costs should be reported as expenses in that same time period. Expenses are matched with revenues. However, when a cost cannot be tied directly to identifiable revenue, matching is not possible. In those cases, the expense is recognized in the most logical time period, in some systematic fashion, or as incurred—depending on the situation.

For the revenue reported in Journal Entry 4A, assuming that the Lawndale Company has substantially completed the work required of this sale and $5,000 is a reasonable estimate of the amount that will be collected, recognition at the time of sale is appropriate. Because the revenue is recognized at that moment, the related expense (cost of goods sold) should also be recorded as can be seen in Journal Entry 4B.

Accrual accounting provides an excellent example of how U.S. GAAP guides the reporting process in order to produce fairly presented financial statements that can be understood by all decision makers around the world.

Check Yourself

Alex sets up a lemonade stand on the corner near his home. In May he purchases and receives several boxes of lemons to be used to make lemonade. During June, Alex sells lemonade to several customers including one that agrees to pay Alex in July. Given this information and the principles of accounting learned earlier, in which month should Alex record the revenue from the sale of lemonade?

A. May

B. June

C. June and July

D. July

The answer is B. That is when the lemonade was actually sold and transferred to the customers (debit cash or accounts receivable and credit sales). Even the amount to be received in July is recorded in June as revenue because it is earned (debit accounts receivable and credit sales). Additionally the cost of the lemons would be an asset when purchased in May (debit inventory and credit cash) and become an expense when they are used to make lemonade in June (debit cost of goods sold and credit inventory).

Key Takeaway

After the financial effects are analyzed, the impact of each transaction is recorded within a company's accounting system through a journal entry. The purchase of inventory, payment of a salary, and borrowing of money are all typical transactions that are recorded by means of debits and credits. All journal entries are maintained within the company's journal. The timing of this recognition is especially important in connection with revenues and expenses. Accrual accounting provides formal guidance within U.S. GAAP. Revenues are recognized when the earning process is substantially complete and the amount to be collected can be reasonably estimated. Expenses are recognized based on the matching principle, which holds that they should be reported in the same period as the revenue they help generate.

[1]In larger organizations, similar transactions are often grouped, summed, and recorded together for efficiency. For example, all cash sales at one store might be totaled automatically and recorded at one time at the end of each day. To help focus on the mechanics of the accounting process, the journal entries recorded for the transactions in this textbook will be prepared individually.

[2]The parenthetical information is included here only for clarification purposes and does not appear in a true journal entry.

1.3: Preparing Journal Entries is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

1.4: The Connection of the Journal and the Ledger

Learning Objectives

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

1. Prepare journal entries for basic transactions such as the payment of insurance, the acquisition of a long-lived asset, the contribution of capital, the payment of a dividend, and the like.
2. Explain the recording of a gain or loss rather than revenue and cost of goods sold.
3. Describe the recording of an unearned revenue.
4. Understand the purpose of both the journal and the ledger.
5. Discuss the posting of journal entries to the ledger T-accounts and describe the purpose of that process.

Question: *The Lawndale Company pays $700 for insurance coverage that was received over the past three months. In this case, though, the amount has already been recognized by the company. Both the insurance expense and an insurance payable were recorded as incurred. Thus, the amounts can be seen on the trial balance in Figure 1.2 "Balances Taken From T-accounts in Ledger". Apparently, Lawndale's accounting system was designed to recognize this particular expense as it grew over time (as required by accrual accounting). When an expense has already been recorded, what journal entry is appropriate at the time actual payment is made?*

Answer: Because of the previous recognition, the expense should not now be recorded a second time. Instead, this payment reduces the liability that was established by the accounting system. Cash—an asset—is decreased, which is shown by means of a credit. At the same time, the previously recorded payable is removed. Any reduction of a liability is communicated by a debit. To reiterate, no expense is included in this entry because that amount has already been recognized. This earlier accrual and then reduction of liability when paid could apply to utilities or salaries or anything used up and then paid for later.

Figure 1.8 Journal Entry 5: Liability for Insurance Is Paid

Insurance Payable	700		(decrease a liability—debit)
Cash		700	(decrease an asset—credit)

Note that Journal Entries 2 and 5 differ although the events are similar. As discussed previously, specific recording techniques can be influenced by the manner in which the accounting system has handled earlier events. In Journal Entry 2, neither the expense nor the payable had yet been recorded. Thus, the expense was recognized at the time of payment. For Journal Entry 5, both the expense and payable had already been entered into the records as the amount gradually grew over time. Hence, when paid, the liability is settled but no further expense is recognized. The proper amount is already present in the insurance expense T-account.

Question: *Assume that a new truck is acquired by the Lawndale Company for $40,000. Cash of $10,000 is paid now but a note payable—due in several years—is signed for the remaining $30,000. This transaction impacts three accounts rather than just two. How is a journal entry constructed when more than two accounts have been affected?*

Answer: As has been discussed, every transaction changes at least two accounts because of the cause and effect relationship underlying all financial events. However, beyond that limit, any number of accounts can be impacted. Complex transactions often touch numerous accounts. Here, the truck account (an asset) is increased and must be debited. Part of the acquisition was funded by paying cash (an asset) with the decrease recorded as a credit. The remainder of the cost was covered by signing a note payable (a liability). A liability increase is recorded by means of a credit. Note that the debits do equal the credits even when more than two accounts are affected by a transaction.

Figure 1.9 Journal Entry 6: Truck Acquired for Cash and by Signing a Note

Truck	40,000		(increase an asset—debit)
Cash		10,000	(decrease an asset—credit)
Note Payable		30,000	(increase a liability—credit)

Question: Lawndale Company needs additional financing so officials go to current or potential shareholders and convince them to contribute cash of $19,000 in exchange for new shares of the company's capital stock. These individuals invest this money in order to join the ownership or increase the number of shares they already hold. What journal entry does a business record when capital stock is issued?

Answer: The asset cash is increased in this transaction, a change that is always shown as a debit. Capital stock also goes up because new shares are issued to company owners. As indicated in the debit and credit rules, the capital stock account increases by means of a credit.

Figure 1.10 Journal Entry 7: Capital Stock Issued for Cash

Cash	19,000		(increase an asset—debit)
Capital Stock		19,000	(increase a capital stock—credit)

Check Yourself

Put a D or a C in the blank in front of each change to an account to indicate whether a debit or credit should be used:

___ Increase accounts payable

___ Increase capital stock

___ Decrease inventory

___ Increase cost of goods sold

___ Decrease cash

___ Increase utilities expense

Answers – Credit, Credit, Credit, Debit, Credit, Debit

Question: *In Journal Entry 4A, a sale was made on credit. An account receivable was established at that time for $5,000. Assume that the customer now pays this amount to the Lawndale Company. How does the collection of an amount from an earlier sales transaction affect the account balances?*

Answer: When a customer makes payment on a previous sale, cash increases and accounts receivable decrease. Both are assets; one balance goes up (by a debit) while the other is reduced (by a credit).

Figure 1.11 Journal Entry 8: Money Collected on Account

Cash	5,000		(increase an asset—debit)
Accounts Receivable		5,000	(decrease an asset—credit)

Note that cash is collected here but no additional revenue is recorded. Based on the requirements of accrual accounting, revenue of $5,000 was recognized previously in Journal Entry 4A. Apparently, the revenue realization principle was met at that time, the earning process was substantially complete and a reasonable estimation could be made of the amount to be received. Recognizing the revenue again at the current date would incorrectly inflate reported net income. Instead, the previously created receivable balance is removed.

Question: *In Journal Entry 1, inventory was purchased on credit for $2,000. Assume, now, that Lawndale makes payment of the entire amount that is due. How is a cash outflow to pay for inventory previously acquired shown in a company's journal?*

Answer: Inventory was bought at an earlier time and payment is now being made. The inventory was properly recorded when acquired and should not be entered again. The merchandise was only obtained that one time. Here, cash is reduced (a credit). The liability set up in Journal Entry 1 (accounts payable) is paid by means of a debit.

Figure 1.12 Journal Entry 9: Money Paid on Account

Accounts Payable	2,000		(decrease a liability—debit)
Cash		2,000	(decrease an asset—credit)

Question: *Company officials like the building that is being used for operations and decide to rent it for four additional months at a rate of $1,000 per month. An immediate payment of $4,000 is made. This cost provides a future economic benefit for the company rather than a past benefit. Recognition of an expense is not yet appropriate. What is recorded when rent or other costs such as insurance or advertising are paid in advance?*

Answer: Cash is decreased by the payment made here to rent this building. As an asset, a reduction is reported in cash by means of a credit. However, this rent provides a future value for Lawndale Company. The cost is not for past usage of the building but rather for the upcoming four months. Therefore, the amount paid creates an asset. The probable economic benefit is the ability to make use of this facility during the future to generate new revenues. When the $4,000 is initially paid, an asset—normally called prepaid rent—is recorded through a debit.

Figure 1.13 Journal Entry 10: Money Paid for Future Rent

Prepaid Rent	4,000		(increase an asset—debit)
Cash		4,000	(decrease an asset—credit)

Note that this company does not record the building itself as the asset because it does not gain ownership or control (beyond these four months). The payment only provides the right to make use of the building for the specified period in the future so that a prepaid rent balance is appropriate.

Before this illustration of typical journal entries is completed, four additional transactions will be examined. In total, these fourteen provide an excellent cross-section of basic events encountered by most businesses and the journal entries created to capture that information. Coming to understand the recording of these transactions is of paramount importance in mastering the debit and credit rules.

Question: *Officials of the Lawndale Company decide to buy a small tract of land by paying $8,000 in cash. Perhaps they think the space might be used sometime in the future as a parking lot. What is recorded to reflect the cash purchase of a plot of land?*

Answer: The transaction here is straightforward. As an asset, land increases with a debit. Cash goes down because of the acquisition and is recorded using a credit. As stated previously, Venetian merchants would probably have made the same recording five hundred years ago (although not in U.S. dollars).

Figure 1.14 Journal Entry 11: Land Acquired for Cash

Land	8,000		(increase an asset—debit)
Cash		8,000	(decrease an asset—credit)

Question: *Now, assume that—at a later time—this same piece of land is sold to an outside party for cash of $11,000. A sale occurs here but the land is not inventory. It was not bought specifically to be resold within the normal course of business. Selling land is not the primary operation of the Lawndale Company. Should revenue be recorded along with cost of goods sold when land is sold? These accounts are used in journalizing the sale of inventory. Does the same reporting apply to the sale of other items such as land or equipment?*

Answer: Because the sale of land is not viewed as a central portion of this company's operations, neither revenue nor cost of goods sold is reported as in the sale of inventory. An $11,000 increase in cash is recorded along with the removal of the $8,000 cost of the land that was conveyed to the new buyer. However, to alert decision makers that a tangential or incidental event has taken place, a gain (if the sales price is more than the cost of the land) or a loss (if the sales price is less than cost) is recognized for the difference. The effect on net income is the same but the reporting has changed.

Often, the resulting gain or loss is then separated from revenues and expenses on the company's income statement to more clearly communicate information as to the nature of the transaction. Consequently, neither revenue nor cost of goods sold is found in the entry below as was shown above in Journal Entries 4A and 4B.

Figure 1.15 Journal Entry 12: Land Sold for Cash in Excess of Cost

Cash	11,000		(increase an asset—debit)
Land		8,000	(decrease an asset—credit)
Gain on Sale of Land		3,000	(increase revenue/gain—credit)

Check Yourself

The sale of building for less than the amount listed as its cost on the balance sheet if the company is in the business of making/selling soft drinks would result in which of the following impacts?

A. Credit to cash

B. Debit to loss on sale

C. Debit to building

D. Debit to cost of goods sold

The answer is B. Instead of reducing inventory and increasing cost of goods sold like when the company would sell its soft drinks. The company would debit cash for the amount the building was sold for (assuming cash was received) and credit the building to reduce it and debit loss on sale for the difference. Sales of assets other than inventory do not result in a change to revenues or expenses (cost of goods sold). Losses look like expenses in that they are increased with a debit but they are reported separately.

Question: Accrual accounting, as specified in the revenue realization principle, mandates that revenues should not be recognized until the earning process is substantially complete. Assume a customer gives the Lawndale Company $3,000 in cash for some type of service to be performed at a future date. The work has not yet begun. Thus, Lawndale cannot report revenue of $3,000. How is a cash inflow recorded if it is received for work before the earning process is substantially complete?

Answer: Although the company collected money, accrual accounting dictates that revenue cannot yet be recognized. The earning process here will not take place until sometime in the future. As an asset, the cash account is increased (debit) but no revenue can be recorded. Instead, an unearned revenue account is set up to recognize the $3,000 credit. This balance is reported by the

Lawndale Company as a liability. Because the money has been accepted, the company is obliged to provide the service or return the $3,000 to the customer. Recording this liability mirrors the company's future responsibility.

Figure 1.16 Journal Entry 13: Money Received for Work to Be Done Later

Cash	3,000		(increase an asset—debit)
Unearned Revenue		3,000	(increase a liability—credit)

Here is one final transaction to provide a full range of basic examples at this preliminary stage of coverage. Many additional transactions and their journal entries will be introduced throughout this textbook, but these fourteen form a strong core of typical events encountered by most businesses.

Question: Assume that the Lawndale Company has been profitable. As a result, the board of directors votes to distribute a cash dividend to all owners, a reward that totals $600. Payment is made immediately. What recording is appropriate when a dividend is paid?

Answer: Cash is reduced by this distribution to the company's owners. As an asset, a credit is appropriate. The cause of the decrease was payment of a dividend. Hence, a dividends paid account is established. According to the debit and credit rules, dividends paid is listed as one of the accounts that increases through a debit. Thus, the recording of this last illustration is as follows.

Figure 1.17 Journal Entry 14: Dividend Distributed to Owners

Dividends Paid	600		(increase dividends paid—debit)
Cash		600	(decrease an asset—credit)

Question: With practice, obtaining an understanding of the rules for debits and credits is a reasonable goal. However, these journal entries do not provide the current balance of any account. They record the effect of each transaction but not the updated account totals, figures that could change many times each day. How does an accountant determine the current balance of cash, inventory, rent expense, or the like?

Answer: In an accounting system, the recording process is composed of two distinct steps.

1. After analyzing the financial impact of a transaction, a journal entry is created to reflect the impact on relevant accounts.
2. Then, each individual debit and credit is added to the specific T-account being altered, a process known as "posting." A debit to cash in a journal entry is listed as a debit in the cash T-account. A credit made to notes payable is recorded as a credit within the notes payable T-account. After all entries are posted, the current balance for any account can be determined by adding the debit and the credit sides of the T-account and netting the two.

Historically, posting the individual changes shown in each journal entry to the specific T-accounts was a tedious and slow process performed manually. Today, automated systems are designed so that the impact of each entry is simultaneously recorded in the proper T-accounts found in the ledger.

For illustration purposes, the journal entries recorded above have been posted into ledger T-accounts shown in Figure 1.4 "Journal Entry 1: Inventory Acquired on Credit". Each account includes the previous balance (PB) found in the trial balance shown in Figure 1.3 "Balances Taken From T-accounts in Ledger" at the start of the illustrated transactions. The additional debits and credits recorded for each of the fourteen sample transactions include the number of the corresponding journal entry for cross-referencing purposes. The debit and credit sides of each account can be summed and netted at any point to determine the current balance (CB).

Figure 1.18 Lawndale Company Ledger

CASH	
PB 20,000	
(3) 9,000	(2) 300
(7) 19,000	(5) 700
(8) 5,000	(6) 10,000
(12) 11,000	(9) 2,000
(13) 3,000	(10) 4,000
	(11) 8,000
	(14) 600
67,000	25,600
CB 41,400	

ACCOUNTS RECEIVABLE	
PB 9,000	
(4A) 5,000	(8) 5,000
14,000	5,000
CB 9,000	

INVENTORY	
PB 8,000	
(1) 2,000	(4B) 2,000
10,000	2,000
CB 8,000	

PREPAID RENT	
(10) 4,000	
CB 4,000	

TRUCK	
(6) 40,000	
CB 40,000	

LAND	
(11) 8,000	(12) 8,000
8,000	8,000
CB 0	

INSURANCE PAYABLE	
	PB 700
(5) 700	
700	700
	CB 0

ACCOUNTS PAYABLE	
	PB 2,600
(9) 2,000	(1) 2,000
2,000	4,600
	CB 2,600

NOTES PAYABLE	
	PB 10,000
	(3) 9,000
	(6) 30,000
	CB 49,000

UNEARNED REVENUE	
	(13) 3,000
	CB 3,000

CAPITAL STOCK	
	PB 12,000
	(7) 19,000
	CB 31,000

RETAINED EARNINGS	
	PB 7,000
	CB 7,000

DIVIDENDS PAID	
(14) 600	
CB 600	

SALES OF MERCHANDISE	
	PB 22,000
	(4A) 5,000
	CB 27,000

COST OF GOODS SOLD	
PB 12,000	
(4B) 2,000	
CB 14,000	

RENT EXPENSE	
PB 3,600	
CB 3,600	

SALARY EXPENSE	
PB 1,000	
(2) 300	
CB 1,300	

INSURANCE EXPENSE	
PB 700	
CB 700	

GAIN ON SALE OF LAND	
	(12) 3,000
	CB 3,000

Note that T accounts for assets are put together along with t accounts for liabilities and equity. This allows for a visual reminder that as journal entries are posted, the Assets = Liabilities + Equity equation will remain in balance with each journal entry.

Key Takeaway

Initial coverage of the recording of basic transactions is concluded here through analysis of the payment of insurance, the contribution of capital, the purchase and sale of land, the receipt of cash prior to work being performed, the payment of dividends to owners, and the like. After the impact of each event is ascertained, debits and credits are used to record these changes. These journal entries are then posted to the appropriate T-accounts used to monitor ever-changing account balances. All the T-accounts are collectively known as a ledger or general ledger. Journal entries document the effect of transactions. T-accounts and the ledger maintain the current balance of every account.

Talking with a Real Investing Pro (Continued)

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

Question: When you were a college student majoring in accounting, you learned all the debit and credit rules as well as about journal entries and the general ledger. In your years as an investment advisor, has this knowledge ever proven to be helpful to you and your career?

Kevin Burns: Although I never planned to be an accountant when I was in college, I found the internal logic of the debit and credit rules quite fascinating. Thinking through transactions and figuring out the proper recording process was a great introduction to business operations. In all honesty, as an investment advisor, I am more interested in asset values and other balance sheet information than the accounting process necessary to gather this information. However, I also happen to own a restaurant and I always find it interesting when I dig through the specific expense accounts looking for ways to be more efficient. For instance, recently when I saw that we had spent a lot of money last year on building maintenance, I could not imagine how that was possible. I dug through the T-account myself and found a recording error that needed to be fixed. My background allowed me to understand the entire process. Frequently, as I study the various debits within our expenses, I am able to spot areas where the restaurant can save money.

1.4: The Connection of the Journal and the Ledger is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

1.5: The Need for Adjusting Entries

Learning Objectives

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

1. Explain the purpose and necessity of adjusting entries.
2. List examples of several typical accounts that require adjusting entries.
3. Define an "accrued expense."
4. Provide examples of adjusting entries for various accrued expenses.
5. Describe the reason that accrued expenses often require adjusting entries but not in every situation.

Question: *The first two steps of the accounting process were identified in the earlier section as "analyze" and "record." A transaction occurs and the financial effects are ascertained through careful analysis. Once determined, the impact an event has on specific accounts is recorded in the form of a journal entry. Each of the debits and credits is then posted to the corresponding T-account located in the ledger. As needed, current balances can be determined for any or all of these accounts by netting the debits and credits.*

The third step in this process was listed as "adjust." Why do ledger account balances require adjustment? Why are the T-account totals found in Figure 1.3 "Balances Taken From T-accounts in Ledger" not simply used by the accountant to produce financial statements for the reporting organization?

Answer: Financial events take place throughout the year. As indicated, journal entries are recorded with the individual debits and credits then entered into the proper T-accounts. However, not all changes in a company's accounts occur as a result of physical events. Balances frequently increase or decrease simply because of the passage of time. Or the impact is so gradual that producing individual journal entries is not reasonable. For example, salary is earned by employees every day (actually every minute) but payment is not usually made until the end of the week or month. Other expenses, such as utilities, rent, and interest, are incurred over time. Supplies such as pens and envelopes are used up on an ongoing basis. Unless an accounting system is programmed to record tiny incremental changes, the financial effects are not captured as they occur.

Following each day of work, few companies take the trouble to record the equivalent amount of salary or other expense and the related liability. When a pad of paper is consumed within an organization, debiting supplies expense for a dollar or two and crediting supplies for the same amount hardly seems worth the effort.

Prior to producing financial statements, the accountant must search for all such changes that have been omitted. These additional increases or decreases are also recorded in a debit and credit format (often called **adjusting journal entries** rather than **regular journal entries**) with the impact then posted to the appropriate ledger accounts. The process continues until all balances are properly stated. These adjustments are a prerequisite step in the preparation of financial statements. They are physically identical to journal entries recorded for transactions but they occur at a different time and for a different reason.

Check Yourself

Which of the following is a true statement with regard to journal entries?

A. Most businesses do not need to complete adjusting entries before preparing financial statements.

B. Adjusting entries look very different from regular journal entries.

C. Changes to accounts that do not involve a specific transaction usually cause a need for an adjusting entry

D. Adjusting entries capture changes to an account as they happen.

The answer is C. Adjusting entries are physically the same as regular entries (debits and credits listed that equal) but instead of transactions that cause changes and are recorded by regular entries, adjusting entries measure changes to accounts that are not linked to a specific transaction.

Question: *Adjusting entries are used to update the ledger for any financial changes that have occurred gradually over time and not recorded through a regular journal entry. What kinds of adjustments are normally needed before financial statements are*

prepared?

Answer: A variety of adjusting entries will be examined throughout the remainder of this textbook. One of the accountant's primary responsibilities is the careful study of all financial information to ensure that it is all fairly presented before being released. Such investigation can lead to the preparation of numerous adjusting entries. Here, only the following four general types of adjustments are introduced. In later chapters, many additional examples will be described and analyzed.

- Accrued expenses (also referred to as accrued liabilities)
- Prepaid expenses
- Accrued revenue
- Unearned revenue (also referred to as deferred revenue)

Usually, at the start of the adjustment process, the accountant prepares an updated trial balance to provide a visual, organized representation of all ledger account balances. This listing aids the accountant in spotting figures that might need adjusting in order to be fairly presented. Therefore, Figure 1.19 "Updated Trial Balance" takes the ending account balances for the Lawndale Company found in the ledger presented in Figure 1.3 "Balances Taken From T-accounts in Ledger" and puts them into the form of a trial balance.

Lawndale Company Trial Balance (after recording all new transactions)

Account	Debit Balance	Credit Balance
Cash	$41,400	
Accounts receivable	9,000	
Inventory	8,000	
Prepaid rent	4,000	
Truck	40,000	
Accounts payable		$2,600
Notes payable		49,000
Unearned revenue		3,000
Capital stock		31,000
Retained earnings, beginning of year		7,000
Dividends paid	600	
Sales of merchandise		27,000
Cost of goods sold	14,000	
Rent expense	3,600	
Salary expense	1,300	
Insurance expense	700	
Gain on sale of land		3,000
Totals	$122,600	$122,600

Question: *The first adjustment listed is an* **accrued expense**. *In an earlier section, the word "accrue" was defined as "to grow." Thus, an accrued expense is one that increases gradually over time. As indicated previously, some companies program their accounting systems to record such expenses as they are incurred. This accrual process reduces the need for separate adjusting entries. Other companies make few, if any, accruals and update all balances through numerous adjustments. The recording process for such expenses should be designed to meet the informational needs of company officials. Some prefer to have updated balances readily available in the ledger while others are inclined to wait for periodic financial reports to be issued. What are some typical accrued expenses and what is the appropriate adjusting entry if they have not been previously recorded by the accounting system?*

Answer: If a reporting company's accounting system recognizes an expense as it grows, no adjustment is necessary. The balances are recorded properly. They are ready to be included in financial statements. Thus, when statements are prepared, the accountant only needs to search for accrued expenses that have not yet been recognized.

Numerous expenses do get slightly larger each day until paid, including salary, rent, insurance, utilities, interest, advertising, income taxes, and the like. For example, on its December 31, 2024, balance sheet, the Hershey Company reported accrued liabilities of approximately $807 million. In the notes to the financial statements, this amount was explained as debts owed on that day for payroll, compensation and benefits, advertising and promotion, and other accrued expenses.

Assume, for illustration purposes, that the accountant reviews the trial balance presented in Figure 1.19 "Updated Trial Balance" and realizes that utility expenses (such as electricity and water) have not been recorded since the most recent payment. Assume that the Lawndale Company currently owes $900 for those utilities. The following adjustment is needed before financial statements are created. It is an adjusting entry because no physical event took place yet (the actual utility bill will not be received until next month); this liability simply grew over time (utitilities have been used) and has not yet been paid.

Figure 1.20 Adjusting Entry 1: Amount Owed for Utilities

Utilities Expense	900		(increase an expense—debit)
Utilities Payable (or Accrued Liabilities)		900	(increase a liability—credit)

ASSETS	=	LIABILITIES	+	STOCKHOLDERS EQUITY	
	UTILITIES PAYABLE		CAPITAL STOCK	+	RETAINED EARNINGS
				–	UTILITIES EXPENSE
	DEBIT	CREDIT		DEBIT	CREDIT
		900		900	

Just like regular entries, adjusting entries by using the appropriate debit or credit keep the accounting equation in balance. In this case that means an increase to the liabilities and a decrease to retained earnings/equity through an increase in the expense.

Check yourself

If Roa Company looked at its payroll records and found that employees had worked and earned $2,100 before June 30 in wages since the last time they were paid in cash (prior to June 30) the adjusting entry needed would include:

A. Debit wages payable $2,100

B. Credit wages expense $2,100

C. Credit cash $2,100

D. Debit wages expense $2,100

The answer is D. To record the expense and the liability that has been accrued between the last time employees were paid and June 30 there needs to be a debit (increase) to wages expense and a credit (increase) to wages payable.

Key Takeaway

Adjusting entries are necessary to update all account balances before financial statements can be prepared. These adjustments are not the result of physical events or transactions but are rather caused by the passage of time or small changes in account balances. The accountant examines a current listing of accounts—known as a trial balance—to identify amounts that need to be changed prior to the preparation of financial statements. Although numerous adjustments are studied in this textbook, four general types are especially common: accrued expenses, prepaid expenses, accrued revenues, and unearned revenues. Any expense (such as salary) that grows gradually over time but has not yet been paid is known as an accrued expense. If not automatically recorded by the accounting system, it must be entered into the records by adjustment prior to producing financial statements.

1.5: The Need for Adjusting Entries is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

1.6: Preparing Various Adjusting Entries

Learning Objectives

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

1. Explain the need for an adjusting entry in the reporting of prepaid expenses and be able to prepare that adjustment.
2. Explain the need for an adjusting entry in the reporting of accrued revenue and be able to prepare that adjustment.
3. Describe the difficulty of determining when the earning process for revenue is substantially complete and discuss possible resolutions.

Question: *The second adjustment to be considered here involves the handling* ***prepaid*** **expenses**. *In the transactions that were recorded in a previous section, Journal Entry 10 reported a $4,000 payment made in advance for four months of rent to use a building. An asset—prepaid rent—was recorded through the normal accounting process. This account is listed on the trial balance in Figure 1.19 "Updated Trial Balance". Why might a year-end adjusting entry be needed in connection with a prepaid expense?*

Answer: During these four months, the Lawndale Company will use the rented facility to help generate revenue. Over that time, the future economic benefit established by the payment gradually becomes a past benefit. The asset literally changes into an expense day by day. For illustrative purposes, assume that one month has now passed since the original payment. This month of benefit provided by the rent ($1,000 or $4,000/four months) no longer exists; it has been consumed.

As a preliminary step in preparing financial statements, an adjusting entry is needed to reclassify $1,000 from the asset into an expense account. This adjustment leaves $3,000 in the asset (for the remaining three months of rent on the building) while $1,000 is now reported as an expense (for the previous one month of rent).

Figure 1.20 Adjusting Entry 2: Previously Rented Facility Is Used

Rent Expense	1,000		(increase an expense—debit)
Prepaid Rent		1,000	(decrease an asset—credit)

The basic purpose of adjusting entries is to take whatever amounts reside in the ledger and align them with the requirements of U.S. generally accepted accounting principles (U.S. GAAP). For this illustration, the original $4,000 payment was classified as a prepaid rent and the adjustment above was created in response to that initial entry.

In recording transactions, some accounting systems mechanically handle events in a different manner than others. Thus, construction of an adjusting entry always depends on the recording that previously took place. To illustrate, assume that when this $4,000 payment was made, the company's computer program had been designed to enter a debit to rent expense rather than to prepaid rent. All money spent for rent was automatically recorded as rent expense. This initial accounting has no impact on the final figures to be reported but does alter the adjustment process.

An adjusting entry still needs to be prepared so that the expense appearing on the income statement is $1,000 (for the past one month) while the asset on the balance sheet is shown as $3,000 (for the next three months). If the entire cost of $4,000 is in rent expense, the following alternative is necessary to arrive at the proper balances. It shifts $3,000 out of the expense and into the asset.

Figure 1.21 Adjusting Entry 3: Alternative Based on a Different Initial Recording

Prepaid Rent	3,000		(increase an asset—debit)
Rent Expense		3,000	(decrease an expense—credit)

This entry leaves $1,000 in expense and $3,000 as the asset. Regardless of the account, the accountant first determines the balance that is present in the ledger and then creates the specific adjustment needed to arrive at fairly presented figures.

Check Yourself

Posh Inc. paid an attorney $10,000 for legal work on a lawsuit against another company on November 1. This represents 50 hours of future services to be received by Posh from the attorney. The $10,000 is recorded as a prepaid legal cost (asset). At the end of the year (December 31) Posh is notified that 10 hours of legal services have been provided prior to December 31. How much should Posh show as a prepaid legal cost on their balance sheet as of December 31?

A. $8,000

B. $2,000

C. $10,000

D. $0

The answer is A. 10 of the 50 hours have been used and become an expense. 10/50 of the legal costs have been used and that is $2,000 out of the $10,000. Therefore the adjusting entry would credit the prepaid legal cost for $2,000 and debit legal expense for $2,000. This leave the appropriate amount of $8,000 still in the prepaid legal cost asset representing the other 40 hours of legal work yet to be provided.

Question: *Accrued revenue is the third general type of adjustment to be covered here. Based on the title, this revenue is one that grows gradually over time. If not recorded by a company's accounting system, updating is necessary before financial statements are prepared. What adjustment is used to recognize accrued revenue that has not previously been recorded?*

Answer: Various types of revenue are earned as time passes rather than through a physical event such as the sale of inventory. To illustrate, assume that a customer comes to the Lawndale Company five days before the end of the year and asks for assistance. The customer must be away for the next thirty days and wants company employees to feed, water, and care for his horses during the period of absence. Everything needed for the job is available at the customer's farm; Lawndale just has to provide the service. The parties agree that the company will receive $100 per day for this work with payment to be made upon the person's return.

No asset changes hands at the start of this task. Thus, the company's accounting system is not likely to make any entry until payment is eventually received. However, assume that after the first five days of work, the company is ready to prepare financial statements and needs to recognize all revenue earned to date. The service to this customer has been carried out for five days at a rate of $100 per day. The company has performed the work to earn $500, an amount that will not be received until later. This receivable and revenue should be recognized through an adjusting entry so that the reported financial figures are fairly presented. The earning process for the $500 occurred this year and should be recorded in this year.

Figure 1.22 Adjusting Entry 4: Revenue Is Earned for Work Done

Accounts Receivable	500		(increase an asset—debit)
Sales of Services		500	(increase a revenue—credit)

No recognition is needed for cost of goods sold. Inventory is not being sold but rather is a service. The $500 receivable will be removed in the subsequent period when the customer eventually pays the company for the services rendered.

Question: *As discussed earlier, the revenue recognition principle (within accrual accounting) provides formal guidance for the timing of revenue reporting. It states in part that the earning process is governed by a contract and is reviewed using a 5 step process. That seems reasonable. In the above example, the work has only been performed for five days out of a total of thirty. That is not substantially complete. Could revenue be recognized even if only part of the job has been completed?*

Answer: This question draws attention to a difficult problem that accountants face frequently in creating a fair portrait of a company. The proper recognition of revenue is one of the most challenging tasks encountered in financial accounting. Here, the simplest way to resolve this issue is to consider the nature of the task to be performed.

According to the contract, is this job a single task to be carried out by the company over thirty days or is it thirty distinct tasks to be handled once a day over this period of time?

If the work of feeding and caring for the horses is one large task like painting a house, then the earning process is only 5/30 finished at the moment and not substantially complete. No revenue is recognized until the work has been performed for twenty-five more days. The previous adjusting entry is not warranted.

Conversely, if this assignment is thirty separate tasks, then five of them are substantially complete and revenue of $500 is properly recorded by the above entry. Unfortunately, the distinction is not always clear. Because accounting is conservative, revenue should never be recognized unless the contract shows that the individual tasks are clearly separate events.

In Adjusting Entry 3, the assumption is made that the daily tasks are separate and that the company could collect for the work accomplished to date. However, this type of judgment can be extremely difficult in the real world. It is often the product of much thought and discussion. The impact on the financial statements can be material, which increases pressure on the accountant.

Students often enter into a financial accounting course believing that little is required other than learning set rules and then following them mechanically. As will be demonstrated many times in this textbook, nothing ever replaces the need for critical thinking and applying of the accounting rules on the part of the accountant.

Key Takeaway

To align reported balances with the rules of accrual accounting, adjusting entries are created as a step in the preparation of financial statements. Prepaid expenses are normally recorded first as assets and then reclassified to expense as time passes to satisfy the matching principle. The mechanics of this process will vary somewhat based on the initial recording of the payment. Accrued revenues and the corresponding receivables are recognized when the earning process is deemed to be substantially complete. The time at which this benchmark is achieved often depends on whether a single job or a collection of independent tasks is under way. As with so many areas of financial reporting, that decision can rely heavily on professional judgment.

1.6: Preparing Various Adjusting Entries is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

1.7: Preparing Financial Statements Based on Adjusted Balances

Learning Objectives

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

1. Explain the need for an adjusting entry in the reporting of unearned revenue and be able to prepare that adjustment.
2. Prepare an income statement, statement of retained earnings, and balance sheet based on the balances in an adjusted trial balance.
3. Explain the purpose and construction of closing entries.

The last adjusting entry to be covered at this time is unearned (or deferred) revenue. Some companies operate in industries where money is received first and then earned gradually over time. Newspaper and magazine businesses, for example, are paid in advance by their subscribers and advertisers. The earning process becomes substantially complete by the subsequent issuance of their products. Thus, the December 31, 2024 balance sheet for the New York Times Company reported a liability titled "unexpired subscriptions revenue" (unearned revenue) *of $187 million. This balance represents payments collected from customers who have not yet received their newspapers (earning the revenue).*

Question: In Journal Entry 13 in an earlier section, the Lawndale Company reported receiving $3,000 for services to be rendered at a later date. An unearned revenue account was recorded as a liability for that amount and appears in the trial balance in Figure 1.18 "Updated Trial Balance". When is an adjusting entry needed in connection with the recognition of previously unearned revenue?

Answer: As indicated, unearned revenue represents a liability recognized when money is received before work is done. After any portion of the required service is carried out so that the earning process is substantially complete, an appropriate amount is reclassified from unearned revenue on the balance sheet to revenue on the income statement. For example, in connection with the $3,000 payment collected by Lawndale, assume that all the work necessary to recognize the first $600 has now been performed. To fairly present this information, an adjusting entry is prepared to reduce the liability and recognize the earned revenue.

Figure 1.23 Adjusting Entry 5: Money Previously Received Has Now Been Earned

Unearned Revenue	600		(decrease a liability—debit)
Sales of Services		600	(increase a revenue—credit)

Check Yourself

Microsoft received $6 billion from customers during 2025 for computer support that will be provided in 2026. It has been properly recorded as unearned revenue. At the end of six months into 2026, Microsoft calculates that of the $6 billion, half of it has been earned. The other half will be earned during the remaining six months. If Microsoft does not make the appropriate adjusting entry, which of the following will be true?

A. Liabilities will be too low by $3 billion on the balance sheet half way through 2026.

B. Revenues for first half of 2026 will be too high on the income statement.

C. Revenues for first half of 2026 will be too low on the income statement.

D. Expenses will be too low for 2026 on the income statement.

The answer is C. The adjusting entry that should be made (half way through 2026) is a debit to unearned revenue (a liability) to decrease it and a credit to revenue for half or $3 billion. That would leave $3 billion in unearned revenue on the balance sheet (fairly stated). Without the entry the liabilities would be too high ($6 billion instead of $3 billion) and there would not be the 3 billion in revenue reported in 2026 so revenue would be too low.

Question: *After all adjusting entries have been recorded in the journal and posted to the appropriate T-accounts in the ledger, what happens next in the accounting process?*

Answer: At this point, the accountant believes that all account balances are fairly presented because no material misstatements exist according to U.S. GAAP. As one final check, an adjusted trial balance is produced for a last, careful review. Assuming that no additional concerns are noticed, the accountant prepares an income statement, a statement of retained earnings, and a balance sheet like was shown from the accounting equation worksheet in Principles of Financial Accounting 1.

The basic financial statements are then completed by the production of a statement of cash flows. In contrast to the previous three, this remaining statement does not report ending ledger account balances but rather discloses the various changes occurring during the period in the composition of the cash account. As indicated in Principles of Financial Accounting 1, all cash flows are classified as resulting from operating activities, investing activities, or financing activities.

The reporting process is then completed by the preparation of the explanatory notes that always accompany a set of financial statements.

The final trial balance for the Lawndale Company (including the four adjusting entries produced above) is presented in the appendix to this chapter. After that, each of the individual figures is appropriately placed within the first three financial statements. Revenues and expenses appear in the income statement, assets and liabilities in the balance sheet, and so on. The resulting statements are also exhibited in the appendix for illustrative purposes. No attempt has been made here to record all possible adjusting entries. For example, no income taxes have been recognized and interest expense has not been accrued in connection with notes payable. Depreciation expense of noncurrent assets with finite lives (the truck, in the company's trial balance) will be discussed in detail in a later chapter. However, these illustrations are sufficient to demonstrate the end result of the accounting process as well as the basic structure used for the income statement, statement of retained earnings, and balance sheet.

The statement of cash flows for the Lawndale Company cannot be created based solely on the limited information available in this chapter concerning the cash account. Thus, it has been omitted. Complete coverage of the preparation of a statement of cash flows will be presented in Principles of Managerial Accounting 2.

Question: *Analyze, record, adjust, and report—the four basic steps in the accounting process. Is the work year complete for the accountant after financial statements are prepared?*

Answer: One last mechanical process needs to be mentioned. Whether a company is as big as Microsoft or as small as the local convenience store, the final action performed each year by the accountant is the preparation of **closing entries**. Several types of accounts—specifically, revenues, expenses, gains, losses, and dividends paid—reflect the various changes that occur in a company's net assets but just for the current period. In order for the accounting system to start measuring the effects for each new year, all of these specific T-accounts must be returned to a zero balance after the annual financial statements are produced.

- Final credit totals existing in every revenue and gain account are closed out by recording equal and off-setting debits.
- Similarly, ending debit balances for expenses, losses, and dividends paid require a credit entry of the same amount to return each of these T-accounts to a zero balance.

After these "temporary" accounts are closed at year's end, the resulting single figure is the equivalent of the net income reported for the year less dividends paid. This net effect is recorded in the retained earnings T-account. The closing process effectively moves the balance for each revenue, expense, gain, loss, and dividend paid into retained earnings. In the same manner as journal entries and adjusting entries, closing entries are recorded initially in the company's journal and then posted to the ledger. As a result, the beginning retained earnings balance for the year is updated to arrive at the ending total reported on the balance sheet.

Assets, liabilities, capital stock, and retained earnings all start out each year with a balance that is the same as the ending figure reported on the previous balance sheet. Those accounts are not designed to report an impact occurring just during the current year. In contrast, revenues, expenses, gains, losses, and dividends paid all begin the first day of each year with a zero balance—ready to record the events of this new period.

Key Takeaway

Companies occasionally receive money for services or goods before they are provided. In such cases, an unearned revenue is recorded as a liability to indicate the company's obligation to its customer. Over time, as the earning process becomes substantially complete, the unearned revenue is reclassified as a revenue through adjusting entries. After this adjustment and all others are prepared and recorded, an adjusted trial balance is created and those figures are then used to produce financial statements. Finally, closing entries are prepared for all revenues, expenses, gains, losses, and dividends paid. Through this process, all of these T-accounts are returned to zero balances so that recording for the new year can begin. The various amounts in these temporary accounts are moved to retained earnings. Thus, its beginning balance for the year is increased to equal the ending total reported on the company's balance sheet.

Talking with a Real Investing Pro (Continued)

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

Question: Large companies have millions of transactions to analyze, classify, and record so that they can produce financial statements. That has to be a relatively expensive process that produces no income for the company. From your experience in analyzing companies and their financial statements, do you think companies should spend more money on their accounting systems or would they be wise to spend less and save their resources?

Kevin Burns: Given the situations of the last decade ranging from the accounting scandals of Enron and WorldCom to recent troubles in the major investment banks, the credibility of financial statements and financial officers has eroded significantly. My view is that—particularly today—transparency is absolutely paramount and the more detail the better. Along those lines, I think any amounts spent by corporate officials to increase transparency in their financial reporting, and therefore improve investor confidence, is money well spent.

1.7: Preparing Financial Statements Based on Adjusted Balances is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

1.8: Chapter 1 Appendix – Financial Statement Preparation

Lawndale Company Final Trial Balance—(including four adjusting entries)

Account	Debit Balance	Credit Balance
Cash	$41,400	
Accounts receivable	9,500	
Inventory	8,000	
Prepaid rent	3,000	
Truck	40,000	
Accounts payable		$2,600
Utilities payable		900
Unearned revenue		2,400
Notes payable		49,000
Capital stock		31,000
Retained earnings, beginning of year		7,000
Dividends paid	600	
Sales of merchandise		27,000
Sales of services		1,100
Cost of goods sold	14,000	
Rent expense	4,600	
Salary expense	1,300	
Utilities expense	900	
Insurance expense	700	
Gain on sale of land		3,000
Totals	$124,000	$124,000

Lawndale Company Income Statement for Year Ended December 31

Revenues:		
Sales of merchandise	$27,000	
Sales of services	1,100	
Total revenues		$28,100
Expenses:		
Cost of goods sold	14,000	
Rent	4,600	
Salary	1,300	
Utilities	900	
Insurance	700	
Total expenses		(21,500)
Gain on sale of land		3,000
Net Income		$9,600

Lawndale Company Statement of Retained Earnings for Year Ended December 31, 2009		
Retained earnings balance, January 1, 2009		$7,000
Net income reported for 2009	$9,600	
Dividends distributed during 2009	600	
Net income less dividends for 2009		9,000
Retained earnings balance, December 31, 2009		$16,000

Lawndale Company Balance Sheet, December 31, 2009		
Current Assets	Assets	
Cash	$41,400	
Accounts receivable	9,500	
Inventory	8,000	
Prepaid rent	3,000	
Total current assets		$61,900
Noncurrent Assets		
Truck		40,000
Total assets		$101,900

Liabilities and Stockholders' Equity		
	Liabilities	
Current Liabilities		
Accounts payable	$2,600	
Utilities payable	900	
Unearned revenue	2,400	
Total current liabilities		$5,900
Noncurrent Liabilities		
Notes payable		49,000
Total liabilities		$54,900
	Stockholders' Equity	
Capial Stock	$31,000	
Retained Earnings	16,000	
Total stockholders' equity		$47,000
Total liabilities and stockholders' equity		$101,900

1.8: Chapter 1 Appendix – Financial Statement Preparation is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

1.9: End-of-Chapter Exercises

Questions (for review not for homework)

1. What is a transaction?
2. Where was the accounting system developed that is still used by businesses today?
3. What is this system called?
4. What are the four steps followed by accounting systems?
5. By what is financial information accumulated?
6. Define “T-account.”
7. Which accounts are increased with a debit?
8. Which accounts are increased with a credit?
9. What is a journal in the accounting sense?
10. What is a trial balance?
11. Accrual accounting is composed of which two principles? Define each.
12. Define “unearned revenue.”
13. What is the purpose of adjusting entries?
14. Name the four general types of adjustments.
15. Give three examples of accrued expenses.
16. Briefly explain why it is difficult for accountants to determine whether or not revenue has been earned if the sales process is not complete.
17. Give an example of business or industry where customers usually pay for the product or service in advance.
18. What type of account is unearned revenue?
19. When should a company reclassify unearned revenue to revenue?
20. Why do companies produce a second trial balance? When is this second trial balance prepared?
21. Why do accountants prepare closing entries?
22. Into which account are revenues and expenses closed?

True or False (for review not for homework)

1. ____ Debits and credits must equal for every transaction.
2. ____ A list of all recorded journal entries is maintained in the ledger.
3. ____ Revenue may not be recorded until cash is collected.
4. ____ A transaction is any event that has a financial impact on a company.
5. ____ An expense account is increased with a credit.
6. ____ Examples of accrued expenses include salary, rent, and interest.
7. ____ Posting refers to process of recording journal entries.
8. ____ A company must recognize an accrued expense as incurred.
9. ____ The matching principle states that expenses should be recognized in the same period as the revenues they help generate.
10. ____ Unearned revenue is a type of revenue account.
11. ____ Determining when to recognize revenue can be difficult for accountants.
12. ____ Only permanent accounts are closed at the end of the financial statement cycle.
13. ____ Some changes to accounts occur because of the passage of time.
14. ____ Accountants do not have to exercise much judgment because there are so many rules to follow.
15. ____ Assets, liabilities and owners’ equity accounts will start each financial statement cycle with the same balance they had at the end of the previous cycle.
16. ____ The word “accrue” means “to grow.”
17. ____ Companies have some discretion in how and when they record accruals.
18. ____ The purpose of adjusting entries is to bring the balance in temporary accounts to zero at the end of the reporting cycle.
19. ____ Only one trial balance is prepared during a financial statement cycle.

Multiple Choice (for review not for homework)

1. Which of the following is **not** true about double-entry bookkeeping?
    1. It originated in Italy.
    2. Debits and credits must equal.
    3. It is still used today.
    4. An entry can have no more than one credit and one debit.
2. Which of the following entries could Yeats Company not make when they perform a service for a client?
    1.

Accounts Receivable	XXX	
Revenue		XXX

    2.

Cash	XXX	
Revenue		XXX

    3.

Cash	XXX	
Accounts Receivable	XXX	
Revenue		XXX

    4.

Accounts Payable	XXX	
Revenue		XXX

3. Which of the following is a transaction for Tyler Corporation?
    1. Tyler pays its employees $400 for work done.
    2. Tyler considers renting office space that will cost $1,500 per month.
    3. Tyler agrees to perform services for a client, which will cost $7,000.
    4. Tyler places an order for supplies that will be delivered in two weeks. The supplies cost $200.
4. Elenor Company sells 400 units of inventory for $40 each. The inventory originally cost Elenor $26 each. What is Elenor's gross profit on this transaction?
    1. $16,000
    2. $10,400
    3. $ 5,600
    4. $ 9,600
5. Which of the following increases with a debit?
    1. Retained earnings
    2. Sales revenue
    3. Inventory

4. Note payable

6. Which of the following accounts would be closed at the end of the financial statement cycle?
   1. Accounts receivable
   2. Accounts payable
   3. Cost of goods sold
   4. Unearned revenue
7. Jenkins Company received $600 from a client in May for work Jenkins would perform during May and June it is appropriately recorded as unearned revenue when received. What entry should Jenkins make on May 31 if one-third of the work is complete on that date?
   1. Debit Cash $600 and credit Revenue $600.
   2. Debit Unearned Revenue $200 and credit Revenue $200.
   3. Debit Cash $600 and Credit Revenue $600.
   4. Debit Unearned Revenue $600 and Credit Revenue $600
8. Which of the following accounts would increase retained earnings when closed into it?
   1. Dividends
   2. Sales revenue
   3. Loss of sale of land
   4. Rent expense
9. Which of the following is **not** one of the four types of adjustments?
   1. Prepaid revenue
   2. Accrued expenses
   3. Unearned revenue
   4. Prepaid expenses
10. In September 20X3, LaToya Corporation paid for insurance for the next six months in the amount of $42,000. On December 31, LaToya's accountant forgot to make the adjusting entry that was needed. Which of the following is true?
    1. Assets are understated by $42,000.
    2. Net income is understated by $14,000.
    3. Expenses are overstated by $42,000.
    4. Net income is overstated by $28,000.

Problems (for homework)

1. Record the following journal entries (in general journal using journal entry format) for Taylor Company for the month of March:
   1. Borrowed $4,500 from Local Bank and Trust
   2. Investors contributed $10,000 in cash for shares of stock
   3. Bought inventory costing $2,500 on credit
   4. Sold inventory that originally cost $400 for $700 on credit
   5. Purchased a new piece of equipment for $9,000 cash
   6. Collected $700 in cash from sale of inventory in (4) above

7. Paid for inventory purchased in (3) above
8. Paid $1,200 in cash for an insurance policy that covers the next year
9. Paid employees $2,400 for wages earned and recorded during February
10. Employees earned $3,000 during the month but have not yet been paid

2. For each of the following transactions, determine if Raymond Corporation has earned revenue during the month of May and, if so, how much it has earned.

   1. Customers paid Raymond $1,500 for work Raymond will perform in June.
   2. Customers purchased $6,000 of inventory for which they have not yet paid.
   3. Raymond performed work for customers and was paid $3,400 in cash.
   4. Customers paid Raymond $2,300 for inventory purchased in April.

3. Record the journal entries for number 2 above.

4. Figure 1.23 Trial Balance—Ester Company

Ester Company Trial Balance 12/31/20XX

Account Title	Debits	Credits
Cash	$4,600	
Accounts Receivable	11,000	
Inventory	15,090	
Accounts Payable		$3,600
Note Payable		13,000
Capital Stock		5,000
Retained Earnings, 1/1/20XX		2,200
Sales Revenue		19,050
Cost of Goods Sold	?????	
Salary Expense	1,500	

5. State which balance, debit, or credit is normally held by the following accounts:

   1. Cash
   2. Dividends
   3. Interest expense
   4. Unearned revenue
   5. Cost of goods sold
   6. Retained earnings
   7. Accounts receivable
   8. Capital stock

6. Near the end of her freshman year at college, Heather Miller is faced with the decision of whether to get a summer job, go to summer school, or start a summer dress making business. Heather has had some experience designing and sewing and believes

it might be the most lucrative of her summer alternatives. She starts “Sew Cool.”

During June, the first month of business, the following occur:

1. Heather deposits $1,000 of her own money into Sew Cool’s checking account.
2. Sew Cool purchases equipment for $1,000. The company signs a note payable for this purchase.
3. Sew Cool purchases $1,000 in sewing supplies and material in cash.
4. Sew Cool gives Heather’s parents a check for $80 for rent and utilities.
5. Heather sews and sells twenty dresses during the month. Each dress has a price of $60. Cash is received for twelve of the dresses, with customers owing for the remaining eight.
6. The dresses sold above cost $35 each to make.
7. Sew Cool purchases advertising for $50 cash.
8. Sew Cool pays Heather a cash dividend of $10 cash.
9. Sew Cool’s taxes, paid in cash, amount to $80.
    1. Prepare journal entries for the above transactions.
    2. Prepare T-accounts for each account used.
    3. Prepare a trial balance for June.

7. Bowling Corporation had the following transactions occur during February:
    1. Bowling purchased $450,000 in inventory on credit.
    2. Bowling received $13,000 in cash from customers for subscriptions that will not begin until the following month.
    3. Bowling signed a note from Midwest Bank for $67,000.
    4. Bowling sold all the inventory purchased in (a) above for $700,000 on account.
    5. Bowling paid employees $120,000 for services performed during January.
    6. Bowling purchased land for $56,000 in cash.
    7. Bowling received $650,000 in cash from customers paying off January’s accounts receivable.
    8. Bowling paid dividends to stockholders in the amount of $4,000.
    9. Bowling owes its employees $123,000 for work performed during February but not yet paid.
    10. Bowling paid $300,000 on its accounts payable.
    11. Bowling paid taxes in cash of $45,000.

    Required:

    1. Prepare journal entries for the above transactions.
    2. Complete the T-accounts below. Numbers already under the accounts represent the prior balance in that account.

        Opening T-Account Balances

Cash		Accounts Receivable		Inventory		Land		Accounts Payable	
500,000		650,000		0		22,000			100,000

Unearned Revenue		Salary Payable		Note Payable		Capital Stock	
	0		120,000		430,000		302,000

Retained Earnings		Sales Revenue		Cost of Goods Sold		Salary Expense	
	220,000		0	0		0	

Tax Expense		Dividends	
0		0	

1. Prepare a trial balance for February.

8. Determine if the following adjusting entries are

- accrued expense (AE)
- prepaid expense (PE)
- accrued revenue (AR)
- unearned revenue (UR)

1. _____ Atlas Magazine was previously prepaid $400,000 by subscribers and has delivered half of the magazines ordered.
2. _____ Hornsby Company agreed to provide 1,000 units of its product to Michaels Inc. and has substantially completed the agreement.
3. _____ Nancy and Sons owes its employees $30,000 for work done over the past two weeks.
4. _____ Replay Inc. advertised on TV 44 during the month of April, but has not yet made an entry to record the event.
5. _____ Centurion Company paid Reliable Insurance Company $54,000 for insurance for twelve months, six of which have passed.
6. _____ Reliable Insurance Company received a payment of $54,000 for insurance for twelve months from Centurion Company and six months have passed.

9. Determine if the following transactions for Marlin Corporation require an adjustment or not. If an adjusting entry is required, give the correct entry.

1. At the beginning of the month, Marlin agreed to perform services for the next three months for Catsui Corporation for $30,000 per month. Catsui paid Marlin $90,000 in advance. One month has now passed.
2. Marlin pays its employees every two weeks. At the end of the month, Marlin owes its employees $480,000, but will not pay them until the following week.
3. Marlin paid $300,000 for rent at the beginning of the month by debiting prepaid rent and crediting cash. The $300,000 covered six months of occupancy, but only one month has passed.
4. At the beginning of the month, Marlin agreed to perform services for Ryland Company for $16,000 per month for the next six months. Ryland has not yet paid any cash to Marlin and the work is not substantially complete.

10. Leon Jackson is ecstatic! First National Bank just approved a loan for Leon to start a Web site design and maintenance business called Webworks. He is now ready to purchase his needed equipment, hire his administrative help, and begin designing sites. During June, his first month of business, the following occur:

a. Webworks signs a note at the bank and is given $10,000 cash.

b. Leon deposits $2,000 of his own money into Webworks's checking account.

c. Webworks purchases a new computer and additional equipment for $3,000.

d. Webworks purchases supplies worth $200 on account that should last Webworks two months.

e. Webworks hires Nancy Po to assist with administrative tasks. She will charge $100 per Web site for her assistance.

f. Webworks begins working on his first two Web sites, one for Juan Sanchez, a friend of his dad's and the other for Pauline Smith, a local businesswoman.

g. Webworks completes the site for Mr. Sanchez and sends him a bill for $600.

h. Webworks completes the site for Ms. Smith and sends her a bill for $450.

i. Webworks collects $600 in cash from Mr. Sanchez.

j. Webworks pays Nancy $100 for her work on Mr. Sanchez's Web site.

k. Webworks receives $500 in advance to work on a Web site for a local restaurant. Work on the site will not begin until July.

l. Webworks pays taxes of $200 in cash.

Required:

A. Prepare journal entries for the above events if needed.

B. Post the journal entries to T-accounts.

C. Prepare an unadjusted trial balance for Webworks for June.

D. Prepare adjusting entries for the following and post them to your T-accounts, adding any additional T-accounts as necessary.

m. Webworks owes Nancy $100 for her work on Ms. Smith's Web site.

n. Leon's parents let him know that Webworks owes $80 toward the electricity bill. Webworks will pay them in July.

o. Webworks only used half of the supplies purchased in (d) above.

E. Prepare an adjusted trial balance for Webworks for June.

11. Jan Haley owns and operates Haley's Dry Cleaners. The following occurred during December:

a. On December 1, Haley prepaid rent on her store for December and January with $2,000 cash.

b. On December 1, Haley purchased insurance with cash in the amount of $2,400 that will last six months.

c. Haley paid $900 of her accounts payable balance.

d. Haley paid off all of her salaries payable balance.

e. Haley purchased supplies on account in the amount of $2,400.

f. Haley paid a salary to her assistant of $1,000 in cash for work done in the first two weeks of December.

g. Haley dry-cleaned clothes for customers on account in the amount of $8,000.

h. Haley collected $6,300 of her accounts receivable balance.

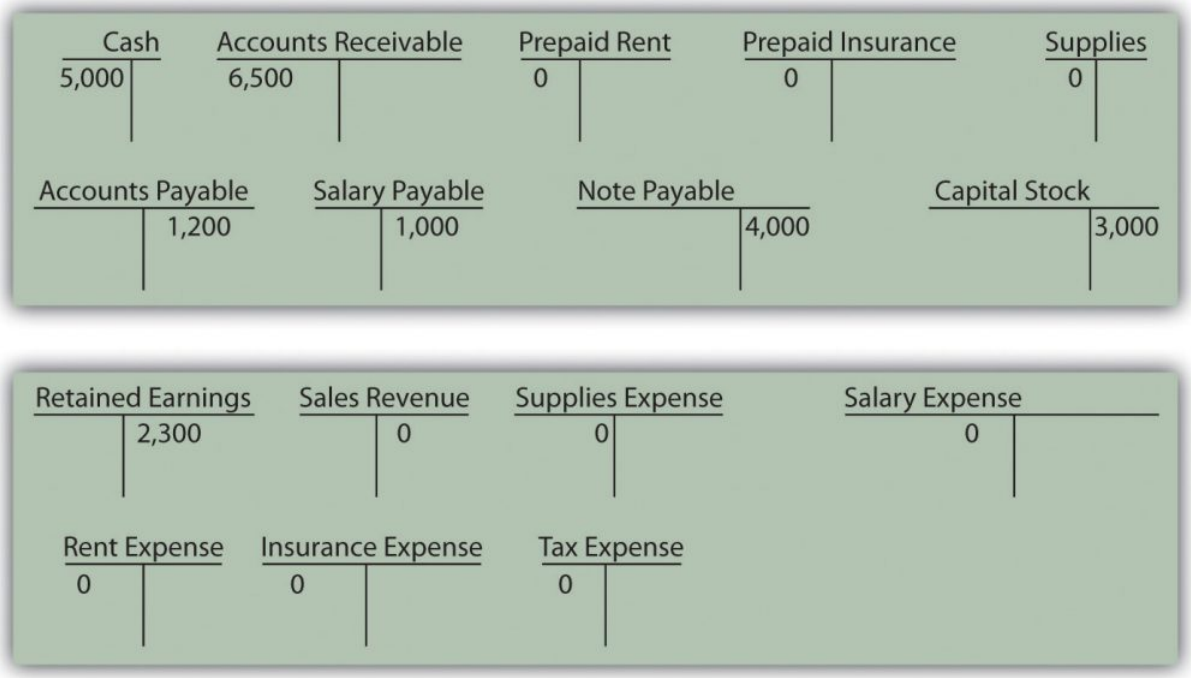
i. Haley paid tax of $750 in cash.

Required:

A. Prepare the journal entry for each transaction.

B. Prepare all necessary T-accounts. Numbers already under the accounts represent the prior balance in that account.

Opening T-Account Balances



C. Prepare a trial balance dated 12/31/XX.

D. Make the following adjusting entries for the month of December and post them to the T-accounts:

j. Rent expense.

k. Insurance expense.

l. Haley owes her assistant $1,000 for work done during the last two weeks of December.

m. An inventory of supplies shows $400 in supplies remaining on December 31.

E. Prepare an adjusted trial balance dated 12/31/XX.

F. Prepare an income statement, statement of retained earnings, and balance sheet for the month ending December 31, 20XX.

12. On January 1, Kevin Reynolds, a student at State U, decides to start a business. Kevin has noticed that various student organizations around campus are having more and more need for professionally recorded videos to stream online. While a lot of students have the ability to record video, producing and editing high quality content is lacking.

Kevin believes that with a beginning investment in specialty equipment and a dedicated recording space, he can provide a valuable product to the college community. So on 1/1, Kevin officially begins “Kevin’s Production.” Of course, Kevin is very careful to ensure that his customers have full ownership rights to their video snipits.

Part 1:

The following occur during January.

1. Kevin deposits $5,000 of his own money into the company’s checking account.

2. Kevin signs a note payable in the amount of $3,000 from Neighborhood Bank. The note is due in one year.

3. KP (Kevin's Productions) purchases a professional video equipment. The cost is $4,000 and he pays cash.

4. KP purchases supplies for $800 on credit (accounts payable).

5. KP pays $250 cash for advertising.

6. KP quickly catches on with the student groups on campus. KP sells video productions for $3,800 in January that were completed. KP collected cash 3,000 and the rest is still receivable.

7. KP pays $600 on its accounts payable.

8. KP pays $1,500 for student workers to help make the videos

8. KP receives $2,000 in advance to produce videos. They will not begin work on those projects until February.

9. KP incurs $400 in tax expense. The taxes will be paid in February.

Required:

A. Prepare journal entries for the above events if needed.

B. Post the journal entries to T-accounts.

C. Prepare adjusting entries for the following and post them to your T-accounts.

10. Additional student work was done on the videos at the end of January that will not be paid until February of $1,200

11. KP incurs $30 in interest expense. The interest will be paid with the note.

12. Only $300 of the supplies were still on hand at the end of January (rest had been used).

D. Prepare an adjusted trial balance for KP for January.

E. **Prepare financial statements for KP for January (income statement, statement of equity and balance sheet)**.

Part II: The following occur in February:

13. Kevin decides to expand outside the college. On the first day of the month, KP pays $2,200 in advance for advertising in various online and radio formats. The advertisements will run during February and March.

14. Collected cash for the $800 remaining from videos produced in January.

15. KP paid off its remaining accounts payable, salaries/wages payable, taxes payable and interest payable.

16. KP purchases $900 in supplies on account.

17. KP produces and sells $4,500 in videos with $2,500 collected in cash and the rest accounts receivable.

18. KP completes and delivers the advanced order of videos described in number 8 above.

19. KP pays student salaries of $2,100 in cash

20. KP incurs tax expense of $400 to be paid in March.

Required:

G. Prepare journal entries for the above events if needed.

H. Post the journal entries to the T-accounts.

I. Prepare adjusting entries for the following and post them to your T-accounts.

21. Unpaid salaries/wages of $900 had been earned by student workers by the end of February

22. An adjustment is made for advertising used in February as mentioned in 12.

23. KP incurs $30 in interest expense. The interest will be paid with the note.

24. KP has only $200 in supplies left at the end of February.

K. Prepare an adjusted trial balance for KP for February.

L. **Prepare the financial statements for February separate from January**

1.9: End-of-Chapter Exercises is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

CHAPTER OVERVIEW

2: In a Set of Financial Statements, What Information Is Conveyed about Receivables?

2.1: Accounts Receivable and Net Realizable Value

2.2: Accounting for Uncollectible Accounts

2.3: The Problem with Estimations

2.4: Estimating the Amount of Uncollectible Accounts

2.5: End-of-Chapter Exercises

2: In a Set of Financial Statements, What Information Is Conveyed about Receivables? is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

2.1: Accounts Receivable and Net Realizable Value

Learning Objectives

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

1. Understand that accounts receivable are reported at net realizable value.
2. Know that net realizable value is an estimation of the amount of cash to be collected from customers.
3. Appreciate the challenge that uncertainty poses in the reporting of accounts receivable.
4. List the factors to be considered by company officials when estimating the net realizable value of accounts receivable.

Question: The goal of financial accounting is to paint a fairly presented portrait of an organization that enables decision makers to make a reasonable assessment of its financial health and future prospects. This likeness should be communicated based on United States generally accepted accounting principles[1](U.S. GAAP) with no material misstatements included. The success of the conveyance is dependent on the ability of an organization's accountants to prepare financial statements that meet this rigorous standard.

Equally as important, every party analyzing the resulting statements must possess the knowledge necessary to understand the multitude of reported figures and explanations. If appropriate decisions are to result based on this information, both the preparer and the reader need an in-depth knowledge of U.S. GAAP.

For example, the asset section of the balance sheet produced by Dell Inc. as of January 31, 2025, indicates that the company held "accounts receivable, net" amounting to $10.3 billion. What does this figure reflect according to U.S. GAAP? What information is communicated to decision makers about a company and its accounts receivable when a single number such as $10.3 billion is reported?

Answer: One of the most satisfying results of mastering the terminology, rules, and principles of financial accounting is the ability to understand the meaning of amounts and balances disclosed about an organization. In magazines, newspapers, radio, television, and the Internet, such information is presented and analyzed daily. As with any language, failure to comprehend elements of the discussion leaves the listener lost and feeling vulnerable. However, following a reasonable amount of study, the informational content begins to make sense and quickly becomes useful in arriving at logical financial decisions.

In Principles of Financial Accounting 1, the term "**accounts receivable"** was introduced to report amounts owed to a company by its customers. Individual balances are generated by sales made on credit. According to U.S. GAAP, the figure that is presented on a balance sheet for accounts receivable is its **net realizable value**—the amount of cash the company estimates will be collected over time from these accounts.

Consequently, officials for Dell Inc. analyzed the company's accounts receivable (a list of all the customers that have bought products or services from Dell and still owe them for those products or services) as of January 31, 2025, and determined that $10.3 billion was the best guess as to the cash that would be collected. As discussed in Principles of Financial Accounting 1, the amount of accounts receivable is the total of all the customers that owe Dell money for purchasing products and services. This list of actual receivables was higher ($10.4 billion) but an estimated amount of doubtful accounts had been subtracted in recognition that a portion of these debts could never be collected ($.1 billion or $78 million to be more exact). For this reason, the asset is identified on the balance sheet as "accounts receivable, net" or, sometimes, "accounts receivable, net of allowance for doubtful accounts" to explain that future losses have already been anticipated and subtracted.

Check Yourself

Tiger Company shows on its balance sheet Accounts Receivable, Net of $960,000 for December 31, 2025. In a footnote, Tiger discloses that the allowance for uncollectible accounts is $40,000 at the end of 2025. Which of the following is true with regard to Tiger's accounts receivable?

A. The amount that is estimated that Tiger will not collect from customers is $40,000 out of the total owed on December 31, 2025.

B. The actual amounts owed to Tiger by customers is $1,000,000 on December 31, 2025.

C. The net realizable amount of accounts receivable for Tiger on December 31, 2025 is $960,000.

D. All of the above are true.

The answer is D. The amount actually owed by customers is $1,000,000 (960,000 + 40,000) and of that $40,000 is estimated as uncollectible, leaving $960,000 or the net realizable value of receivables as the amount Tiger will most likely collect.

Question: As discussed in previous chapters, many of the figures reported in financial accounting cannot be absolutely correct. Although $10.3 billion is the asset balance shown by Dell, the cash eventually collected might be somewhat higher or lower. Should the lack of exactness in reporting receivables cause concern for decision makers?

Answer: No one will ever be able to predict the exact amount of cash to be received from nearly $10.3 billion in accounts receivable. In fact, Note One to Dell's financial statements specifically states, "The preparation of financial statements in accordance with GAAP requires the use of management's estimates. These estimates are subjective in nature and involve judgments that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at fiscal year-end, and the reported amounts of revenues and expenses during the fiscal year. Actual results could differ from those estimates."

Knowledgeable decision makers understand that some degree of uncertainty exists with all such balances. However, a very specific figure does appear on Dell's balance sheet. By including this amount, company officials are asserting that they have obtained sufficient evidence to provide reasonable assurance that the amount collected will not be a materially different figure[2].

This is the meaning of an accounts receivable balance presented according to U.S. GAAP. Actual receipts are expected to be close enough to $10.3 billion so that an interested party can rely on this number in arriving at considered decisions about the reporting company's financial health and future prospects. Officials believe they have evidence that any eventual difference with the cash collected will be so small that the same decisions would have been made even if the exact outcome had been known at the time of reporting. The difference between reported and actual figures is most likely to be inconsequential. Once again, though, absolute assurance is not given for such reported balances but merely reasonable assurance.

Clearly, the reporting of receivables moves the coverage of financial accounting into more complicated territory. In the transactions and events analyzed previously, uncertainty was rarely mentioned. The financial impact of signing a bank loan or the payment of a salary can be described to the penny except in unusual situations. Here, the normal reporting of accounts receivable introduces the problem of preparing statements where the ultimate outcome is literally unknown. The very nature of such uncertainty forces the accounting process to address such challenges in some logical fashion.

Questions: Inherent uncertainty is associated with the reporting of receivables. No one can know exactly how much cash will be collected. How do company officials obtain sufficient evidence to provide reasonable assurance that the balance is not materially misstated? How does any business ever anticipate the amount of cash that will be collected from what can be a massive number of accounts receivable?

Answer: In accounting, reported balances never represent random guesses. Considerable investigation and analysis goes into arriving at financial statement figures. To determine the net realizable value appropriate for accounts receivable, company officials consider many relevant factors such as the following:

- Historical experience of the company in collecting its receivables
- Efficiency of the company's credit verification policy
- Current economic conditions
- Industry averages and trends
- Current percentage of overdue accounts
- Efficiency of company's collection procedures

Dell Inc. explains this process within the notes to its financial statements by indicating that its estimation "is based on an analysis of historical bad debt experience, current receivables aging, expected future write-offs, as well as an assessment of specific identifiable customer accounts considered at risk or uncollectible."

Additional information disclosed by Dell indicates that the company actually held $10.4 billion in accounts receivable but—at the date of the balance sheet—$78 million of these accounts were anticipated to be uncollectible. Thus, the amount of cash that is estimated to be received is the reported $10.3 billion balance ($10.4 billion total less $.1 billion expected to be uncollectible). Quite

obviously, decision makers studying the company will be interested in comparing these data to the figures disclosed by Dell in previous years as well as the information disseminated by competing organizations such as Hewlett-Packard and Apple. Just determining whether the $78 million in uncollectible accounts is a relatively high or low figure is quite significant in evaluating the efficiency of Dell's current operations.

Check Yourself

Tiger Company showed on their balance sheet on December 31, 2025 that Accounts Receivable, Net was $960,000 and that the allowance for uncollectible accounts was $40,000 on that date. What percentage of Accounts Receivable did Tiger estimate would be uncollectible?

A. 2%

B. 3%

C. 4%

D. 96%

The answer is C. Divide the $40,000 allowance (estimated uncollectible) and divide it by the total receivables owed (960,000 + 40,000) = 1,000,000. This percentage makes it easy to compare to competitors of Tiger to see how much of a problem they are having in collecting their receivables.

Key Takeaways

Because of various uncertainties, many of the figures reported in a set of financial statements represent estimations. Accounts receivable is shown at its net realizable value, the amount of cash expected to be collected. Losses from bad accounts are anticipated and removed based on historical trends and other relevant information. Thus, the figure reported in the asset section of the balance sheet is lower than the total amount of receivables held by the company.

[1]As indicated previously, other versions of generally accepted accounting principles do exist. Unless otherwise noted, in this textbook, the presentation of U.S. GAAP is assumed.

[2]The independent auditors also analyze the available evidence and must believe that it is sufficient to provide the same reasonable assurance in order to render an unqualified opinion on the financial statements.

2.1: Accounts Receivable and Net Realizable Value is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

2.2: Accounting for Uncollectible Accounts

Learning Objectives

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

1. Understand the reason for reporting a separate allowance account in connection with accounts receivable.
2. Know that bad debt expenses must be anticipated and recorded in the same period as the related sales revenue to conform to the matching principle.
3. Prepare the adjusting entry necessary to reduce accounts receivable to net realizable value and recognize the resulting bad debt expense.

Question: Based on the information provided by Dell Inc., companies seem to maintain two separate ledger accounts in order to report accounts receivables on their balance sheet at net realizable value. One is the sum of all accounts outstanding and the other is an estimation of the amount within that total which will never be collected. Interestingly, the first is a fact and the second is an opinion. The two are then combined to arrive at the net realizable value figure that is shown within the financial statements. Is the amount reported for accounts receivable actually the net of the total due from customers less the anticipated amount of doubtful accounts?

Answer: Yes, companies maintain two separate T-accounts for accounts receivables but that is solely because of the uncertainty involved. If the balance to be collected was known, one account would suffice for reporting purposes. However, that level of certainty is rarely possible.

- An accounts receivable T-account monitors the total due from all of a company's customers.
- A second account (often called the **allowance for doubtful accounts** or the **allowance for uncollectible accounts)** reflects the estimated amount that will eventually have to be written off as uncollectible.

Whenever a balance sheet is to be produced, these two accounts are netted to arrive at net realizable value, the figure to be reported for this asset.

The allowance for doubtful accounts is an example of a "**contra account**," one that always appears with another account but as a direct reduction to lower the reported value. Here, the allowance serves to decrease the receivable balance to its estimated net realizable value. As a contra asset account, debit and credit rules are applied that are the opposite of the normal asset rules. Thus, the allowance increases with a credit (creating a decrease in the net receivable balance) and decreases with a debit. The more accounts receivable a company expects to be bad, the larger the allowance. This increase, in turn, reduces the net realizable value shown on the balance sheet.

By establishing two T-accounts, a company such as Dell can manage a total of $10.4 billion in accounts receivables (and keeping track of hundreds of separate customers who owe them money) while setting up a separate allowance balance of $78 million (estimated because we do not know which of those hundreds of customers will end up not paying). As a result, the reported figure —as required by U.S. GAAP—is the estimated net realizable value of $10.3 billion.

Question: Accounts receivable and the offsetting allowance for doubtful accounts are netted with the resulting figure reported on the balance sheet[1]*. How does the existence of doubtful accounts affect the income statement? Sales are made but a portion of the resulting receivables must be reduced because collection is rarely expected to be 100 percent. Does an increase in this allowance create an expense for the reporting company?*

Answer: Previously, an expense was defined as a measure of the outflow or reduction of net assets caused by the reporting company's attempt to generate revenues. Because companies such as Dell typically sell product on credit to business customers so that those customers will buy more product because of the convenience of buying on credit and not having to pay for them until later. This would mean that the risk that certain customers will not pay is a cost of adding credit sales to Dell's revenues. Thus receivables are recorded that will eventually have to be removed because they cannot be collected, fits the definition of an expense (a cost that helps a company earn revenue). In financial reporting, terms such as "**bad debt expense,**" "**doubtful accounts expense**," or "the provision for uncollectible accounts" are often encountered.

The inherent uncertainty as to the amount of cash that will actually be received affects the physical recording process. To illustrate, assume that a company makes sales on account to one hundred different customers late in Year One for $1,000 each. The earning process is substantially complete at the time of sale and the amount of cash to be received can be reasonably estimated. According to the revenue recognition process found within accrual accounting, the company should immediately recognize the $100,000 revenue generated by these transactions[2].

Figure 2.1 Journal Entry—Year One—Sales Made on Credit

Accounts Receivable	100,000		(increase an asset—debit)
Sales		100,000	(increase a revenue—credit)

ASSETS		=	LIABILITIES	+ STOCKHOLDERS EQUITY		
ACCOUNTS RECEIVABLE				CAPITAL STOCK	+ RETAINED EARNINGS	
					SALES	
DEBIT	CREDIT				DEBIT	CREDIT
100,000						100,000

BOTH SIDES OF THE EQUATION ARE EQUAL.

Assume further that the company's past history and other relevant information indicate to officials that approximately 7 percent of all credit sales will prove to be uncollectible (a very high percentage for illustration). An expense of $7,000 (7 percent of $100,000) is anticipated because only $93,000 in cash is expected from these receivables rather than the full $100,000.

The specific identity and the actual amount of these bad accounts will probably not be known for several months. No physical evidence exists at the time of sale to indicate which will become worthless (buyers rarely make a purchase and then immediately declare bankruptcy or leave town). For convenience, accountants wait until financial statements are to be produced before making their estimation of net realizable value. The necessary reduction is then recorded by means of an adjusting entry.

Question: This company holds $100,000 in accounts receivable but only expects to collect $93,000 based on the available evidence. The $7,000 reduction in the asset is an expense. When should the expense be recognized? These sales were made in Year One but the identity of the specific customers who fail to pay and the exact amounts to be removed will not be determined until Year Two. Should bad debt expense be recognized in the same year as the sales by relying on an estimate or delayed until the actual results are eventually finalized?

Answer: This situation illustrates how accrual accounting plays such a key role within U.S. GAAP. As discussed previously, the timing of expense recognition according to accrual accounting is based on the matching principle. Where possible, expenses are recorded in the same period as the revenues they helped generate. That guidance is clear. Thus, every company should handle uncollectible accounts in the same manner. The expected expense is the result of making sales to customers who ultimately will never pay. Because the revenue was reported at the time of sale in Year One, the related expense must also be recognized in that year. This handling is appropriate according to accrual accounting even though the $7,000 is only an estimated figure.

Based on U.S. GAAP, when the company produces financial statements at the end of Year One, an adjusting entry is made to (1) reduce the receivables balance to its net realizable value and (2) recognize an expense in the same period as the related revenue.

Figure 2.2 Adjusting Entry—End of Year One—Recognition of Bad Debt Expense for the Period

Bad Debt Expense	7,000		(increase an expense—debit)
Allowance for Doubtful Accounts		7,000	(increase a contra asset—credit)

ASSETS				= LIABILITIES	+ EQUITY	STOCKHOLDERS	
ACCOUNTS RECEIVABLE		ALLOWANCE FOR UNCOLLECTIBLE			CAPITAL STOCK	+ RETAINED EARNINGS	
Debit	Credit	Debit	Credit			– Bad Debt Expense	
						Debit	Credit
			7,000			7,000	

After this entry is made and posted to the ledger, the Year One financial statements contain the following information based on the adjusted T-account balances (assuming for convenience that no other sales were made on credit during the year):

Figure 2.3 Year One—Financial Statements

Income Statement (Partial) for Year One	
Revenue	
Sales	$100,000
Operating Expenses	
Bad Debt Expense	7,000
Balance Sheet (Partial) at End of Year One	
Current Assets	
Accounts Receivable	$100,000
Allowance for Doubtful Accounts	7,000
Accounts Receivable, Net	$93,000

From this information, anyone studying these financial statements for Year One should understand that an expense estimated at $7,000 was incurred this year because the company made sales that will never be collected. In addition, year-end accounts receivable total $100,000 but have an anticipated net realizable value of only $93,000. Neither the $7,000 nor the $93,000 figure is expected to be exact but the eventual amounts should not be materially different. This basic portrait provides decision makers with fairly presented information about the accounts receivables held by the reporting company.

Check Yourself

If in the example used above, the estimate had only been that 5% of the accounts would be uncollectible instead of 7%. What would be different on the financial statements from those show above?

A. Net income on the income statement would be higher (because bad debt expense is lower)

B. Revenues on the income statement would be higher (because sales are higher)

C. Net realizable amount of Accounts Receivable would be lower on the balance sheet (because the allowance would be higher)

D. The number of customers that owe the company will be lower due to more strict collection policies.

The answer is A. Because the estimate would be 5%, the allowance would be estimated at $5,000 instead of $7,000 and bad debt expense would also be lower and by lowering expenses, net income (revenue – expenses) goes up. Nothing changes for revenues or number of customers and the net realizable amount would be higher not lower.

Question: When financial statements are prepared, an expense must be recognized and the receivable balance reduced to net realizable value. However, in the above adjusting entry, why was the accounts receivable account not directly decreased by $7,000 to the anticipated balance of $93,000? This approach is simpler as well as easier to understand. Why was the $7,000 added to an allowance account? In reporting receivables, why go to the trouble of setting up a separate allowance?

Answer: When the company prepares this adjustment at the end of Year One, it does not yet know which accounts will fail to be collected. Officials are only guessing that $7,000 will prove worthless. Plus, on the date of the balance sheet, the company actually does hold $100,000 in accounts receivable. That figure cannot be reduced directly until the specific identity of the accounts to be written off has been determined. Utilizing a separate allowance allows the company to communicate the expected amount of cash to be collected while still maintaining a record of all balances in the accounts receivable T-account.

Key Takeaways

Sales and the ultimate decision that specific accounts receivable will never be collected can happen months apart. During the interim, bad debts are estimated and recorded on the income statement as an expense and on the balance sheet through an allowance account, a contra asset. In that way, the receivable balance is shown at net realizable value while expenses are recognized in the same period as the sale to correspond with the matching principle. When financial statements are prepared, an estimation of the uncollectible amounts is made and an adjusting entry recorded. Thus, the expense, the allowance account, and the accounts receivable are all presented properly according to U.S. GAAP.

[1]Some companies include both accounts on the balance sheet to explain the origin of the reported balance. Others show only the single net figure with additional information provided in the notes to the financial statements.

[2]Because the focus of the discussion here is on accounts receivable and their collectability, the recognition of cost of goods sold as well as the possible return of any merchandise will be omitted. Those topics are discussed in detail in later chapters.

2.2: Accounting for Uncollectible Accounts is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

2.3: The Problem with Estimations

Learning Objectives

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

1. Record the impact of discovering that a specific receivable is uncollectible.
2. Understand the reason that an expense is not recognized when a specific receivable is deemed to be uncollectible.
3. Recognize that estimated figures often prove to be erroneous but changes in previous year figures are not made if a reasonable estimate was made.

Question: The company in the illustration in the last section expects to collect an amount from its receivables that will not materially differ from $93,000. The related $7,000 expense is recorded in the same period as the revenue through an adjusting entry. What happens when an actual account is determined to be uncollectible? For example, assume that on March 13, Year Two, a $1,000 balance proves to be worthless. The customer dies, declares bankruptcy, disappears, or just refuses to make payment. This is not a new expense; $7,000 was already anticipated and recognized in Year One. It is merely the first discovery. How does the subsequent write-off of a receivable as being uncollectible affect the various T-account balances?

Answer: When an account proves to be uncollectible, the receivable T-account is decreased. The $1,000 balance is simply removed. It is no longer viewed as an asset because it does not have future economic benefit. Furthermore, the anticipated amount of bad accounts is no longer $7,000. Because this first worthless receivable has been identified and eliminated, only $6,000 remains in the allowance.

The following journal entry is made to **write off** this account. This entry is repeated whenever a balance is found to be worthless. No additional expense is recognized. The expense was estimated and recorded in the previous period based on applying accrual accounting and the matching principle.

Figure 2.4 Journal Entry during Year Two—Write-Off of Specific Account as Uncollectible

Allowance for Doubtful Accounts	1,000		(decrease a contra asset—debit)
Accounts Receivable		1,000	(decrease an asset—credit)

Note that both of these accounts are in the asset section and both are decreased. A decrease in a contra asset increases assets so that this entry does not change total assets or any other section of the accounting equation.

The two basic steps in the recording of doubtful accounts are:

1. The amount of bad accounts is estimated whenever financial statements are to be produced. An adjusting entry then recognizes the expense in the same period as the sales revenue. It also increases the allowance for doubtful accounts (to reduce the reported receivable balance to its anticipated net realizable value).
2. Subsequently, whenever a specific account is deemed to be worthless, the balance is removed from both the accounts receivable and the allowance for doubtful accounts T-accounts. The related expense has been recognized previously and is not affected by the removal of the uncollectible account. With no change to the expense there is no effect on the net income.

Check Yourself

In 2025, Dell Computer writes off an account receivable from Customer XYZ for 5,000 because XYZ has declared bankruptcy. Which of the following would NOT be true when Dell records this write off?

A. Dell's allowance account for uncollectible accounts will go down.

B. Dell's total assets will go down.

C. Dell's number of customers shown as owing Dell money will go down.

D. Dell's net income will not change because of the write off.

The answer is B. While the journal entry will debit the allowance account and make it go down and will credit Accounts Receivable to remove the amount owed by XYZ from the list and total of customers owing Dell money, this will not change Dell's total assets since the allowance and accounts receivable are both assets moving in the opposite direction. The bad debt expense and net income will also not be affected.

Question: In this illustration, at the end of Year One, the company estimated that $7,000 of its accounts receivable will ultimately prove to be uncollectible. However, in Year Two, that figure is likely to be proven wrong. The actual amount might well be $6,000 or $8,000 or many other numbers. When the precise figure is known, does a company return to its Year One financial statements and adjust them to this correct balance?
Should a company continue reporting an estimated figure once it has been shown to be incorrect?

Answer: According to U.S. GAAP, if a number is reported based on a reasonable estimation, any subsequent differences with actual amounts are **not** handled retroactively (by changing the previously released figures). For example, if uncollectible accounts here prove to be $8,000, the company does not adjust the balance reported as the Year One bad debt expense from $7,000 to $8,000. It continues to report $7,000 for that period even though that number is now known to be wrong[1.]

There are several practical reasons for the accountant's unwillingness to adjust previously reported estimations unless they were clearly unreasonable or fraudulent:

1. Most decision makers are well aware that many reported figures only present estimates. Discrepancies are expected and should be taken into consideration when making decisions based on numbers presented in a set of financial statements. In analyzing this company and its financial health, astute investors and creditors anticipate that the total of bad accounts will ultimately turn out to be an amount around $7,000 rather than exactly $7,000.
2. Because an extended period of time often exists between issuing statements and determining actual balances, most parties will have already used the original information to make their decisions. Knowing the exact number now does not allow them to undo those prior actions. There is no discernable benefit from having updated figures as long as the original estimate was reasonable.
3. Financial statements contain numerous estimations and nearly all will prove to be inaccurate to some degree. If exactness were required, correcting each of these previously reported figures would become virtually a never-ending task for a company and its accountants. Scores of updated statements might have to be issued before a "final" set of financial figures became available after several years. For example, the exact life of a building might not be known for fifty years. Decision makers want information that is usable as soon as possible. Speed in reporting is more important than absolute precision.
4. At least theoretically, half of the differences between actual and anticipated results should make the reporting company look better and half make it look worse. If so, the corrections needed to rectify all previous estimation errors will tend to offset and have little overall impact on a company's reported income and financial condition.

Thus, no change is made in financial figures that have already been released whenever a reasonable estimation proves to be wrong. However, differences that arise should be taken into consideration in creating current and subsequent statements. For example, if the Year One bad debts were expected to be 7 percent, but 8 percent actually proved to be uncollectible, the accountant might well choose to use a higher percentage at the end of Year Two to reflect this new knowledge.

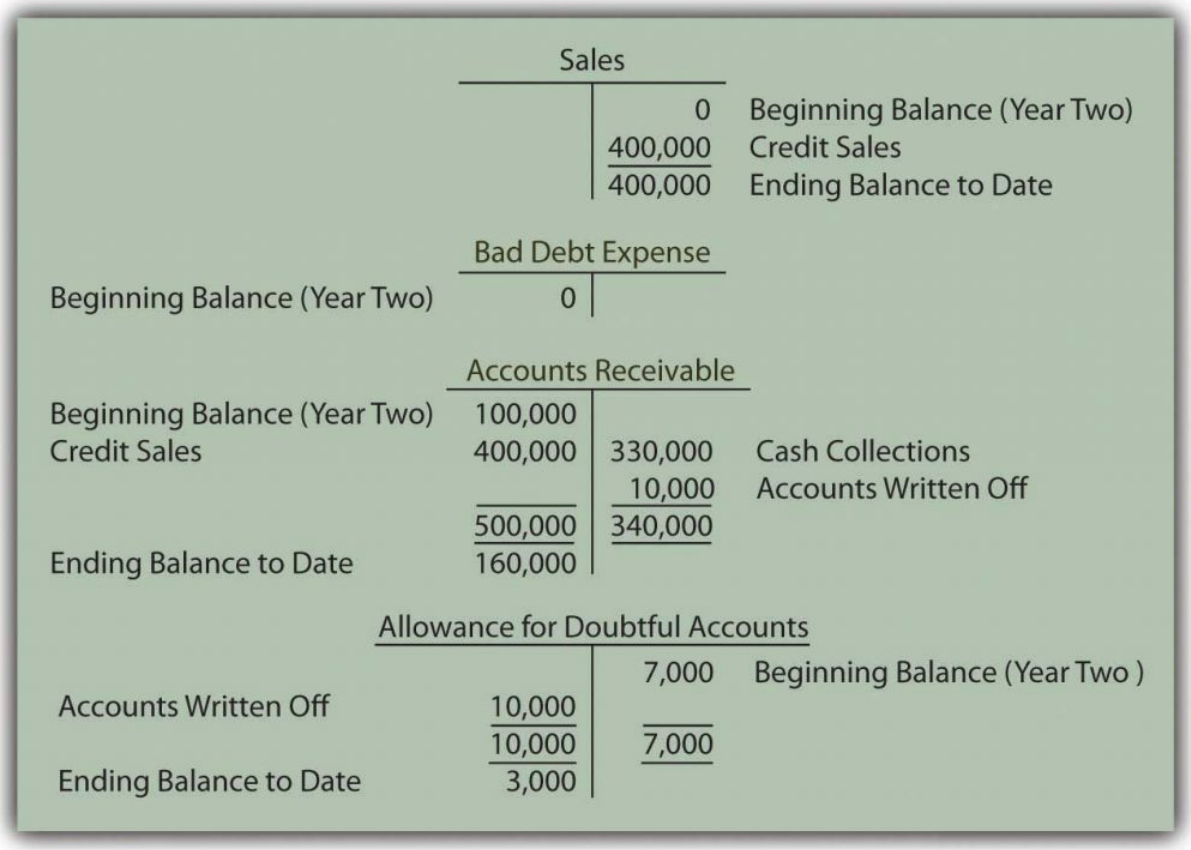
Question: To carry this illustration one step further, assume that $400,000 in new credit sales are made during Year Two while cash of $330,000 is collected. Uncollectible receivables totaling $10,000 are written off in that year. What balances appear in the various T-accounts at the end of the subsequent year to reflect sales, collections, and the write-offs of receivables?

Answer: Sales and bad debt expense were reported previously for Year One. However, as income statement accounts, both were closed out so as to begin Year Two with zero balances. They are temporary accounts. In contrast, accounts receivable and the allowance for doubtful accounts appear on the balance sheet and retain their ending figures going into each subsequent period. They are permanent accounts. These two T-accounts will still show $100,000 and $7,000 respectively at the beginning of Year Two.

Assuming that no adjustments have yet been made, these four accounts hold the following balances at the end of Year Two based on appropriate journal entries. Notice that the expense account remains at zero until the end-of-year estimation is made and

recorded.

Figure 2.5 End of Year Two—Sales, Receivables, and Bad Debt Balances



Sales

	0	Beginning Balance (Year Two)
	400,000	Credit Sales
	400,000	Ending Balance to Date

Bad Debt Expense

Beginning Balance (Year Two)	0	

Accounts Receivable

Beginning Balance (Year Two)	100,000		
Credit Sales	400,000	330,000	Cash Collections
		10,000	Accounts Written Off
	500,000	340,000	
Ending Balance to Date	160,000		

Allowance for Doubtful Accounts

		7,000	Beginning Balance (Year Two)
Accounts Written Off	10,000		
	10,000	7,000	
Ending Balance to Date	3,000		

Note that T accounts for income statement accounts start over at zero (are closed to retained earnings) in year 2 while balance sheet accounts (assets and contra assets) carry their balances forward to the new year. Accounts receivable and allowance would be on the asset or left side of the accounting equation and revenues and expenses would be on the right side.

Question: In the above T-accounts, the balances represent the account totals for Year Two prior to year-end adjusting entries. Why does a debit balance of $3,000 appear in the allowance for doubtful accounts prior to the recording of the necessary adjustment? When a debit balance is found in the allowance for doubtful accounts, what does this figure signify?

Answer: When the Year One financial statements were produced, $7,000 was estimated as the amount of the receivables that would eventually be identified as uncollectible. In Year Two, the actual total written off turned out to be $10,000. The original figure was too low by $3,000. We do not go back to the previous year and make the correction but rather the difference is now reflected by the debit remaining in the allowance account. Until the estimation for the new year is determined and recorded (considering the previous balance), the balance residing in the allowance account indicates a previous underestimation (an ending debit balance) or overestimation (a credit) of the amount of worthless accounts.

Key Takeaways

Bad debt expense is estimated and recorded in the period of sale to correspond with the matching principle. Subsequent write-offs of specific accounts do not affect the expense further. Rather, both the asset and the allowance for doubtful accounts are decreased at that time. If a written off account is subsequently collected, the allowance account is increased to reverse the previous impact. Estimation errors are to be anticipated; perfect predictions are rarely possible. When the amount of uncollectible accounts differs from the original figure recognized, no retroactive adjustment is made if a reasonable estimation was made. Decisions have already

been made by investors and creditors based on the original data and cannot be reversed. These readers of the statements should have understood that the information could not possibly reflect exact amounts.

[1]As will be discussed in subsequent chapters, previously issued financial statements are restated if found to contain material misstatements or in a few other specific circumstances. However, a difference between an actual figure and a reasonable estimation is not handled in this manner. In real life, determining whether a previously reported amount was a reasonable estimation can be the subject of intense debate.

2.3: The Problem with Estimations is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

2.4: Estimating the Amount of Uncollectible Accounts

Learning Objectives

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

1. Estimate and record bad debts when the percentage of sales method is applied.
2. Estimate and record bad debts when the percentage of receivables method is applied.
3. Explain the reason that bad debt expense and the allowance for doubtful accounts will normally report different figures.
4. Understand the purpose and maintenance of a subsidiary ledger.

Question: The final step in reporting receivables at the end of Year Two is the estimation of the bad accounts incurred during this second year and the preparation of the related adjusting entry. According to the ledger balances, sales on credit for the year were $400,000, remaining accounts receivable amount to $160,000, and a $3,000 debit sits in the allowance for doubtful accounts. No entry has yet been made for the Year Two bad debt expense. How is the estimation of uncollectible accounts derived each year?

Answer: Much of financial accounting is quite standardized. However, estimations can be made by any method that is considered logical. After all, it is an estimate. Over the decades, two different approaches have come to predominate when predicting the amount of uncollectible accounts. As long as company officials obtain sufficient evidence to support the reported numbers, either way can be applied.

Percentage of sales method. This alternative computes doubtful accounts expense by anticipating the percentage of sales (or credit sales) that will eventually fail to be collected. The percentage of sales method is sometimes referred to as an income statement approach because the only number being estimated (bad debt expense) appears on the income statement.

Percentage of receivables method. Here, the proper balance for the allowance for doubtful accounts is determined based on the percentage of ending accounts receivable that are presumed to be uncollectible. This method is labeled a balance sheet approach because the one figure being estimated (the allowance for doubtful accounts) is found on the balance sheet. A common variation used by many companies is the "**aging method**," which first categorizes all receivable balances by age and then multiplies each of the individual totals by a different percentage. Normally, a higher rate is used for accounts that are older because they are considered more likely to become uncollectible.

Question: Assume that this company chooses to use the percentage of sales method. All available evidence is studied by officials who come to believe that 8 percent of credit sales made during Year Two will prove to be worthless. In applying the percentage of sales method, what adjusting entry is made at the end of the year so that financial statements can be prepared?

Answer: According to the general ledger, the company generated $400,000 in credit sales during Year Two. If uncollectible accounts are expected to be 8 percent of that amount, the expense is reported as $32,000 ($400,000 × 8 percent). Bad debt expense (the figure estimated) must be raised from its present zero balance to $32,000.

Figure 2.6 Adjusting Entry for Year Two—Bad Accounts Estimated as a Percentage of Sales

Bad Debt Expense	32,000		(increase an expense—debit)
Allowance for Doubtful Accounts		32,000	(increase a contra asset—credit)

This adjustment increases the expense to the appropriate $32,000 figure, the proper percentage of the sales figure. However, the allowance account already held a $3,000 debit balance ($7,000 Year One estimation less $10,000 accounts written off). As can be seen in the T-accounts, the $32,000 recorded expense results in only a $29,000 balance for the allowance for doubtful accounts.

Figure 2.7 Resulting T-Accounts, Based on Percentage of Sales Method

Bad Debt Expense	
Beginning Balance	0
Expense Adjustment	32,000
Ending Balance	32,000

Allowance for Doubtful Accounts			
		7,000	Beginning Balance
Accounts Written Off	10,000	32,000	Expense Adjustment
	10,000	39,000	
		29,000	Ending Balance

After this adjustment, the figures appearing in the financial statements for Year Two are as follows:

Figure 2.8 Bad Accounts Estimated Based on 8 Percent of Sales

Income Statement (Partial) for Year Two	
Revenue	
Sales	$400,000
Operating Expenses	
Bad Debt Expense	32,000
Balance Sheet (Partial) at End of Year Two	
Current Assets	
Accounts Receivable	$160,000
Allowance for Doubtful Accounts	29,000
Accounts Receivable, Net	$131,000

Check Yourself

When increasing the allowance for uncollectible accounts and thereby reducing the net realizable amount of accounts receivable to be shown on the balance sheet, it is necessary to also:

A. Increase revenues

B. Decrease expenses

C. Increase expenses

D. Increase stockholders equity

The answer is C. A credit or increase to the contra asset account labelled Allowance for Doubtful or Uncollectible accounts is offset by debit or increase to the bad debt expense that also decreases net income and stockholders equity.

Question: How can bad debt expense be reported as $32,000 while the allowance for doubtful accounts shows a balance of only $29,000? Should those two numbers not always be identical in every set of financial statements?

Answer: In this introductory coverage, the difference in these accounts is assumed to be caused solely by the failure of previous estimations to be accurate. Last year, the doubtful accounts expense for this company was reported as $7,000 but accounts with balances totaling $10,000 proved to be uncollectible. Because companies do not go back to the statements of previous years to fix numbers when a reasonable estimate was made, the expense is $3,000 higher in the current period to compensate.

Mechanically, the underestimation still exists in the accounting records in Year Two. It creates the $3,000 debit in the allowance for doubtful accounts before the expense adjustment. Thus, although the current expense is $32,000 (8 percent of sales), the allowance is reported as only $29,000 (the $32,000 expense offset by the $3,000 debit balance remaining from the prior year).

Students are often concerned because these two reported numbers differ. However, both are merely estimates. The actual amount of worthless accounts is likely to be a number somewhat different from either $29,000 or $32,000. Therefore, the disagreement caused by the lingering impact of the $3,000 Year One underestimation should not be an issue as long as company officials believe that neither of the reported balances is materially misstated.

Question: The percentage of receivables method handles this process a bit differently. Assume that the Year Two adjusting entry has not yet been made so that bad debt expense remains at zero and the allowance for doubtful accounts still holds a $3,000 debit balance. However, the company has chosen to use the percentage of receivables method rather than the percentage of sales method. Officials have looked at all available evidence and come to the conclusion that 15 percent of ending accounts receivable ($160,000 × 15 percent or $24,000) is most likely to prove to be uncollectible. How does application of the percentage of receivables method affect the recording of doubtful accounts?

Answer: The percentage of receivables method (or the aging method if that variation is used) views the estimated figure of $24,000 as the proper total for the allowance for doubtful accounts. Thus, the accountant must turn the $3,000 debit balance residing in that contra asset account into the proper $24,000 credit. That change can only be accomplished by recognizing an expense of $27,000. Under the percentage of receivables method, after the adjustment has been recorded, the allowance balance will equal the estimate ($24,000). The expense is the amount needed to arrive at this allowance figure.

Figure 2.9 Adjusting Entry for Year Two—Bad Accounts Estimated as a Percentage of Receivables

Bad Debt Expense	27,000		(increase an expense—debit)
Allowance for Doubtful Accounts		27,000	(increase a contra asset—credit)

As shown in the T-accounts below, this entry successfully changes the allowance from a $3,000 debit balance to the desired $24,000 credit. Because bad debt expense had a zero balance prior to this entry, it is now based solely on the $27,000 amount needed to establish the proper allowance.

Figure 2.10 Resulting T-Accounts, Based on Percentage of Receivables Method

Allowance for Doubtful Accounts			
		7,000	Beginning Balance
Accounts Written Off	10,000	27,000	Expense Adjustment
	10,000	34,000	
		24,000	Ending Balance

Bad Debt Expense	
Beginning Balance	0
Expense Adjustment	27,000
Ending Balance	27,000

After this adjusting entry, the figures appearing in the financial statements for Year Two are as follows:

Figure 2.11 Bad Accounts Estimated Based on 15 Percent of Receivables

Income Statement (Partial) for Year Two	
Revenue	
Sales	$400,000
Operating Expenses	
Bad Debt Expense	27,000
Balance Sheet (Partial) at End of Year Two	
Current Assets	
Accounts Receivable	$160,000
Allowance for Doubtful Accounts	24,000
Accounts Receivable, Net	$136,000

Once again, the difference between the expense ($27,000) and the allowance ($24,000) is $3,000 as a result of the estimation being too low in the prior year. The current year expense must be higher.

Either approach can be used as long as adequate support is generated for the numbers reported. They are just two ways to estimate the effect of bad debts. However, financial accounting does stress the importance of consistency to help make the numbers comparable from year to year. Once a method is selected, it normally must continue to be used in all subsequent periods.

Under the percentage of sales method, the expense account is aligned with the volume of sales. In applying the percentage of receivables method, determining the uncollectible portion of ending receivables is the central focus. Regardless of the approach, both bad debt expense and the allowance for doubtful accounts are simply the result of estimating the final outcome of an uncertain event—the collection of accounts receivable.

Check yourself

Which of the following is a correct statement about the percent of receivables method of estimating the allowance for doubtful accounts?

A. It is sometimes referred to as the income statement approach because it focuses on the amount of bad debt expense recorded.

B. It uses a different journal entry to record the write off of accounts receivable than other methods.

C. It requires correction to earlier estimations be made in the same period as the original estimation.

D. The balance in the allowance for doubtful accounts account is essential to making the adjusting entry.

The answer is D. The percentage of receivables method focuses on calculating what the allowance for doubtful accounts balance should be and then increasing it or decreasing it from what it was before adjustment to what it should be. The amount of debit or credit to the allowance will be offset by the opposite to the bad debt expense.

Question: A company such as Dell Inc. must have thousands or even hundreds of thousands of separate receivables. The accounts receivable T-account maintains the total dollar amount owed to the company but does not indicate the balance due from each individual customer. How does an accounting system monitor all the specific receivable amounts? That has to be essential information for any organization for billing and collection purposes.

Answer: As indicated, a general ledger account only reflects the total at the present time. In many cases, as with accounts receivable, the composition of that balance is also important information. For those T-accounts, the accounting system can be expanded to include a **subsidiary ledger** to maintain data about the various individual components making up the account total.

In the previous illustration, the company reports $160,000 as the total of its accounts receivable at the end of Year Two. A separate subsidiary ledger should be in place to monitor the amounts owed by each customer (Mr. A, Ms. B, and so on). The general ledger figure is used whenever financial statements are to be produced. The subsidiary ledger allows the company to access individual account balances so that appropriate action can be taken if specific receivables grow too large or become overdue.

When a subsidiary ledger is maintained, the accounting system can be programmed so that each entry into the designated general ledger T-account requires an immediate parallel increase or decrease to the appropriate individual account. Thus, a $75 sale on credit to Mr. A raises the overall accounts receivable total in the general ledger by that amount while also increasing the balance listed for Mr. A in the subsidiary ledger.

Subsidiary ledgers can be utilized in connection with any general ledger account where the availability of component information is helpful. Other than accounts receivable, they are commonly set up for inventory, equipment, and accounts payable. As might be imagined, big companies maintain subsidiary ledgers for virtually every T-account, whereas small companies are likely to limit use to accounts receivable and—possibly—a few other large balances.

Before computer systems became common, keeping the total of thousands of individual accounts in a subsidiary ledger in agreement with the corresponding general ledger T-account balance was an arduous task. Mechanical errors (mathematical problems as well as debit and credit mistakes) tended to abound. However, current electronic systems are typically designed so that the totals reconcile automatically.

Key Takeaways

Each year, an estimation of uncollectible accounts must be made as a preliminary step in the preparation of financial statements. Some companies use the percentage of sales method, which calculates the expense to be recognized, an amount which is then added to the allowance for doubtful accounts. Other companies use the percentage of receivable method (or a variation known as the aging method). It determines the ending balance for the allowance. The reported expense is the amount needed to adjust the allowance to this ending total. Both methods provide no more than an approximation of net realizable value based on the validity of the percentages that are applied.

2.4: Estimating the Amount of Uncollectible Accounts is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

2.5: End-of-Chapter Exercises

Questions (for review not homework)

1. Define “accounts receivable.”
2. How is the “net realizable value” of accounts receivable determined?
3. Name three factors a company might consider when trying to determine the amount of accounts receivable that will be ultimately collected.
4. What does the account “allowance for doubtful accounts” represent?
5. Define “contra account.”
6. When is bad debt expense recorded?
7. Why do companies set up the allowance for doubtful accounts instead of just decreasing accounts receivable for any expected uncollectible balances?
8. What entry does a company make to write off a specific account that has proven to be uncollectible?
9. Give two reasons why accountants do not restate prior year statements when estimations are not exact.
10. Name the two most popular approaches to estimating uncollectible accounts and briefly explain each.
11. What is the purpose of a company having an accounts receivable subsidiary ledger?

True or False (For review not for homework)

1. ____ Companies use two separate accounts in order to report accounts receivable at its net realizable value.
2. ____ Bad debt expense is reported on the balance sheet as a contra account to accounts receivable.
3. ____ The matching principle says that expenses should be recorded the same period as the revenues they help generate.
4. ____ The net accounts receivable number on the balance sheet represents the exact amount the company will collect in cash.
5. ____ All companies perform their estimation of uncollectible accounts in the same manner.
6. ____ Frequently, bad debt expense and the ending balance in the allowance for doubtful accounts will differ.
7. ____ The older a receivable, the less likely it is to be collected.
8. ____ To make statements more accurate, bad debt expense is recorded when a specific account is deemed uncollectible and written off.

Multiple Choice (For review not for homework)

1. Which of the following would **not** be used to help a company determine the net realizable value of its accounts receivable?
    1. Industry averages and trends
    2. The company’s ability to pay its own debts
    3. Current economic conditions
    4. Efficiency of the company’s collection procedures
2. Which principle states that expenses should be recorded in the period in which they help generate revenues?
    1. Matching principle
    2. Going concern principle
    3. Cost/benefit analysis
    4. Measurement principle
3. SunFun Company manufactures lawn furniture that is sold to retailers like big box home improvement stores. During October 20X1, SunFun sold furniture to Home Place on account in the amount of $40,000. At the end of 20X1, the balance was still outstanding. In January 20X2, SunFun decided to write off this particular account as it did not appear the balance would ever be collected. Choose the correct journal entry for this transaction below.
    1. Debit allowance for doubtful accounts 40,000 and credit accounts receivable 40,000.
    2. Debit bad debt expense 40,000 and credit allowance for doubtful accounts 40,000

3. Debit bad debt expense 40,000 and credit accounts receivable 40,000

4. Debit cash 40,000 and credit accounts receivable 40,000

4. Ornate Inc. ended 20X3 with $400 in allowance for bad debts. In 20X4, Ornate wrote off $360 in accounts receivable that appear to be uncollectible. At the end of 20X4, Ornate recorded bad debt expense of $330. What is the balance in the allowance for doubtful accounts at the end of 20X4?
   1. $370
   2. $730
   3. $60
   4. $690
5. Gladson Corporation accrues bad debt expense using the percentage of sales method. At the end of the year, Gladson has $450,000 in accounts receivable and $4,000 (credit balance) in its allowance for doubtful accounts before any entry is made for bad debts. Sales for the year were $1,900,000. The percentage that Gladson has historically used to calculate bad debts is 1 percent of sales. Which of the following is true?
   1. Gladson's bad debt expense for the year is $500.
   2. The percentage of sales method is designed to achieve an accurate balance sheet presentation of the net realizable value of accounts receivable.
   3. Gladson would report an allowance for doubtful accounts of $23,000.
   4. Gladson would need to make an adjustment because the $4,000 remaining balance in the allowance for doubtful accounts indicates they estimated wrong last year.

Problems For Homework

1. Nuance Company had net credit sales for the year of $1,050,000. Nuance estimates that 1 percent of its net credit sales will never be collected.
   1. Prepare the entry to record Nuance's bad debt expense for the year. (Using T accounts might help think it through)
   2. Nuance had accounts receivable of $200,000 at the end of the year. Show how the net accounts receivable balance would be reported on the balance sheet. Assume that the allowance for doubtful accounts had a beginning balance of a credit of $1,000.
   3. Why is A/R shown at net rather than just showing the full amount?
2. Assume that Nuance in number 1 above used the percentage of receivables method to estimate uncollectible accounts instead of the percentage of sales method. Nuance assumes that 3 percent of accounts receivable will never be collected.
   1. Prepare the entry to record Nuance's bad debt expense for the year. (Using T accounts will be helpful)
   2. Show how the net accounts receivable balance would be reported on the balance sheet. Assume that the allowance for doubtful accounts had a beginning balance of $2,000 debit.
   3. Why are companies allowed to choose between methods of estimating bad debts instead of being required to use one method?
3. Ray's GamePlace sells all the hottest gear and video games. On January 1, 20X7, Ray's had the following account balances:

Accounts Receivable	$27,000
Less Allowance for Doubtful Accounts	(4,000)
Net Accounts Receivable	$23,000

1. Put the beginning balances in the appropriate T accounts.
2. During 20X7, Ray's wrote off $5,000 in uncollectible accounts. Prepare this journal entry and post in appropriate T accounts.
3. During 20X7, Ray's made credit sales of $148,000 and collected $116,000 of accounts receivable. Prepare these journal entries and post to the T accounts.
4. At the end of the year, Ray's determines that approximately 5 percent of its ending accounts receivable balance will not be collected. Ray's uses the percentage of receivables method of calculating bad debts. Make the necessary journal entry in journal format and in the T accounts.

4.

THE HERSHEY COMPANY
CONSOLIDATED BALANCE SHEETS
(in thousands, except share data)

December 31,	2024	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 730,746	$
Accounts receivable—trade, net	800,402	
Inventories	1,254,094	

Hershey Company's accounts receivable-trade in the Consolidated Balance Sheet is presented net of allowances for bad debts of $40,487 on December 31, 2024.

The above information was provided by Hershey Company in its financial statements for year ended December 31, 2024. Answer the following about what is being communicated by the Hershey Company about accounts receivable:

a. What is the total amount owed by customers of Hershey for their purchases from Hershey as of the end of 2024?

b. What is the dollar amount that Hershey does not plan to collect based on their estimate of bad debts at the end of 2024?

c. What percentage of the total accounts receivable does Hershey plan on not collecting based on their estimate at the end of 2024? Round to a tenth of a percent.

d. When starting 2025, what amount should Hershey use as the beginning balance in the Accounts Receivable T account?

Comprehensive Problem

This problem will carry through several chapters, building in difficulty. It allows students to continuously practice skills and knowledge learned in previous chapters.

Recall in Chapter 1 that Leon Jackson started Webworks, a Web site design and maintenance firm. You helped him prepare his adjusted trial balance for June. We are going to continue with this problem, preparing Webworks financial statements for July.

Here are Webworks financial statements as of June 30.

Webworks
Income Statement
As of June 30

Revenue	$1,050
Expenses	(380)
Earning before Tax	670
Tax Expense	(200)
Net Income	$ 470

Webworks
Stmt. of Retained Earnings
As of June 30

Retained Earnings, June 1	$0
Net Income	470
Retained Earnings, June 30	$470

Webworks
Balance Sheet
June 30

Assets		**Liabilities**	
Current		**Current**	
Cash	$9,800	Accounts Payable	$280
Accounts Receivable	450	Salaries Payable	100
Supplies Inventory	100	Unearned Revenue	500
Total Current Assets	$10,350	Total Current Liabilities	$880
Noncurrent		**Noncurrent**	
Equipment	$3,000	Notes Payable	$10,000
		Owners' Equity	
		Capital Stock	$2,000
		Retained Earnings	470
		Total Owners' Equity	$2,470
Total Assets	$13,350	Total Liabilities & Owners' Equity	$13,350

The following events occur during July:

a. Webworks purchases additional equipment for $4,000 cash.

b. Webworks purchases supplies worth $90 on account.

c. Webworks pays off its accounts payable and salaries payable from June.

d. Webworks starts and completes four more Web sites and bills clients for $1,800.

e. Recall that in June, Webworks received $500 in advance to design a restaurant Web site. Webworks completes this site during July.

f. Webworks collects $1,200 in accounts receivable.

g. Webworks pays Nancy $500 for her work during the first three weeks of July.

h. Webworks receives $200 in advance to work on a Web site for a local dry cleaner and $300 in advance to work on a Web site for a local vet. Work will not begin on the Web sites until August.

i. Leon's parents have decided to charge rent after seeing how successful his business is and how much space it is taking up in their house. They all agree that rent will be $200 per month. Webworks pays $600 for July, August, and September.

j. Webworks pays taxes of $300 in cash.

Required:

A. Prepare journal entries for the above events.

B. Post the journal entries to T-accounts.

C. Prepare an unadjusted trial balance for Webworks for July.

D. Prepare adjusting entries for the following and post them to your T-accounts.

k. Webworks owes Nancy $200 for her work during the last week of July.

l. Leon's parents let him know that Webworks owes $150 toward the electricity bill. Webworks will pay them in August.

m. Webworks determines that it has $50 worth of supplies remaining at the end of July.

n. Prepaid rent should be adjusted for July's portion.

o. In June, Webworks designed a site for Pauline Smith, but has not yet been fully paid. Leon believes the company may not be able to collect all of its accounts receivable. A local CPA helps Leon determine that similar businesses report an allowance for bad debt at an average of 10 percent of their accounts receivable. Webworks will use this method. Make the bad debt adjustment for Webworks.

E. Prepare an adjusted trial balance.

F. Prepare financial statements for July.

2.5: End-of-Chapter Exercises is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

CHAPTER OVERVIEW

3: How Does a Company Gather Information about Its Inventory?

3.1: Determining and Reporting the Cost of Inventory
3.2: Perpetual and Periodic Inventory Systems
3.3: The Calculation of Cost of Goods Sold
3.4: Determining Inventory on Hand
3.5: The Necessity of Adopting a Cost Flow Assumption
3.6: The Selection of a Cost Flow Assumption for Reporting Purposes
3.7: Applying Cost Flow Assumptions to Determine Reported Inventory Balances
3.8: Reporting Inventory at the Lower-of-Cost-or-Market
3.9: End-of-Chapter Exercises

3: How Does a Company Gather Information about Its Inventory? is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

3.1: Determining and Reporting the Cost of Inventory

Learning Objectives

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

1. Understand that inventory is recorded initially at its historical cost.
2. Provide the guiding rule for identifying expenditures and other costs that must be capitalized in the reporting of inventory.
3. Explain the rationale for offering a cash discount for payments made within a specified period of time as well as the accounting for such cost reductions.

Question: The asset section of the February 1, 2025, balance sheet produced by Best Buy Co. Inc. reports net accounts receivable of $1 billion. Based on discussions in the previous chapter, a decision maker should know that this figure reflects net realizable value—the estimation by officials of the amount of cash that will be collected from the receivables owed to the company by its customers. Knowledge of financial accounting rules allows an individual to understand the information being conveyed in a set of financial statements.

As is common, the next account that appears on Best Buy's balance sheet is inventory, all the items held on that date that were acquired for sales purposes—televisions, cameras, computers, and the like. The figure disclosed by the company for this asset is $5.1 billion. Does this balance also indicate net realizable value—the cash expected to be generated from the company's merchandise—or is different information reflected? On a balance sheet, what does the amount reported for inventory represent?

Answer: The challenge of analyzing the various assets reported by an organization would be reduced substantially if every monetary number disclosed the same basic information, such as net realizable value. However, over the decades, virtually every asset has come to have its own individualized method of reporting, one created to address the special peculiarities of that account. Thus, the term "presented fairly" often has a totally different meaning for each asset. Reporting accounts receivables, for example, at net realizable value only has rare impact on the approach that has come to be accepted for **inventory.** To review, **inventory** is the items purchased or made by a business to sell to their customers. For example, a boat dealer would have boats purchased or made as part of their inventory. A fishing business might buy a boat to be used in their business but it would not be inventory because it would not be for sale to customers (who are more interested in buying fish, correct?).

The reporting of **inventory** is especially unique because the reported balance is not as standardized as with accounts receivable. For example, under certain circumstances, the balance sheet amount shown for inventory actually can reflect net realizable value. Several other meanings for the reported balance, though, are more likely. The range of accounting alternatives encountered in analyzing this asset emphasizes the importance of reading the notes included with financial statements rather than fixating on a few reported numbers alone. Without careful study of the additional disclosures, a decision maker simply cannot know what Best Buy means by the $5.1 billion figure reported for "merchandise inventories." Another company could show the identical number for its inventory and still be reporting considerably different information.

Question: Accounting for inventory seems particularly complicated. A logical approach to the coverage here is needed. In coming to understand the reporting methodology that is utilized with this asset, where should the discussion begin?
What is the first issue that an accountant faces in establishing an appropriate balance for inventory so that it is reported in conformity with U.S. GAAP?

Answer: The study of inventory and its financial reporting should begin by defining "cost." In acquiring each item, officials make the decision to allocate a certain amount of scarce resources. What did the company expend to obtain its inventory? That is a reasonable question to address.

To illustrate, assume that a sporting goods company (Rider Inc.) acquires a new bicycle (Model XY-7) to sell. Rider's accounting system should be designed to determine the cost of this piece of inventory, the sacrifice that the company chose to make to obtain

the asset. Assume that a price of $250 was charged by the manufacturer (Builder Company) for the bicycle and the purchase was made by Rider on credit. Rider spends another $9 to transport the item from the factory to one of its retail stores and $6 to have the pieces assembled so that the bicycle can be displayed in the salesroom for customers to examine.

In accounting for the acquisition of inventory, cost includes all normal and necessary amounts incurred to get the item into the condition and position to be sold. Hence, by the time this bicycle has reached Rider's retail location and been readied for sale, its cost to the sporting goods company is $265.

Figure 3.1 Maintaining a Cost for Inventory Item

Rider, Inc.
Subsidiary Ledger
Bicycle—Model XY-7

Invoice Price—Charged by Manufacturer	$250	
Transportation-in—Delivery to Company's Store	9	
Assembly	6	
Cost of Inventory (Bicycle)	$265	Quantity—1

The charges for delivering this merchandise and assembling the parts were included in the cost of the asset (the traditional term for adding a cost to an asset account is **capitalization**). Both of these expenditures were properly viewed as normal and necessary to get the bicycle into the condition and position to be resold. Interestingly, any amount later expended to transport the merchandise from the store to a buying customer is recorded as an expense rather than as an asset because that cost is incurred after the sale takes place. At that point, no further future value exists since the merchandise has already been sold.

Occasionally, costs arise where the "normal and necessary" standard may be difficult to apply. To illustrate, assume that the president of a store that sells antiques buys a 120-year-old table for resell purposes. When the table arrives at the store, another $300 must be spent to fix a scratch cut across its surface. Should this added cost be capitalized (added to the reported balance for inventory) or expensed? The answer to this question is not readily apparent and depends on ascertaining all relevant facts. Here are two possibilities.

Scenario one: The table was acquired by the president with the knowledge that the scratch already existed and needed to be fixed prior to offering the merchandise for sale. In that case, repair is a normal and necessary activity to put the table into condition necessary to be sold. The $300 is capitalized, recorded as an addition to the cost of the inventory.

Scenario two: The table was bought without the scratch but was damaged when first moved into the store through an act of employee carelessness. The table must be repaired but the scratch was neither normal nor necessary. This cost could have been avoided. The $300 is not capitalized but rather reported as a repair expense by the store.

If the accountant cannot make a reasonable determination as to whether a particular cost qualifies as normal and necessary, the conservatism principle that underlies financial accounting requires the $300 to be reported as an expense. When in doubt, the alternative that makes reported figures look best is avoided so that decision makers are not encouraged to be overly optimistic about the company's financial health and future prospects.

Check Yourself

RST, Inc. purchases 100 hockey sticks for resale purposes in its retail store. The invoice from the manufacturer shows the total for the sticks was $7,800. In addition, RST paid a freight company $300 to bring the hockey sticks from the manufacturer to RST's store. When accounting for the inventory of hockey sticks each hockey stick will be treated as if it has a cost of what amount?

A. $81

B. $78

C. $100

D. $300

The answer is A. The cost of each hockey stick is $78 (7,800/100) plus $3 (300/100) = $81.

Question: When inventory is acquired, some sellers are willing to accept a reduced amount to encourage fast payment—an offer that is called a cash discount (or a sales discount or purchases discount depending on whether the seller or the buyer is making the entry). Cash becomes available sooner so that the seller can quickly put it back into circulation to make more profits. In addition, the possibility that a receivable will become uncollectible is reduced if the balance due is not allowed to get too old. Tempting buyers to make quick payments to reduce their cost is viewed as a smart business practice by many sellers.

To illustrate, assume the invoice received by the sporting goods company (Rider) for the above bicycle indicates the proper $250 balance due but also includes the notation: 2/10, n/45. What message is being conveyed by the seller? How do cash discounts impact the reporting of inventory?

Answer: Sellers—such as Builder Company in this example—can offer a wide variety of discount terms to encourage speedy payment. One such as 2/10, n/45 is generally read "two ten, net 45." It informs the buyer that a 2 percent discount can be taken if the invoice is paid by the tenth day. Any net amount that remains unpaid (after merchandise returns or partial cash payments) is due on the forty-fifth day. Rider has the option to pay $245 for the bicycle within ten days of receiving the invoice by taking advantage of the $5 discount ($250 × 0.02). Or the sporting goods company can wait until the forty-fifth day but then is responsible for the entire $250.

Many companies automatically take advantage of these discounts as a matter of policy because of the high rate of interest earned. If Rider does not submit the money in ten days, it must pay an extra $5 in order to hold onto $245 for an additional thirty-five days. This delay equates to a 2.04 percent interest rate over just that short period of time ($5/$245 = 2.04 percent [rounded]). There are over ten thirty-five-day periods in a year. Paying the extra $5 is the equivalent of an annual interest rate in excess of 21 percent.

365 days per year/35 days holding the money = 10.43 time periods per year
2.04% (for 35 days) × 10.43 time periods equals a 21.28% rate for a year

That substantial rate of interest is avoided by making the early payment, a decision chosen by most companies unless they are experiencing serious cash flow difficulties.

Assuming that Rider avails itself of the discount offer, the capitalized cost of the inventory is reduced to $260. Note the discount only applies to the amount owed to the manufacturer and not the transportation in and assembly which were paid to different suppliers with different terms/discounts.

Figure 3.2 Cost of Inventory Reduced by Cash Discount

Rider, Inc.
Subsidiary Ledger
Bicycle—Model XY-7

Invoice Price—Charged by Manufacturer	$250
Discount Taken—2/10, n/45	(5)
Transportation-in from Seller to Store	9
Assembly	6
Cost of Inventory (Bicycle)	$260 Quantity—1

Check Yourself

Looking back at our earlier check yourself with RST, Inc. lets say that RST has terms with the manufacturer of the hockey sticks that indicate 1/10 Net 30 applies to the purchase of the hockey sticks and not to the freight. RST pays within the discount period. What would be the cost of each individual hockey stick for accounting purposes?

A. $78

B. $80.22

C. $81

D. $77.22

The answer is B. The $81 from the last check yourself subtract .78 or 78 x 1% = $80.22

Key Takeaways

Any discussion of the reporting of inventory begins with the calculation of cost, the amount spent to obtain the merchandise. Cost encompasses all payments that are considered normal and necessary to get the merchandise into the condition and possession to be sold. Any other expenditures are expensed as incurred. Cash discounts are often offered to buyers to encourage quick payment. Taking advantage of such discounts is usually a wise decision because they effectively save interest at a relatively high rate and will affect the cost of the inventory recorded.

3.1: Determining and Reporting the Cost of Inventory is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

3.2: Perpetual and Periodic Inventory Systems

Learning Objectives

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

1. Identify the attributes as well as both the advantages and disadvantages of a perpetual inventory system.
2. Identify the attributes as well as both the advantages and disadvantages of a periodic inventory system.
3. Provide journal entries for a variety of transactions involved in the purchase of inventory using the perpetual inventory system.

Question: There is a difference between a periodic and perpetual system for tracking inventory with a preference for the perpetual system being most common. A perpetual system—which frequently relies on bar coding and computer scanning—maintains an ongoing record of all items present. How is the recording of an inventory purchase carried out in a perpetual system?

Answer: When a perpetual inventory system is in use, all additions and reductions are monitored in the inventory T-account. Thus, theoretically, the balance found in that general ledger account at any point in time will be identical to the merchandise physically on hand. In actual practice, recording mistakes as well as losses such as theft and breakage create some (hopefully small) discrepancies. Consequently, even with a perpetual system, the inventory records must be reconciled occasionally with the items actually present to reestablish accuracy.

In a perpetual inventory system, the maintenance of a separate subsidiary ledger showing data about the individual items on hand is essential. On February 1, 2025, Best Buy reported inventory totaling $5.1 billion. However, the company also needs specific information as to the quantity, type, and location of all televisions, cameras, computers, and the like that make up this sum. That is the significance of a perpetual system; it provides the ability to keep track of the various types of merchandise. The total cost is available in the inventory T-account but detailed data about the composition (the quantity and frequently the cost) of merchandise physically held is maintained in a subsidiary ledger where an individual file can be available for each item.

Below are the journal entries that Rider Inc. (the sporting goods company) makes for its purchase of a bicycle to sell (Model XY-7) if a perpetual inventory system is utilized. A separate subsidiary ledger file (such as shown previously) is also established to record the quantity and cost of the specific items on hand.

The assumption is made here that the transportation and assembly charges are paid in cash. Furthermore, the actual purchase is initially on credit with payment made during the ten-day discount period. The bicycle is recorded at $250 and then reduced by $5 at the time the discount is taken. This approach is known as the “gross method of reporting discounts.” As an alternative, companies can choose to anticipate taking the discount and simply make the initial entry for the $245 expected payment. This option is referred to as the “net method of reporting discounts.”

Purchased Bicycle (Model XY-7)—Recorded Using Gross Method

Inventory	250		(increase an asset—debit)
Accounts Payable		250	(increase a liability—credit)

Paid for Bicycle after Taking 2 Percent Discount

Accounts Payable	250		(decrease a liability—debit)
Cash		245	(decrease an asset—credit)
Inventory		5	(decrease an asset—credit)

Payment Made to Transport Bicycle to Retail Store

Inventory	9		(increase an asset—debit)
Cash		9	(decrease an asset—credit)

Payment Made to Assemble Bicycle for Display Purposes

Inventory	6		(increase an asset—debit)
Cash		6	(decrease an asset—credit)

Figure 3.3 Rider Inc.—Journal Entries—Perpetual Inventory System[1]

After posting these entries, the inventory T-account in the general ledger reports a net cost of $260 ($250 – $5 + $9 + $6) and the separate subsidiary ledger shown previously indicates that one Model XY-7 bicycle is on hand with a cost of $260.

ASSETS		
INVENTORY		
	Debit (increase)	Credit (decrease)
	250	5
	9	
	6	
Balance	250 + 9 + 6 – 5 = 260	Add up the debits (increases) and subtract credits (decreases)

Check Yourself

Which of the following is correct with regard to recording the journal entry to pay for inventory within the discount period with terms that allow a discount?

A. It increases the assets.

B. It decreases expenses.

C. It decreases inventory.

D. It increases expenses.

C is the answer. Payment for purchases of inventory on credit that include taking a discount are recorded by a debit to accounts payable and two credits – one to inventory (decreases) and one to cash.

Question: In a periodic system, no attempt is made to keep an ongoing record of a company's inventory. Instead, the quantity and cost of merchandise is only determined periodically as a preliminary step in preparing financial statements. How is the actual recording of an inventory purchase carried out in a periodic system?

Answer: If a company uses a periodic inventory system, neither the cost nor the quantity of the specific inventory items on hand is monitored. These data are not viewed by company officials as worth the cost and effort required to gather it. However, transactions still take place and a record must be maintained of the costs incurred. This information is eventually used for financial reporting but also—more immediately—for control purposes. Regardless of the recording system, companies want to avoid spending unnecessary amounts on inventory as well as tangential expenditures, such as transportation and assembly. If the accounting system indicates that a particular cost is growing too rapidly, alternatives can be investigated before the problem becomes serious. Periodic systems are designed to provide such information through the use of separate general ledger T-accounts for each cost incurred.

Q*uestion*: *Given the availability of sophisticated computers, do any companies still use periodic inventory systems? With bar coding and the advanced state of technology, is periodic inventory simply an antiquated system that is no longer found in actual practice?*

Answer: Obviously, in this computer age, perpetual inventory systems have come to dominate because they provide valuable information to company officials. However, some types of businesses will simply never change from the simplicity of a periodic system.

A beauty salon or barber shop, for example, where services are rendered but a small amount of inventory is kept on hand for occasional sales, would certainly not need to absorb the cost of a perpetual system. Visual inspection can alert the employees as to the quantity of inventory on hand.

Restaurants, sandwich shops, ice cream stores, and the like might well choose to use a periodic system because purchasing usually takes place at the establishment where quantities are easy to observe and manage. The information provided by a perpetual system does not necessarily provide additional benefit.

"Dollar stores," sell large quantities of low-priced merchandise. Goods tend to be added to a store's inventory as they become available rather than based on any type of managed inventory strategy. Again, officials must decide whether keeping up with the inventory on hand will impact their decision making. If not, the cost of a perpetual system is unnecessary.

Perhaps, most importantly, some companies often use a hybrid system where the units on hand and sold are monitored with a perpetual system. However, to reduce cost, the dollar amounts are only determined using a periodic system at the end of the year to prepare financial statements. In that way, the company gains valuable information (the number of units on hand) at a reduced cost.

Key Takeaways

Perpetual inventory systems are designed to maintain updated figures for inventory as a whole as well as for individual items. Separate subsidiary ledger accounts show the balance for each type of inventory so that company officials can know the size, cost, and composition of the merchandise. A periodic system is cheaper to operate because no attempt is made to monitor inventory balances (in total or individually) until financial statements are to be prepared. A periodic system does allow a company to control costs by keeping track of the individual inventory costs as they are incurred.

[1]If the net method is applied by Rider Inc. the initial purchase entry is recorded as $245. Later, if the discount is not taken, the additional cost of $5 is recorded as a loss or an expense rather than as a capitalized cost of the inventory because it is not normal and necessary to pay the extra amount.

3.2: Perpetual and Periodic Inventory Systems is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

3.3: The Calculation of Cost of Goods Sold

Learning Objectives

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

1. Explain the meaning of the FOB point in connection with an inventory purchase and its impact on the recording of the transaction.
2. Identify the time at which cost of goods sold is computed in a perpetual inventory system as well as the recording made at the time of sale.
3. Understand the necessity of taking a physical inventory count.

Question: Rider Inc. (the sporting goods company) buys a bicycle for resell purposes and records the transaction using either a perpetual or periodic system. When should an inventory purchase be recorded? Assume, for example, that Builder Company (the manufacturer of this bicycle) is located in Wisconsin, whereas the retail store operated by Rider is in Kentucky. Delivery takes several days at a minimum. The precise moment for recording the transaction is probably not critical except near the end of the year when the timing of journal entries can impact the balances to be included on the financial statements.

To illustrate, assume this bicycle is ordered by Rider Inc. on December 27 of Year One. It is shipped by Builder Company from Wisconsin on December 29 of Year One and arrives at the retail store on January 4 of Year Two. When Rider produces its financial statements for Year One, should the inventory cost and related payable be included even though the bicycle was not physically received until Year Two?

Answer: Documents prepared in connection with shipments made from a seller to a buyer are normally marked with an "FOB" point. FOB stands for "Free On Board" (a traditional maritime term that has gained a wider use over the years) and indicates when legal title to property is transferred. That is the moment that the bicycle is assumed to be conveyed from one party to the other. It signifies the appropriate date for recording.

In this illustration, if Builder Company specifies that the sale of this bicycle is made "**FOB shipping point"** and Rider Inc. agrees to this condition, the transaction occurs on December 29, Year One, when the bicycle leaves the seller. Consequently, both the asset and the liability appear on the December 31, Year One, balance sheet prepared by the buyer while Builder records sale revenue in Year One. However, if the contract states that the transaction is made "**FOB destination**," the seller maintains legal ownership until the bicycle arrives at the store on January 4, Year Two. Neither party records the transaction until that time. Near the end of a reporting period, account balances can clearly be altered by the FOB designation.

The FOB point is often important for two other reasons.

- The company that holds legal title to merchandise during the trip from seller to buyer normally incurs all transportation costs. If no other arrangements are negotiated, "FOB shipping point" means that Rider Inc. as the buyer pays for shipping - usually separate from paying for the merchandise. "FOB destination" assigns this same cost to Builder, as the seller and means the buyer probably pays for the merchandise and shipping together with one payment.
- Any losses or damages that occur in route affect the party holding legal title (again, unless other arrangements are specified in a contract). If shipment from Wisconsin to Kentucky was noted as FOB shipping point and the bicycle breaks as the result of an accident in Illinois, it is the buyer's inventory that was hurt. It is the seller's problem, though, if the shipment is marked as FOB destination. The legal owner bears the cost of damages that occur during the physical conveyance of property.

Check Yourself

The ABC Company sells inventory to the RST Company on December 28, 2025 and it is shipped the same day. The agreement between the two includes that the inventory is sold FOB shipping point. The inventory arrives at the RST warehouse on January 2, 2026. Who owns the inventory on December 31, 2025?

A. RST

B. ABC

C. Both companies

D. Neither company

The answer is A. When items are sold FOB shipping point then ownership transfers from ABC to RST at the point it is shipped on December 28 and thus would be owned by the buyer (RST) as it is in transit on December 31 (balance sheet date)

Question: When a sale is made so that inventory is surrendered, the seller reports an expense that has previously been identified as "cost of goods sold" or "cost of sales." For example, Best Buy reported "cost of goods sold or cost of sales," for the year ended February 1, 2025, as $32.1 billion. When should cost of goods sold be determined?

To illustrate, assume that Rider Inc. begins the current year holding three Model XY-7 bicycles costing $260 each—$780 in total. During the period, another five units of this same model are acquired, again for $260 apiece or $1,300 in total[1]*. Eventually, a customer buys seven of these bicycles for her family and friends paying cash of $440 each or $3,080 in total. No further sales are made of this model. At the end of the period, a single bicycle remains (3 + 5 – 7). One is still in stock while seven have been sold. What is the proper method of recording the company's cost of goods sold?*

Answer: *Perpetual inventory system*. The acquisition and subsequent sale of inventory when a perpetual system is in use was demonstrated earlier. The accounting records maintain current balances so that officials are cognizant of (a) the amount of merchandise being held and (b) the cost of goods sold for the year to date. These figures are readily available in general ledger T-accounts. In addition, separate subsidiary ledger balances are usually established for the individual items in stock, showing the quantity on hand and its cost. When each sale is made, the applicable cost is reclassified from the inventory account on the balance sheet to cost of goods sold on the income statement. Simultaneously, the corresponding balance in the subsidiary ledger is lowered.

In this example, bicycles had been acquired by Rider Inc. and seven of them, costing $260 each (a total of $1,820), are sold to a customer for $440 apiece or $3,080. When a perpetual system is in use, two journal entries are prepared at the time of this transaction: one for the sale and a second to shift the cost of the inventory from asset to expense.

Figure 3.4 Journal Entries for Sale of Seven Model XY-7 Bicycles—Perpetual Inventory System

Cash	3,080		(increase an asset—debit)
Sales Revenue—Merchandise		3,080	(increase a revenue—credit)
Cost of Goods Sold	1,820		(increase an expense—debit)
Inventory		1,820	(decrease an asset—credit)

ASSETS				= LIABILITIES	+ EQUITY	STOCKHOLDERS		
CURRENT ASSETS					+ RETAINED EARNINGS			
Cash		Inventory			Sales		Cost of Goods Sold	
		780 (beginning from last period)						
		1,300 (purchases)						
3,080			1,820			3,080	1,820	
		Ending (780 + 1300 – 1820) = 260						

To focus on the inventory the beginning/ending balances were not shown for other accounts and neither is the credit for the entry for purchases (could be either accounts payable or cash)

Removing $1,820 leaves an inventory balance of $260 ($780 + $1,300 – $1,820) representing the cost of the one remaining unit. The $1,260 difference between revenue and cost of goods sold for this sale ($3,080 minus $1,820) is the markup (also known as "***g*ross profit" or "gross margin"**).

Check yourself

RST purchases 50 soccer balls for $10 each for a total of $500. They pay $20 for shipping to get them to their store. They had no soccer balls on hand at the end of last accounting period. When they sell 25 soccer balls for $20 each to a customer on credit, they will debit cost of goods sold for what amount?

A. $45

B. $250

C. $260

D. $270

The answer is C. The cost of each soccer ball is $10 plus $.40 for shipping ($20/50 balls) = $10.40. Sales of 25 soccer balls for $20 each will result in a debit to Accounts Receivable $500 and credit to Sales for $500. Also, the debit to COGS will be recorded for 25 x $10.40 = 260 along with a credit to inventory for $260.

Question: In a perpetual inventory system, cost of goods sold is determined at the time of each sale. Figures retained in a subsidiary ledger provide the cost of the specific item being surrendered so that an immediate reclassification from asset to expense can be made.

With a periodic system, cost of goods sold is not calculated until financial statements are prepared. The beginning inventory balance (the ending amount from the previous year) is combined with the total acquisition costs incurred this period. How is the cost of goods sold determined and can that method be used to check the result of the perpetual inventory system.

The Inventory Formula can be stated as:

Beginning Inventory

+ Net Purchases (adjusted for all of the freight and assembly and discounts) Cost

– Ending Inventory

= Cost of Goods Sold

This is the formula that is used to calculate the adjusting entry at the end of the year in a periodic system and with items that are small in amount or quantity such that perpetual inventory is not deemed necessary. It is also the formula to use when checking the results of the perpetual system and look for errors in inventory accounting. Finding the ending inventory either by using computer records or by taking a physical count is important to getting the correct amount in cost of goods sold. Any errors or in either the ending or beginning inventory will affect cost of goods sold and therefore net income.

Key Takeaways

The legal conveyance of inventory from seller to buyer establishes the timing for recording and is based on the FOB point specified. This designation also identifies the party responsible for transportation costs and items damaged while in transit. In contrast, the recording of cost of goods sold depends on the inventory system used. For a perpetual system, the reclassification of an item from inventory to expense occurs at the time of each sale. The expense is found by adding the beginning inventory to the purchase costs for the period and then subtracting ending inventory. A year-end adjusting entry then updates the various general ledger accounts.

[1]In this illustration, each bicycle in the company's inventory has the same cost: $260. At this introductory stage, utilizing a single cost for all items eliminates a significant theoretical problem concerning the flow of costs, one that will be discussed in detail in a

subsequent section.

[2]The Purchases figure here could have also been shown by displaying the various cost components, such as the invoice price, purchases discount, transportation-in, and assembly. That breakdown is important for internal decision making and control but probably of less interest to external parties.

3.3: The Calculation of Cost of Goods Sold is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

3.4: Determining Inventory on Hand

Learning Objectives

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

1. Understand the necessity of taking a physical inventory even in a perpetual inventory system.
2. Estimate the amount of inventory on hand using historic gross profit percentages and identify the situations when this computation might be necessary.

Question: In a periodic inventory system, a physical count is always taken at or very near the end of the fiscal year. This procedure is essential. There is no alternative method for determining the final inventory figure and, hence, the cost of goods sold for the period. When a company uses a perpetual system, is a count of the goods on hand still needed since both the current inventory balance and cost of goods sold are maintained and available in the accounting records?

Answer: A physical inventory is necessary even if a company has invested the effort and cost to install a perpetual system. Goods can be lost, broken, or stolen. Errors can occur in the record keeping. Thus, a count is taken on a regular basis simply to ensure that the subsidiary and general ledger balances are kept in alignment with the actual items held. Unless differences become material, this physical inventory can take place at a convenient time rather than at the end of the year. For example, assume that a company sells snow ski apparel. If a perpetual system is in use, the merchandise could be inspected and counted by employees in May when quantities are low and damaged goods easier to spot.

An adjustment is necessary when the count does not agree with the perpetual inventory balance. To illustrate, assume that company records indicate that sixty-five ski jackets are currently in stock costing $70 apiece. The physical inventory finds that only sixty-three items are actually on hand. The inventory account must be reduced (credited) by $140 to mirror the shortfall (two missing units at $70 each).

The other half of the adjusting entry depends on what is being communicated on the income statement. If the reason for the reduction of inventory is part of regular business (theft, breakage, recording errors) then the missing items should be included in cost of goods sold (the cost of making the sales). The balance reported for these two jackets needs to be moved to the expense account to show that actual cost.

Figure 3.5 Adjusting Entry—To Bring Perpetual Inventory Records in Line with Physical Count, a Recording Error Is Assumed

Cost of Goods Sold	140		(increase an expense—debit)
Inventory (to reduce inventory for two jackets costing $70 each)		140	(decrease an asset—credit)

Conversely, if differences between actual and recorded inventory amounts occur because of an unusual occurrence like a fire or flood. This may need to be communicated differently. It would probably be more appropriate to record the reduction of inventory as a debit or increase to a loss account separated from expenses at the bottom of the income statement.

In practice, when an inventory count is made and the results differ from the amount of recorded merchandise, the exact cause is often impossible to identify and it is **assumed to be cost of goods sold**. Whether a loss is reported or a change is made in reporting cost of goods sold, the impact on net income is the same. The construction of the adjustment is subject to professional judgment by an accountant. They should consider what is being communicated and work to achieve consistent application from year to year.

Question: A periodic system is cheap and easy to operate. It does, though, present some practical problems. Assume that a company experiences a fire, flood, or other disaster and is attempting to gather evidence—for insurance or tax purposes—as to the amount of merchandise that was destroyed. How does the company support its claim? Or assume a company wants to produce interim financial statements for a single month or quarter (rather than a full year) without going to the cost and trouble of taking a complete physical inventory count. If the information is needed, how can a reasonable approximation of the inventory on hand be derived when a periodic system is in use?

Answer: One entire branch of accounting—known as "**forensic accounting**"—specializes in investigations where information is limited or not available (or has even been purposely altered to be misleading). For example, assume that a hurricane floods a retail clothing store in Charleston, South Carolina. Only a portion of the merchandise costing $80,000 is salvaged[1]. In trying to determine the resulting loss, the amount of inventory in the building prior to the storm needs to be calculated. A forensic accountant might be hired, by either the owner of the store or the insurance company involved, to produce a reasonable estimate of the merchandise on hand at the time. Obviously, if the company had used a perpetual rather than a periodic system, the need to hire the services of an accounting expert would be less likely unless fraud was suspected. But even with the perpetual system the following process might help to substantiate the company's claim of loss.

In some cases, arriving at a probable inventory balance is not extremely complicated even if periodic inventory procedures are utilized. When historical trends can be determined with assurance, a valid estimation of the goods on hand is possible at any point in time without the benefit of perpetual records. For the Charleston store, assume that the general ledger is located after the disaster and the T-account balances provide the following information resulting from the periodic system in use:

Figure 3.6 Estimating Inventory—General Ledger Balances

Inventory available for sale:	
Inventory, beginning of year	$165,000
Purchases of inventory for current period	378,000
Cash discounts on purchases	(6,000)
Transportation-in	34,000
Cost to date	$571,000
Sales	$480,000

If no sales had taken place, the inventory on hand would have cost $571,000 as shown by the ledger accounts. Sales did occur prior to the hurricane and a significant amount of merchandise was removed by the customers. However, the $480,000 balance shown in the sales T-account does not reflect the cost of the inventory items that were surrendered. It is a retail amount, the summation of the price charged for all the merchandise sold during the year to date.

To determine the cost of inventory held at the time of the catastrophe, cost of goods sold for the current year has to be approximated and then removed from the $571,000 total. Many companies use a fairly standard markup percentage in setting retail prices. By looking at previously reported balances, the accountant is often able to make a reasonable determination of that markup. For example, assume that in the preceding year, this company reported sales revenue of $500,000 along with cost of goods sold of $300,000 and, hence, gross profit of $200,000. In this earlier period, cost of goods sold was 60 percent of sales revenue ($300,000/$500,000) while gross profit was 40 percent ($200,000/$500,000).

If available evidence does not indicate any significant changes this year in the method used to set retail prices, the accountant can assume that cost of goods sold during the period prior to the storm was about $288,000 ($480,000 sales revenue × 60 percent). Because the cost of all available inventory was $571,000, approximately $283,000 of those goods were still in stock when the hurricane hit Charleston ($571,000 total cost less $288,000 estimated cost of goods sold). This residual figure can then serve as the basis for the insurance or tax claim. Only goods costing $80,000 were saved. Thus, the estimated loss was $203,000 ($283,000 less $80,000).

Remember the Inventory/Cost of Goods Formula

Beginning Inventory + Net Purchases – Ending Inventory = COGS

can be restated as

Beginning Inventory (165,000) + Net Purchases (378,000 – 6,000 + 34,000) – COGS (estimated at 288,000) = Ending Inventory = 283,000

The biggest obstacle in this type calculation is the validity of the cost and markup percentages. Many companies offer an eclectic variety of products, each with its own specific gross profit. Other companies change their markups frequently based on market conditions. In such cases, determining a reliable percentage can be difficult and the accuracy of the resulting estimation is more questionable.

Check yourself

Puddle Company had beginning inventory of $45,000 and purchased $490,000 more during 2025. For 2025 sales were $930,000 and for 2022-2024 Puddle's gross profit margin was consistently 45%. What would be the estimate of ending inventory at the end of 2025 when Puddle's inventory was completely destroyed by fire?

A. 511,500

B. 418,500

C. 45,000

D. 23,500

The answer is D. Formula – Beginning Balance $45,000 + Net Purchases $490,000 = Goods Available 535,000 – Cost of Goods Sold (930,000 x .55) 511,500 = Estimated inventory 23,500.

Key Takeaways

Although perpetual inventory systems are designed to maintain current account balances, a physical count is still required periodically to update the records for errors, theft, and the like. In addition, knowledge of the amount of inventory on hand is sometimes needed in a periodic system even if complete records are not available. If a loss has occurred due to some type of disaster or if interim financial statements are to be prepared, the inventory balance can be estimated. This computation is based on determining the gross profit percentage using historical data. Cost of goods sold for the period is estimated and then removed from the total inventory available for sale.

Talking with a Real Investing Pro (Continued)

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

Question: Gross profit is the sales revenue generated by a company less cost of goods sold. In other words, it is the markup that a company is able to earn from the sale of its inventory. Goods are bought for a price and then sold at a higher value. In analyzing companies, gross profit is often stated as a percentage. A company's gross profit, for example, might be 37 percent of its sales. When you study a company, how much attention do you pay to changes in gross profit from year to year or differences that exist between one company and another?

Kevin Burns: Actually year to year differences only interest me if there is a significant change. If a company's gross profit margin increases significantly from one year to the next, my radar is activated. I want to know exactly why that happened. Is it temporary or something significant? If gross profit is that volatile, it could also easily go the other direction in the future. I prefer steady as she goes. Predictability and transparency are very important to me. As for gross profit margins between one company and another, the only way that is significant to me is if they are in the same industry and then only if there are big differences. Most companies in mature industries have similar margins and large differences, again, would make me very suspicious.

3.4: Determining Inventory on Hand is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

3.5: The Necessity of Adopting a Cost Flow Assumption

Learning Objectives

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

1. Understand the reason that accounting rules are often standardized so that all companies report many events in the same manner.
2. Know that the selection of a particular cost flow assumption is necessary when inventory is sold.
3. Apply the following cost flow assumptions to determine reported balances for ending inventory and cost of goods sold: specific identification, FIFO, LIFO, and averaging.

Question: In the coverage of financial accounting to this point, general standardization has been evident. Most transactions are recorded in an identical fashion by all companies. This defined structure helps ensure understanding. It also enhances the ability of decision makers to compare results from one year to the next or from one company to another. For example, inventory—except in unusual circumstances—is always reported at historical cost unless its value is lower. Experienced decision makers should be well aware of that criterion when they are reviewing the inventory figures reported by a company.

However, an examination of the notes to financial statements for some well-known businesses shows an interesting inconsistency in the reporting of inventory (emphasis added).

Best Buy (U.S.A.) Inc.—as of February 1, 2025:

"The weighted-average method is used to determine the cost of inventory which includes costs of in-bound freight to move inventory into our distribution centers"

Johnson & Johnson and Subsidiaries—as of December 31, 2024:

"Inventories are stated at the lower of cost or net realizable value determined by the first-in, first-out method."

Weis Markets, Inc. —as of December 31, 2024:

The Company's center store and pharmacy inventories are valued using last in, first out (LIFO). The Company's fresh inventories are valued using average cost.

"Specific-identification basis," "first-in, first-out," "last-in, first-out," "weighted average cost"—what information do these terms provide? Why are all of these companies using different methods?
In the financial reporting of inventory, what is the significance of disclosing that a company applies "first-in, first-out," "last-in, first-out," or the like?

Answer: In the previous chapter, the cost of all inventory items was kept constant over time. Although that helped simplify the initial presentation of relevant accounting issues, such stability is hardly a realistic assumption. For example, the retail price of gasoline has moved up and down like a yo-yo in recent years. The cost of some commodities, such as bread and soft drinks, has increased gradually for many decades. In other industries, prices actually tend to fall over time. New technology products often start with a high price that drops as the manufacturing process ramps up and becomes more efficient. Several years ago, personal computers cost tens of thousands of dollars and now sell for hundreds.

A key event in accounting for inventory is the transfer of cost from the inventory T-account to cost of goods sold as the result of a sale. The inventory balance is reduced and the related expense is increased. For large organizations, such transactions can take place thousands of times each day. If each item has an identical cost, no problem exists. This standard amount is always reclassified into expense to reflect the sale.

However, if inventory items are acquired at different costs, which cost is moved from asset to expense? At that point, a cost flow assumption must be selected by company officials to guide reporting. That choice can have a significant impact on both the income statement and the balance sheet. It is literally impossible to analyze the reported net income and inventory balance of a company such as ExxonMobil without knowing the cost flow assumption that has been applied.

Question: An example is probably the easiest approach by which to demonstrate cost flow assumptions. Assume a men's retail clothing store holds $120 in cash. On October 26, Year One, one blue dress shirt is bought for $50 in cash for resell purposes. Later, near the end of the year, this style of shirt becomes especially popular. On December 29, Year One, the store's manager buys a second shirt exactly like the first but this time at a cost of $70. Cash on hand has been depleted completely ($120 less $50 and $70) but the company now holds two shirts in its inventory.

Then, on December 31, Year One, a customer buys one of these two shirts by paying cash of $110. Regardless of the cost flow assumption, the company retains one blue dress shirt in inventory at the end of the year and cash of $110. It also reports sales revenue of $110. Those facts are not in doubt.

From an accounting perspective, two questions are left to be resolved (1) what is the cost of goods sold reported for the one shirt that was sold and (2) what is the cost remaining in inventory for the one item still on hand?

In simpler terms, should the $50 or $70 be reclassified to cost of goods sold; should the $50 or $70 remain in ending inventory? For financial accounting, the importance of the answers to those questions cannot be overemphasized. What are the various cost flow assumptions and how are they applied to inventory?

Answer: ***SPECIFIC IDENTIFICATION***. In a literal sense, specific identification is not a cost flow assumption. Companies that use this approach are not making an assumption because they know which item was sold. By some technique, they are able to identify the inventory conveyed to the customer and reclassify its cost to expense.

For some types of inventory, such as automobiles held by a car dealer, specific identification is relatively easy to apply. Each vehicle tends to be somewhat unique and can be tracked through identification numbers. Unfortunately, for many other types of inventory, no practical method exists for determining the physical flow of merchandise.

Thus, if the men's retail store maintains a system where the individual shirts are marked in some way, it will be possible to know whether the $50 shirt or the $70 shirt was actually conveyed to the customer. That cost can be moved from asset to expense.

However, for identical items like shirts, cans of tuna fish, bags of coffee beans, hammers, packs of notebook paper and the like, the idea of maintaining such precise records is ludicrous. What informational benefit could be gained by knowing whether the first blue shirt was sold or the second? In most cases, the cost of creating such a meticulous record-keeping system far outweighs any potential advantages.

FIRST-IN, FIRST-OUT (FIFO). The **FIFO** cost flow assumption is based on the premise that selling the oldest item first is most likely to mirror reality. Stores do not want inventory to grow unnecessarily old and lose freshness. The oldest items are often placed on top in hopes that they will sell first before becoming stale or damaged. Therefore, although the identity of the actual item sold is rarely known, the assumption is made in applying FIFO that the first (or oldest) cost is always moved from inventory to cost of goods sold.

Note that it is not the oldest item that is necessarily sold but rather the oldest cost that is reclassified to cost of goods sold. No attempt is made to determine which shirt was purchased by the customer. Here, because the first shirt cost $50, the following entry is made to record the expense and reduce the inventory.

Figure 3.6 Journal Entry—Reclassification of the Cost of One Piece of Inventory Using FIFO

Cost of Goods Sold	50	
Inventory		50

For this retail store, the following financial information is reported if FIFO is applied. Two shirts were bought for ($50 and $70) and one shirt was sold for $110.

FIFO	
Cost of Goods Sold (One Unit—the First One)	$50
Gross Profit ($110 less $50)	$60
Ending Inventory (One Unit—the Last One)	$70

In a period of rising prices, the earliest (cheapest) cost moves to cost of goods sold and the latest (more expensive) cost is retained in ending inventory. For this reason, in inflationary times, FIFO is associated with a higher reported net income as well as a higher reported inventory total on the company's balance sheet. Not surprisingly, these characteristics help make it a popular choice.

Check Yourself

XYZ has no shoes in inventory on March 1. XYZ uses the FIFO cost flow assumption. XYZ company buys 20 pairs of shoes for $30 each on March 3 and 30 pairs of shoes for $35 each on March 10. When a customer comes into the store and buys one pair of shoes for $50, the cost of goods sold that should be recorded would be?

A. $50

B. $30

C. $35

D. $20

The answer is B. FIFO assumes that the oldest items are sold first. The shoes purchased on March 3 are the oldest and thus we use the cost of the shoes purchased on that day. With that assumption, the remaining inventory would be 19 pairs at $30 and 30 pairs at a cost of $35 each.

LAST-IN, FIRST-OUT (LIFO). **LIFO** is the opposite of FIFO: the most recent costs are moved to expense as sales are made.

Theoretically, the LIFO assumption is often justified as more in line with the matching principle. Shirt One was bought on October 26 whereas Shirt Two was not acquired until December 29. Revenue was earned on December 31. Proponents of LIFO argue that matching the December 29 cost with the December 31 revenue is more appropriate than using a cost incurred months earlier. According to this reasoning, income is more properly determined with LIFO because a relatively current cost is shown as cost of goods sold rather than a figure that is out-of-date. The difference is especially apparent in periods of high inflation. "By matching current costs against current sales, LIFO produces a truer picture of income; that is, the quality of income produced by the use of LIFO is higher because it more nearly approximates disposable income" (Rumble, 1983).

The last cost incurred in buying two blue shirts was $70 so that amount is reclassified to expense at the time of the first sale.

Figure 3.7 Journal Entry—Reclassification of the Cost of One Piece of Inventory Using LIFO

Cost of Goods Sold	70	
Inventory		70

Although the physical results of these transaction are the same (one unit was sold, one unit was retained, and the company holds $110 in cash), the financial picture painted using the LIFO cost flow assumption is quite different from in the earlier FIFO example.

LIFO	
Cost of Goods Sold (One Unit—the Last One)	$70
Gross Profit ($110 Less $70)	$40
Ending Inventory (One Unit—the First One)	$50

Characteristics commonly associated with LIFO can be seen in this example. When prices rise, LIFO companies report lower net income (the most recent and, thus, the most costly purchases are moved to expense) and a lower inventory account on the balance sheet (because the earlier and cheaper costs remain in the inventory T-account).

Check Yourself

XYZ has no shoes in inventory on March 1. XYZ uses the LIFO cost flow assumption. XYZ company buys 20 pairs of shoes for $30 each on March 3 and 30 pairs of shoes for $35 each on March 10. When a customer comes into the store and buys one pair of shoes for $50 on March 15th, the cost of goods sold that should be recorded would be?

A. $50

B. $30

C. $35

D. $20

The answer is C. LIFO assumes that the newest items are sold first. The shoes purchased on March 10 are the newest and thus we use the cost of the shoes purchased on that day. With that assumption, the remaining inventory would be 20 pairs at $30 and 29 pairs at a cost of $35 each.

Averaging. Because the identity of the items conveyed to buyers is unknown, this final cost flow assumption holds that using an average of all costs is the most logical solution. Why choose any individual cost if no evidence exists of its validity? The first item received might have been sold or the last. Selecting either is an arbitrary decision. If items with varying costs are held, using an average provides a very appealing logic. In the shirt example, the two units cost a total of $120 ($50 plus $70) so the average is $60 ($120/2 units).

Figure 3.8 Journal Entry—Reclassification of the Cost of One Piece of Inventory Using Averaging

Cost of Goods Sold	60	
Inventory		60

Although no shirt did cost $60, this average serves as the basis for both cost of goods sold as well as the cost of the item still on hand. All costs are included in arriving at each reported figure.

Averaging	
Cost of Goods Sold (One Unit—the Average One)	$60
Gross Profit ($110 less $60)	$50
Ending Inventory (One Unit—the Average One)	$60

Averaging has many supporters. However, it can be a more complicated system to implement especially if costs change frequently. In addition, it does not offer the benefits that make FIFO (higher reported income) and LIFO (lower taxes in the United States) so appealing. Company officials often arrive at such practical decisions based on an evaluation of advantages and disadvantages and not on theoretical merit.

Key Takeaways

U.S. GAAP tends to apply standard reporting rules for many transactions to make financial statements more usable by decision makers. The application of an inventory cost flow assumption is one area where a significant variation is present. A company can choose to use specific identification, first-in, first-out (FIFO), last-in, first-out (LIFO), or averaging. Each of these assumptions determines the cost moved from inventory to cost of goods sold to reflect the sale of merchandise in a different manner. The

reported inventory balance as well as the expense on the income statement (and, hence, net income) are dependent on the cost flow assumption that is selected.

References

Rumble, C. T., “So You Still Have Not Adopted LIFO,” *Management Accountant*, October 1983, 50.

3.5: The Necessity of Adopting a Cost Flow Assumption is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

3.6: The Selection of a Cost Flow Assumption for Reporting Purposes

Learning Objectives

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

1. Appreciate that reported inventory and cost of goods sold numbers are not intended to be right or wrong but rather must conform to U.S. GAAP, which includes several different allowable cost flow assumptions.
2. Recognize that three cost flow assumptions (FIFO, LIFO, and averaging) are particularly popular in the United States.
3. Understand the meaning of the LIFO conformity rule and realize that use of LIFO in the U.S. largely stems from the presence of this tax rule.
4. Know that U.S. companies prepare financial statements according to U.S. GAAP and their income tax returns based on the Internal Revenue Code so that significant differences often exist.

Question: FIFO, LIFO, and averaging can present radically different portraits of identical events. Is the gross profit for this men's clothing store really $60 (FIFO), $40 (LIFO), or $50 (averaging) in connection with the sale of one blue shirt? Analyzing the numbers presented by most companies can be difficult if not impossible without understanding the implications of the assumption applied. Which of the cost flow assumptions is viewed as most appropriate in producing fairly presented financial statements?

Answer: Because specific identification reclassifies the cost of the actual unit that was sold, finding theoretical fault with that approach is difficult. Unfortunately, specific identification is nearly impossible to apply unless easily distinguishable differences exist between similar inventory items. That leaves FIFO, LIFO, and averaging. Arguments over both their merits and problems have raged for decades. Ultimately, the numbers in financial statements must be presented fairly based on the cost flow assumption that is applied.

In Principles of Financial Accounting 1, an important distinction was made. The report of the independent auditor never assures decision makers that financial statements are "presented fairly." That is a hopelessly abstract concept like truth and beauty. Instead, the auditor states that the statements are "presented fairly…in conformity with accounting principles generally accepted in the United States of America." That is a substantially more objective standard. Thus, for this men's clothing store, all the following figures are presented fairly but only in conformity with the cost flow assumption used by the reporting company.

Figure 3.7 Results of Possible Cost Flows Assumptions Used by Clothing Store

	Gross Profit	Ending Inventory	
Bought Two Units and Sold One	$60	$70	based on application of FIFO
Bought Two Units and Sold One	40	50	based on application of LIFO
Bought Two Units and Sold One	50	60	based on application of averaging

Question: *Since company officials are allowed to select a cost flow assumption, which of these methods is most typically found in the reporting of companies in the United States?*

Answer: To help interested parties gauge the usage of various accounting principles, a survey is carried out annually of the financial statements of six hundred large companies in this country. The resulting information allows accountants, auditors, and decision makers to weigh the validity of a particular method or presentation. For 2007, that survey found the following frequency of application of cost flow assumptions. Some companies use multiple assumptions: one for a particular part of inventory and a different one for the remainder. Thus, the total here is well above six hundred even though over one hundred of the surveyed companies did not have inventory or mention a cost flow assumption (inventory was probably an immaterial amount). As will be discussed a bit later in this chapter, using multiple assumptions is especially common when a U.S. company has subsidiaries located internationally.

Inventory Cost Flow Assumptions—600 Companies Surveyed (Iofe & Calderisi, 2008)	
First-in, First-out (FIFO)	391
Last-in, First-out (LIFO)	213
Averaging	155
Other	24

Interestingly, individual cost flow assumptions tend to be more prevalent in certain industries. In this same survey, 86 percent of the financial statements issued by food and drug stores used LIFO whereas only 10 percent of the companies labeled as “computers, office equipment” had adopted this same approach. That difference could quite possibly be caused by the presence of inflation or deflation. Prices of food and drugs tend to escalate consistently over time while computer prices often fall as technology advances

Question: In periods of inflation, as demonstrated by the previous example, FIFO reports a higher gross profit (and, hence, net income) and a higher inventory balance than does LIFO. Averaging presents figures that normally fall between these two extremes. Such results are widely expected by those readers of financial statements who understand the impact of the various cost flow assumptions.

Any one of these methods is permitted for financial reporting. Why is FIFO not the obvious choice for every organization that anticipates inflation in its inventory costs? Officials must prefer to report figures that make the company look stronger and more profitable. With every rise in prices, FIFO shows a higher income because the earlier (cheaper) costs are transferred to cost of goods sold. Likewise, FIFO reports a higher total inventory on the balance sheet because the later (higher) cost figures are retained in the inventory T-account. The company is no different physically by this decision but FIFO makes it look better. Why does any company voluntarily choose LIFO, an approach that reduces reported income and total assets when prices rise?

Answer: LIFO might well have faded into oblivion because of its negative impact on key reported figures (during inflationary periods) except for a U.S. income tax requirement known as the **LIFO conformity rule**. Although this tax regulation is not part of U.S. GAAP and looks rather innocuous, it has a huge impact on the way inventory and cost of goods sold are reported to decision makers in this country.

As prices rise, companies prefer to apply LIFO for tax purposes because this assumption reduces reported income and, hence, required cash payments to the government. In the United States, LIFO has come to be universally equated with the saving of tax dollars. When LIFO was first proposed as a tax method in the 1930s, the United States Treasury Department appointed a panel of three experts to consider its validity. The members of this group were split over a final resolution. They eventually agreed to recommend that LIFO be allowed for income tax purposes but only if the company was also willing to use LIFO for financial reporting. At that point, tax rules bled over into U.S. GAAP.

The rationale behind this compromise was that companies were allowed the option but probably would not choose LIFO for their tax returns because of the potential negative effect on figures reported to investors, creditors, and others. During inflationary periods, companies that apply LIFO do not look as financially healthy as those that adopt FIFO. Eventually this recommendation was put into law and the LIFO conformity rule was born. If LIFO is used on a company’s income tax return, it must also be applied on the financial statements.

However, as the previous statistics point out, this requirement did not prove to be the deterrent that was anticipated. Actual use of LIFO has become quite popular. For many companies, the savings in income tax dollars more than outweigh the problem of having to report numbers that make the company look a bit weaker. That is a choice that company officials must make.

Figure 3.8 Advantages and Disadvantages of FIFO and LIFO

*Assumes a rise in prices over time. The tax effect is a temporary deferral of tax payments and not an actual reduction in the rate of tax. The advantages and disadvantages are less pronounced when prices are not changing very much.

Question: The LIFO conformity rule requires companies that apply LIFO for income tax purposes to also use that same method for their financial reporting to investors, creditors, and other decision makers. Is the information submitted to the government for income tax purposes not always the same as that presented to decision makers in a set of financial statements? Reporting different numbers seems unethical.

Answer: In jokes and in editorials, companies are often derisively accused of "keeping two sets of books." The implication is that one is skewed toward making the company look good (for reporting purposes) whereas the other makes the company look bad (for taxation purposes). However, the existence of separate records is a practical necessity. One set is kept based on applicable tax laws while the other enables the company to prepare its financial statements according to U.S. GAAP. Different rules mean that different numbers result.

In filing income taxes with the United States government, a company must follow the regulations of the Internal Revenue Code[1]. Those laws have several underlying objectives that influence their development.

First, they are designed to raise money for the operation of the federal government. Without adequate funding, the government could not provide hospitals, build roads, maintain a military and the like.

Second, income tax laws enable the government to help regulate the health of the economy. Simply by raising or lowering tax rates, the government can take money out of the economy (and slow public spending) or leave money in the economy (and increase public spending). As an illustration, recently a significant tax break was passed by Congress for purchasing new equipment. This was designed to motivate businesses to increase their purchases of equipment, grow their business and hire additional workers.

Third, income tax laws enable the government to assist certain members of society who are viewed as deserving help. For example, taxpayers who encounter high medical costs or casualty losses are entitled to a tax break. Donations conveyed to an approved charity can also reduce a taxpayer's tax bill. The rules and regulations were designed to provide assistance for specified needs.

In contrast, financial reporting for decision makers must abide by the guidance of U.S. GAAP, which seeks to set rules for the fair presentation of accounting information. That is the reason U.S. GAAP exists. Because the goals are entirely different, there is no particular reason for the resulting financial statements to correspond to the tax figures submitted to the Internal Revenue Service (IRS). Not surprisingly, though, significant overlap is found between tax laws and U.S. GAAP. For example, both normally recognize the cash sale of merchandise as revenue at the time of sale. However, countless differences do exist between the two sets of rules. Depreciation, as just one example, is computed in an entirely different manner for tax purposes than for financial reporting.

Although separately developed, financial statements and income tax returns are tied together at one significant spot: the LIFO conformity rule. If a company chooses to use LIFO for tax purposes, it must do the same for financial reporting. Without that requirement, many companies likely would use FIFO in creating their financial statements and LIFO for their income tax returns. Much of the popularity shown earlier for LIFO is undoubtedly derived from this tax requirement rather than any theoretical merit.

Key Takeaways

Information found in financial statements is required to be presented fairly in conformity with U.S. GAAP. Because several inventory cost flow assumptions are allowed, presented numbers can vary significantly from one company to another and still be appropriate. FIFO, LIFO, and averaging are all popular. Understanding and comparing financial statements is quite difficult

without knowing the implications of the method selected. LIFO, for example, tends to produce low-income figures in a period of inflation. This assumption probably would not be used extensively except for the LIFO conformity rule that prohibits its use for tax purposes unless also reported on the company's financial statements. Typically, financial reporting and the preparation of income tax returns are unrelated because two sets of rules are used with radically differing objectives. However, the LIFO conformity rule joins these two at this one key spot.

[1]Many states also charge a tax on income. These states have their own unique set of laws although they often resemble the tax laws applied by the federal government.

References

Iofe, Y., senior editor, and Matthew C. Calderisi, CPA, managing editor, *Accounting Trends & Techniques*, 62nd edition (New York: American Institute of Certified Public Accountants, 2008), 159.

3.6: The Selection of a Cost Flow Assumption for Reporting Purposes is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

3.7: Applying Cost Flow Assumptions to Determine Reported Inventory Balances

Learning Objectives

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

1. Use FIFO to report ending inventory and cost of goods sold.
2. Monitor inventory on an ongoing basis through a perpetual LIFO system.
3. Use a weighted average system to report ending inventory and cost of goods sold.
4. Calculate inventory balances by applying a moving average inventory system.

Question: Certainly companies purchase more than one or two shirts or other inventory items. How does the FIFO cost flow assumption apply to a perpetual system with several purchases and sales by the company?

The following illustrates the application of FIFO to our perpetual inventory. Starting with 4 units at $110 each, the company sold 3 of those units on February 2 and all of them came from the oldest (beginning inventory is always the oldest units). They purchased an additional 3 units at $120 on February 6. On June 8, they sold 3 more units – now the oldest units are the one left over from beginning inventory and 2 out of those purchased on February 6. Another 3 were purchased on June 13 at $130 each. The final sale on September 9 was one unit left over from those purchased on February 6 and one unit from those purchased on June 13.

Notice that the dates of purchases and sales become important to determine the order and how to apply the cost flow assumption.

	Inventory Acquired →	Inventory On Hand →	Cost of Goods Sold
1/1—Beginning Balance		4 Units @ $110	
2/2—3 Units Sold		1 Unit @ 110	(A) 3 Units @ $110 = $330
2/6—3 Units Bought	3 Units @ $120	1 Unit @ 110 3 Units @ 120	
6/8—3 Units Sold		1 Unit @ $120	(B) 1 Unit @ 110 2 Units @ 120 = 350
6/13—3 Units Bought	3 Units @ 130	1 Unit @ 120 3 Units @ 130	
9/9—2 Units Sold		2 Units @ 130	(C) 1 Unit @ 120 1 Unit @ $130 = 250
9/22—2 Units Bought	2 Units @ 149	2 Units @ 130 2 Units @ 149	
Totals		**$260 + $298 = $558**	**$330 + $350 + $250 = $930**

Question: LIFO reverses the FIFO cost flow assumption so that the last costs incurred are the first reclassified to cost of goods sold. How is LIFO applied to the inventory of an actual business?If the Mayberry Home Improvement Store adopted LIFO, how would the reported figures have been affected by this decision? The mechanical structure for a perpetual LIFO system is the same as that demonstrated for perpetual FIFO except that the most recent costs are moved into cost of goods sold at the time of each sale (points A, B, and C).

Figure 3.9 Perpetual LIFO—Bathtub Model WET-5

	Inventory Acquired →	Inventory On Hand →	Cost of Goods Sold
1/1—Beginning Balance		4 Units @ $110	
2/2—3 Units Sold		1 Unit @ 110	(A) 3 Units @ $110 = 330
2/6—3 Units Bought	3 Units @ $120	1 Unit @ 110 3 Units @ 120	
6/8—3 Units Sold		1 Unit @ 110	(B) 3 Units @ 120 = 360
6/13—3 Units Bought	3 Units @ 130	1 Unit @ 110 3 Units @ 130	
9/9—2 Units Sold		1 Unit @ 110 1 Unit @ 130	(C) 2 Units @ 130 = 260
9/22—2 Units Bought	2 Units @ 149	1 Unit @ 110 1 Unit @ 130 2 Units @ 149	
Totals		**$110 + $130 + $298 = $538**	**$330 + $360 + $260 = $950**

Once again, the last cell in the "inventory on hand" column contains the asset figure to be reported on the balance sheet (a total of $538) while the summation of the "cost of goods sold" column provides the amount to be shown on the income statement ($950).

Note that with the perpetual LIFO example above dates are even more important because with LIFO a new purchase of inventory will become the items sold so whether that purchase happened before or after the sale will change our calculations. The calculation of which items were sold and what the cost of goods sold is for the sale on September 9 would be different if it was made on September 23 (when the purchase on the 9/22 becomes the newest units rather than those purchased on 6/13).

Question: Not surprisingly, averaging follows a path similar to that of the previous examples. Costs are either moved to cost of goods sold at the end of the year (periodic or weighted average) or at the time of each new sale (perpetual or moving average). The only added variable to this process is the calculation of average cost. In the operation of an averaging system, when and how is the average cost of inventory determined?

Perpetual (moving) average. In this final approach to maintaining and reporting inventory, each time that a company buys inventory at a new price, the average cost is recalculated. Therefore, a moving average system must be programmed to update the average whenever additional merchandise is acquired.

Below, a new average is computed at points D, E, and F. Each time this figure is found by dividing the number of units on hand after the purchase into the total cost of those items. For example, at point D, the company now has four bathtubs. One cost $110 while the other three were acquired for $120 each or $360 in total. Total cost was $470 ($110 + $360) for these four units for a new average of $117.50 ($470/4 units). That average is then used until the next purchase is made. The applicable average at the time of sale is transferred from inventory to cost of goods sold at points A ($110.00), B ($117.50), and C ($126.88) below.

Figure 3.10 Perpetual (Moving) Average—Bathtub Model WET-5

	Inventory Acquired →	Inventory on Hand →	Cost of Goods Sold
1/1—Beginning Balance		4 Units @ $110 = $440	
2/2—3 Units Sold		1 Unit @ 110 = 110	(A) 3 Units @ $110 = $330
2/6 —3 Units Bought	3 Units @ $120	1 Unit @ 110 = 110 3 Units @ 120 = 360	
New Average		(D) 4 Units @ 117.50 = 470	
6/8—3 Units Sold		1 Unit @ 117.50	(B) 3 Units @ 117.50 = 352.50
6/13—3 Units Bought	3 Units @ 130	1 Unit @ 117.50 = 117.50 3 Units @ 130 = 390	
New Average		(E) 4 Units @ 126.88 = 507.50	
9/9—2 Units Sold		2 Units @ 126.88 = 253.76	(C) 2 Units @ 126.88 = 253.76
9/22—2 Units Bought	2 Units @ 149	2 Units @ 126.88 = 253.76 2 Units @ 149 = 298	
New Average		(F) 4 Units @ 137.94 = 551.76	
Totals		**$551.76**	**$330 + $352.50 + $253.76 = $936.26**

Summary. The three inventory systems shown here for Mayberry Home Improvement Store provide a number of distinct pictures of ending inventory and cost of goods sold. As stated earlier, these numbers are all fairly presented but only in conformity with the specified principles being applied. In application, Mayberry would need to choose one of the three cost flow assumptions and stick with it year after year so they would be consistent. Only for illustration do we show the different assumptions with the same list of transactions.

Question: Wait a minute, what about recording the sales of the bathtubs in the above situation? What would that look like and would it be different if the cost flow assumption was different?

Answer: Remember that with any sale of inventory there are two journal entries needed - that for the sales price and that for the cost of goods sold. In the above examples the sales price would be the same regardless of cost flow assumption (no customer is

going to go for a higher price just because you use weighted average) so if the sales price were $300 per bathtub then the journal entry for recording the sale for A is going to be:

Account	Debit	Credit
Cash	900 (3x300)	
Revenue or Sales		900
COGS	330 (as shown for weighted average above)	
Inventory		330

The revenue/sales and cash entry would be the same for B and be $600 for C. These sales entries would be identical for A, B and C regardless of the cost flow assumption. Only the COGS and Inventory journal entry would be for different amounts based on the calculations shown in the inventory schedules shown above for each cost flow assumption.

Question: What would these look entries look like in the T accounts as part of the accounting cycle?

Answer:

Using the weighted average cost flow assumption and assuming that all sales and purchases were ma and focusing on only the T accounts involved in our inventory transactions the journal entries might get posted to look like this:

Cash		Inventory			Cost of Goods Sold		Sales	
$ 900.00	$ 360.00	$ 440.00	$ 330.00	A	$ 330.00		$ 900.00	A
$ 900.00	$ 390.00	$ 360.00	$ 352.50	B	$ 352.50		$ 900.00	B
$ 600.00	$ 298.00	$ 390.00	$ 253.76	C	$ 253.76		$ 600.00	C
		$ 298.00						
$1,352.00		$ 551.74			$ 936.26		$2,400.00	

This provides the inventory amount for the balance sheet and the sales and cost of goods sold totals to put on the income statement (at least when added together with inventory, sales and cost of goods sold for other products) like we have done previously from T accounts.

Key Takeaways

Perpetual LIFO transfers the most recent cost to cost of goods sold but makes that reclassification at the time of each sale. A moving average system computes a new average cost whenever merchandise is acquired. That figure is then reclassified to cost of goods sold at the time of each sale until the next purchase is made.

3.7: Applying Cost Flow Assumptions to Determine Reported Inventory Balances is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

3.8: Reporting Inventory at the Lower-of-Cost-or-Market

Learning Objectives

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

1. Explain the need for reporting inventory at the lower-of-cost-or-market.
2. Use net realizable value to estimate the market value of unsold inventory at the end of the year.
3. Calculate and record the journal entry to record the adjustment to inventory when market value drops below the cost of inventory.

Question: In the example of Rider Inc., Model XY-7 bicycles have been bought and sold and one unit remains in stock at the end of the year. The cost of this model has held steady at $260. However, its market value is likely to differ from that figure.

Assume that, because of the sales made during the period, company officials believe that a buyer will eventually be found to pay $440 for this last bicycle. Is inventory always reported on a balance sheet at historical cost or is market (or fair) value ever taken into consideration? Should this bicycle be shown as an asset at $260, $440, or some other pertinent figure?

Answer: Under normal conditions, market value is rarely relevant in the reporting of inventory. For Rider Inc. this bicycle will most likely appear as an asset at its cost of $260 until sold. Value is such a subjective figure that it is usually ignored in reporting inventory. The company has no reliable proof that the bicycle will bring in $440 until a sale actually occurs. The conservative nature of accounting resists the temptation to inflate reported inventory figures based purely on the anticipation of a profitable transaction at some point in the future.

An exception to this rule becomes relevant if the value of inventory falls below cost (what the bicycle could be sold for falls below $260). Once again, the conservatism inherent in financial accounting is easily seen. If market value remains greater than cost, no change is made in the reported balance until a sale occurs. In contrast, if the value drops so that inventory is worth less than cost, a loss is recognized immediately. Accountants often say that losses are anticipated but gains are not. As a note to the February 3, 2023 financial statements for Dollar General states, "Inventories are stated at the **lower-of-cost-or-market**" (emphasis added). Whenever inventory appears to have lost value for any reason, the accountant compares the cost of the item to its market value and the lower figure then appears on the balance sheet.

Question: *When applying the lower-of-cost-or-market approach to inventory, how does the owner of the merchandise ascertain market value?*

Answer: The practical problem in applying this rule arises from the difficulty in ascertaining an appropriate market value. There are several plausible ways to view the worth of any asset. For inventory, net realizable value—the amount of cash expected from an eventual sale – has become the accepted estimate for reporting purposes under GAAP. When preparing financial statements, GAAP requires that accountants consider if the net realizable value has dropped below the original cost of the inventory. If that is the case, then an adjustment to reduce inventory is needed.

Sales value. The sales value of an item can fall for any number of reasons. For example, technological innovation will almost automatically reduce the amount that can be charged for earlier models. This phenomenon can be seen whenever a new Go Pro or smart phone is introduced to the market. Older items still in stock often must be discounted significantly to attract buyers. Similarly, changes in fashions and fads can hurt the sales value of certain types of inventory. Swim suits usually are offered at reduced prices in August and September as the summer season draws to a close. Damage can also impact an owner's ability to recoup the cost of inventory. Advertised sales tempt buyers to stores by offering scratched and dented products, such as microwaves and refrigerators, at especially low prices.

For accounting purposes, the sales value of inventory is normally defined as its **estimated net realizable value**. As discussed in the previous chapter, this figure is the amount of cash expected to be derived from an asset. For inventory, net realizable value is the anticipated sales price less any cost required so that the sale will occur. For example, the net realizable value of an older model digital camera might be the expected amount a customer will pay after money is spent to advertise the product. The net realizable

value for a scratched refrigerator is likely to be the anticipated price of the item less the cost of any repairs that must be made prior to the sale.

Question: Inventory records are maintained at the historical cost of each item. For reporting purposes, this figure is utilized unless the market value is lower. A reduction in value can result because of a drop in net realizable value (a sales value). How is the comparison of cost and market value actually made when inventory is reported?

> *Assume that Rider Inc. is currently preparing financial statements and holds two bicycles in ending inventory. Model XY-7 cost the company $260 while Model AB-9 cost $380. As mentioned, Model XY-7 now has a net realizable value of only $210. The other unit, Model AB-9, has been damaged and can only be sold for $400 after $50 is spent for necessary repairs. What should Rider report for its asset inventory?*

Answer: As a preliminary step in preparing financial statements, a comparison of the cost and market value of the inventory is made. For Rider, both reported cost amounts here must be reduced and the inventory account shown as $560[1]. The market value used for both items is the item's net realizable value of $210 for XY-7 and $350 (net realizable value of $400 minus $50) for AB-9.

Figure 3.10 Recognition of a Loss on Impaired Inventory Value

Model	Cost	Impaired Market Value	Lower of Cost or Market Value
XY-7	$260	$210 (replacement cost)	$210
AB-9	380	350 (net realizable value)	350
Totals	$640		$560

Rider Inc. reports its inventory at the conservative $560 amount on its balance sheet with an $80 loss ($640 – $560) appearing in the income statement for this period. The journal entry to record this reduction in inventory is a credit to inventory and typically a debit to cost of goods sold. This communicates to the reader that drops in value of inventory below cost is part of the risk of doing business and holding inventory. When the drop is considered particularly unusual, a company may debit a loss on the income statement rather than the cost of goods sold expense. This simple illustration includes only one bike of each model. In more realistic scenarios, there would be several XY-7 unsold at the end of the year. If this is the case then the loss on XY-7 ($50) would be multiplied by the number of XY-7 are unsold to get a total loss. This would be the amount of the journal entry rather than just the loss on one. Also if there are other models where the market value is greater than the cost then they are ignored in calculating the loss. Only the models with a loss are counted.

Check Yourself

Gorilla, Inc. has 10 sets of virtual reality goggles in its inventory on December 31, 2025. Each of these sets of goggles cost Gorilla $900 when they were purchased. Right at the end of December, a new technology was released that greatly improved the performance of virtual reality. Gorilla's inventory has become somewhat obsolete. Where normally, Gorilla would sell the goggles for $1,500, for the 10 still unsold, Gorilla estimates that if shipped outside the country, they can still be sold for $400 and they would pay $50 each in extra shipping. What amount should Gorilla reduce its inventory by on December 31?

A. $4,500

B. $4,000

C. $5,500

D. Zero

The answer is C. The original cost of the inventory was $900 each so the total would be $9,000 for all 10. The net realizable value for the goggles is $350 = $400 – $50 each. For 10 that is $3,500. So inventory must go down by $5,500 (9,000 – 3,500). This would be recorded as an adjusting entry December 31 of a credit to inventory of $5,500 and debit to cost of goods sold $5,500 unless this is a very unusual drop in value.

Key Takeaways

Inventory is traditionally reported on a company's balance sheet at its historical cost. However, reductions can be made based on applying the conservative lower-of-cost-or-market approach. Net realizable value (expected sales price less any costs necessary to sale) may become less than cost because of changes in fads or technology or possibly as a result of damage. Consequently, the reported inventory figure should be reduced if this market values is below cost.

[1]In applying the lower-of-cost-or-market to inventory, the comparison can be made on an item-by-item basis. For example, XY-7 can be valued based on cost and market value and then, separately, a similar determination can be made for AB-9. A company can also group its inventory (all bicycles, for example, might comprise one group that is separate from all motorcycles) and report the lower amount determined for each of these groups. A third possibility is to sum the cost of all inventory and make a single comparison of that figure to the total of all market values. U.S. GAAP does not specify a mechanical approach to use in applying lower-of-cost-or-market value.

3.8: Reporting Inventory at the Lower-of-Cost-or-Market is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

3.9: End-of-Chapter Exercises

Questions

1. Define “cost” as it relates to determining the value of inventory.
2. What is a cash discount?
3. Explain what the term “3/10 n/30” means.
4. How do cash discounts impact the reported value of inventory?
5. What is a perpetual inventory system?
6. What is a periodic inventory system?
7. Explain the concept of “free on board.”
8. When does ownership transfer if documents specify “FOB shipping point”?
9. When does ownership transfer if documents specify “FOB destination”?
10. What two journal entries are made when inventory is sold under a perpetual system?
11. Give the formula for computing cost of goods sold under a periodic system.
12. Explain the concept of “lower-of-cost-or-market.”
13. Why would a company that uses a perpetual inventory system still perform a physical inventory count?
14. Why is it unrealistic to assume that inventory costs will remain constant over time?
15. What is a cost flow assumption?
16. Briefly explain the specific identification approach.
17. Briefly explain the first-in, first-out cost flow assumption.
18. Briefly explain the last-in, first-out cost flow assumption.
19. Briefly explain the averaging cost flow assumption.
20. Which cost flow assumption will give a higher net income in a period of rising prices?
21. Why don’t all companies use specific identification?
22. What are advantages of using LIFO?
23. Why must a company keep one set of books for financial reporting purposes and another for tax compliance purposes?

True or False (for review)

1. ____ If the market value of a company’s inventory increases, the company should record a gain.
2. ____ A company should include costs of transporting an item to its store when determining the cost of the item.
3. ____ A company that uses a perpetual inventory system should still perform a physical inventory count.
4. ____ In a perpetual system, but not a periodic system, cost of goods sold is determined and recorded at the time of sale.
5. ____ If inventory is shipped FOB shipping point, the buyer takes title as soon as the inventory leaves the seller’s warehouse.
6. ____ Companies infrequently take advantage of purchase discounts because they amount to so little savings.
7. ____ Companies only follow the “lower-of-cost-or-market” guideline if they use a periodic inventory system.
8. ____ Using the LIFO cost assumption will always result in a lower net income than using the FIFO cost assumption.
9. ____ LIFO tends to provide a better match of costs and expenses than FIFO and averaging.
10. ____ Companies can use LIFO for tax purposes and FIFO for financial reporting.
11. ____ It is impossible for decision makers to compare a company who uses LIFO with one who uses FIFO.
12. ____ A jewelry store or boat dealership would normally be able to use the specific identification method.
13. ____ The underlying concept of FIFO is that the earliest inventory purchased would be sold first.

Multiple Choice (for review)

1. On February 13, North Carolina Furniture purchases three sofas from a manufacturer for $300 each. The terms of the sale are 2/10 n/45. North Carolina Furniture pays the invoice on February 21. How much would they pay?

    1. $300
    2. $900
    3. $882

4. $810

2. Crayson Inc. started the year with $490,000 in beginning inventory. During the year, Crayson purchased an additional $1,060,000 in inventory. At the end of the year, Crayson employees performed a physical count and determined that ending inventory amounted to $450,000. What was Crayson's cost of goods sold for the year?

   1. $1,100,000
   2. $1,020,000
   3. $120,000
   4. $1,060,000

3. Raceway Corporation manufactures miniature cars and racetracks for collectors and enthusiasts. Raceway placed an order for supplies from Delta Inc. on December 1. The sales staff at Delta informed Raceway that the supplies would not be available to ship out until December 22 and Raceway accepted this arrangement. The supplies actually shipped, FOB shipping point, on December 26 and arrived at Raceway's receiving dock on January 2. On which date should Raceway include the supplies in its inventory?

   1. December 1
   2. December 22
   3. December 26
   4. January 2

4. Which of the following concerning the "lower-of-cost-or-market" rule is **not** true?

   1. If the estimated value of an inventory item falls below its historical cost, the value of the item should be written down.
   2. If the market value of an item exceeds its historical cost, it should be written up and a gain should be recorded.
   3. It is possible for an item's net realizable value to fall below its historical cost.
   4. Lower-of-cost-or-market is an example of the conservatism principle.

5. Romulus Company sells maps. At the end of the year, Romulus's inventory account indicated that it had 2,900 maps of Italy on hand that had originally cost $30 each. An inventory count showed that only 2,875 were actually in ending inventory. What journal entry should Romulus make?

   1. Debit cost of goods sold 750 credit loss on inventory shortage 750

   2. Debit cost of goods sold 30 and credit inventory 30

   3. Debit inventory 750 and credit cost of goods sold 750

   4. Debit cost of goods sold 750 and credit inventory 750

6. Real South Products has $400,000 worth of inventory on hand on January 1. Between January and March 13, Real South purchased an additional $190,000 in inventory and sales of $530,000 had been made. On March 13, Real South's warehouse flooded and all but $15,000 worth of inventory was ruined. Real South has an average gross profit percentage of 25 percent. What would be the approximate value of the inventory destroyed in the flood?

   1. $240,000
   2. $275,000
   3. $207,500
   4. $177,500

7. Which of the following provides the best matching of revenues and expenses?

   1. Specific Identification

2. FIFO
3. LIFO
4. Averaging

8. Milby Corporation purchased three hats to sell during the year. The first, purchased in February, cost $5. The second, purchased in April, cost $6. The third, purchased in July, cost $8. If Milby sells two hats during the year and uses the FIFO method, what would cost of goods sold be for the year?

   1. $13
   2. $19
   3. $14
   4. $11

9. Which is **not** a reason a company would choose to use LIFO for financial reporting?

   1. The company wishes to use LIFO for tax purposes.
   2. The company wants net income to be as high as possible.
   3. The company would like to match the most current costs with revenues.
   4. LIFO best matches the physical flow of its inventory.

10. Traylor Corporation began the year with three items in beginning inventory, each costing $4. During the year Traylor purchased five more items at a cost of $5 each and two more items at a cost of $6.50 each. Traylor sold eight items for $9 each. If Traylor uses LIFO, what would be Traylor's gross profit for the year?

    1. $42
    2. $30
    3. $35
    4. $72

Problems (for homework)

1. ConnecTech bought 400 computers in December 20X2 for $300 each. It paid $260 to have them delivered to its store. In January 20X3, ConnecTech sold 220 of the computers for $550 each. ConnecTech uses a perpetual inventory system.

   1. Prepare the journal entry(ies) to record ConnecTech's purchase of the computers.
   2. Determine the balance in ConnecTech's ending inventory on December 31, 20X2.
   3. Prepare the journal entry(ies) to record the sale of the computers.
   4. Determine the balance in ConnecTech's ending inventory on January 31, 20X3.

2. Montez Muffins and More is a bakery located in New York. Montez purchases a great deal of flour in bulk from a wholesaler. The wholesaler offers purchase discounts for fast payment. Montez purchased 6000 pounds of flour for $1000 total on May 1, under terms 3/10 n/30. Determine the amount Montez should pay under the following scenarios:

   1. Montez pays the full balance on May 25.
   2. Montez pays the full balance on May 10.
   3. Montez pays half the balance on May 10 and half on May 25.

3. Racers ATVs sells many makes and models of all terrain vehicles. Racers uses a periodic inventory system. On January 1, Racers had a beginning inventory of AXVs costing $28,600. On January 14, Racers received a shipment of Model AXVs with a purchase price of $14,700 and transportation costs of $400. On May 19, Racers received a second shipment of AXVs with a purchase price of $16,900 and transportation costs of $450. On November 1, Racers received its before-Christmas shipment of AXVs with a purchase price of $27,800 and transportation costs of $750.

   1. Make the necessary journal entries for January 14, May 19, and November 1 to show the purchase of the inventory.
   2. Assume that a physical inventory count on December 31 showed an ending inventory of AXVs of $25,800. Determine cost of goods sold for the AXV model for the year.
   3. If sales of AXVs were $96,700, what profit did Racers make on this model?

4. Magic Carpets Inc. sells a full line of area rugs, from top quality to bargain basement. Economic conditions have hit the textile industry, and Magic Carpets accountant is concerned that its rug inventory may not worth the amount Magic paid for it. Information about three lines of rugs is found below:

	Cost	Sales Price	Cost to Sell	Number of rugs in inventory
High Flyers	$235	$250	$25	80
Midflight	150	220	25	120
Under the Radar	100	109	22	160

   1. Determine market value for each type of rug.
   2. Determine lower-of-cost-or-market for each type of rug.
   3. Determine if Magic Carpets has suffered a loss of value on its inventory, and if so, what the amount of loss is (remember to multiply any loss on a model by how many are in inventory).
   4. Show the journal entry to record the loss if there is one.

5. Costello Corporation uses a perpetual inventory system. At the end of the year, the inventory balance reported by its system is $45,270. Costello performs an inventory count and determines that the actual ending inventory is $39,780.

   1. Discuss why a company that uses a perpetual inventory system would perform a physical inventory count.
   2. Why might the ending balance in inventory differ between the perpetual inventory system and physical inventory count?
   3. Assume that Costello believes the difference is due to errors made by its accounting staff and this is a normal risk in tracking inventory. Record the journal entry Costello should make in this case.

6. Fabulous Fay's is a boutique clothing store in San Diego. Fay's uses a perpetual inventory system. In March, Fay's purchased a type of swimwear designed to be slimming to the wearer. It purchased 20 suits of varying sizes for $55 each and priced them at $120 each. They sold out almost immediately, so Fay purchased 40 more suits in April for $55 each and sold 38 of them for $130 each. Again in July, Fay made one more purchase of 20 suits at $55 each and sold 14 of them for $130 each. Fay decided not to put the rest of her inventory on sale at the end of the summer, but to hold onto it until cruise season started the following winter. She believed she could sell the rest then without having to mark them down.

   1. Make the journal entries for the purchases Fay made.
   2. Make the journal entries for the sales Fay made.
   3. Determine the balance in ending inventory on December 31.
   4. Fay performed a physical count on December 31 and determined that three of the swimsuits had been severely damaged due to a leaky pipe. Make the journal entry to show the loss of this inventory.

7. Paula's Parkas sells NorthPlace jackets. At the beginning of the year, Paula's had twenty jackets in stock, each costing $35 and selling for $60. The following table details the purchases and sales made during January:

Date	Number of Items	Cost per Item
January 2	Purchased 12	$36.00
January 8	Purchased 10	36.50
January 10	Sold 15	
January 17	Sold 14	
January 22	Purchased 8	37.00
January 28	Sold 10	

Assume that Paula's Parkas uses the perpetual FIFO method.

1. Show the j**ournal entries** and **T accounts** needed to record the transactions during January
2. Determine Paula's Parkas cost of goods sold and ending inventory for January.
3. Determine Parka's gross profit for January.

8. Assume the same facts as in problem 7 above, but that Paula's Parkas uses the perpetual LIFO method.

   1. Show the **journal entries** and **T accounts** needed to record the transactions during January.
   2. Determine Paula's Parkas cost of goods sold and ending inventory for January.
   3. Determine Parka's gross profit for January.

9. Assume the same facts as in problem 7 above, but that Paula's Parkas uses the moving average method.

   1. Show the **journal entries** and the **T accounts** needed to record the transactions during January.
   2. Determine Paula's Parkas cost of goods sold and ending inventory for January.
   3. Determine Parka's gross profit for January.

Comprehensive Problem

In Chapter 2 "In a Set of Financial Statements, What Information Is Conveyed about Receivables?", you prepared Webworks statements for July. They are included here as a starting point for August.

Here are Webworks financial statements as of July 31.

Webworks
Balance Sheet
July 31

Assets		Liabilities	
Current		**Current**	
Cash	$5,720	Accounts Payable	$240
Accounts Receivable	1,050	Salaries Payable	200
Less Allowance for Doubtful Accounts	(105)	Unearned Revenue	500
Net Accounts Receivable	945	Total Current Liabilities	$940
Supplies Inventory	50		
Prepaid Rent	400		
Total Current Assets	$7,115		
Noncurrent		**Noncurrent**	
Equipment	$7,000	Notes Payable	$10,000
		Owners' Equity	
		Capital Stock	$2,000
		Retained Earnings	1,175
		Total Owners' Equity	$3,175
		Total Liabilities & Owners' Equity	
Total Assets	$14,115		$14,115

Webworks
Income Statement
As of July 31

Revenue	$2,300
Expenses	(1,295)
Earning before Tax	1,005
Tax Expense	(300)
Net Income	$705

Webworks
Stmt. Of Retained Earnings
As of July 31

Retained Earnings, July 1	$470
Net Income	705
Retained Earnings, July 31	$1,175

The following events occur during August:

a. Webworks decides to begin selling a limited selection of inventory items related to its business. During August, Webworks purchases specialty keyboards for $4,900 on account and flash drives for $3,200 on account with the hopes of selling them to its Web site customers or others who might be interested. Due to the limited amount of inventory, Webworks will use a periodic system. Record these purchases.

b. Webworks purchases supplies worth $100 on account.

c. Webworks starts and completes six more Web sites and bills clients for $2,700.

d. Recall that in July, Webworks received $500 in advance to design two Web sites. Webworks completes these sites during August.

e. Webworks collects $2,400 in accounts receivable.

f. Webworks pays Nancy $600 for her work during the first three weeks of August.

g. In June, Webworks designed a site for Pauline Smith and billed her. Unfortunately, before she could finish paying the bill, Ms. Smith's business folded. It is unlikely Webworks will collect anything. Record the entry to write off the $100 remaining receivable from Ms. Smith.

h. Webworks sells keyboards for $4,500 and flash drives for $3,000 cash.

i. Webworks pays off its salaries payable from July.

j. Webworks pays off $6,000 of its accounts payable.

k. Webworks receives $100 in advance to work on a Web site for a local dentist. Work will not begin on the Web site until September.

l. Webworks pays Leon salary of $2,000.

m. Webworks pays taxes of $475 in cash.

Required:

A. Prepare journal entries for the above events.

B. Post the journal entries to T-accounts.

C. Prepare an unadjusted trial balance for Webworks for August.

D. Prepare adjusting entries for the following and post them to your T-accounts.

n. Webworks owes Nancy $250 for her work during the last week of August.

o. Leon's parents let him know that Webworks owes $250 toward the electricity bill. Webworks will pay them in September.

p. Webworks determines that it has $60 worth of supplies remaining at the end of August.

q. Prepaid rent should be adjusted for August's portion.

r. Webworks is continuing to accrue bad debts at 10 percent of accounts receivable.

s. Webworks performs a count of ending inventory and determines that $1,900 in keyboards and $1,100 in flash drives remain. Record cost of goods sold.

E. Prepare an adjusted trial balance.

F. Prepare financial statements for August.

Above, you prepared Webworks statements for August.

The following events occur during September:

a. Webworks purchases supplies worth $120 on account.

b. At the beginning of September, Webworks had 19 keyboards costing $100 each and 110 flash drives costing $10 each. Webworks has decided to use perpetual FIFO to cost its inventory.

c. On account, Webworks purchases thirty keyboards for $105 each and fifty flash drives for $11 each.

d. Webworks starts and completes five more Web sites and bills clients for $3,000.

e. Webworks pays Nancy $500 for her work during the first three weeks of September.

f. Webworks sells 40 keyboards for $6,000 and 120 flash drives for $2,400 cash.

g. Webworks collects $2,500 in accounts receivable.

h. Webworks pays off its salaries payable from August.

i. Webworks pays off $5,500 of its accounts payable.

j. Webworks pays off $5,000 of its outstanding note payable.

k. Webworks pays Leon salary of $2,000.

l. Webworks pays taxes of $795 in cash.

Required:

A. Prepare journal entries for the above events.

B. Post the journal entries to T-accounts.

C. Prepare an unadjusted trial balance for Webworks for September.

D. Prepare adjusting entries for the following and post them to your T-accounts.

m. Webworks owes Nancy $300 for her work during the last week of September.

n. Leon's parents let him know that Webworks owes $275 toward the electricity bill. Webworks will pay them in October.

o. Webworks determines that it has $70 worth of supplies remaining at the end of September.

p. Prepaid rent should be adjusted for September's portion.

q. Webworks is continuing to accrue bad debts so that the allowance for doubtful accounts is 10 percent of accounts receivable.

E. Prepare an adjusted trial balance.

F. Prepare financial statements for September.

3.9: End-of-Chapter Exercises is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

CHAPTER OVERVIEW

4: In a Set of Financial Statements, What Information Is Conveyed about Long Term Assets?

4.1: The Reporting of Property and Equipment
4.2: Determining Historical Cost and Depreciation Expense
4.3: Alternative Patterns for Calculating Depreciation
4.4: Recording Depreciation Expense for a Partial Year
4.5: Recording Expenditures That Affect Older Assets
4.6: Identifying and Accounting for Intangible Assets
4.7: The Balance Sheet Reporting of Intangible Assets
4.8: Recognizing Intangible Assets Owned by a Subsidiary
4.9: Accounting for Research and Development
4.10: End-of-Chapter Exercises

4: In a Set of Financial Statements, What Information Is Conveyed about Long Term Assets? is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

4.1: The Reporting of Property and Equipment

Learning Objectives

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

1. Recognize that tangible operating assets with lives of over one year (such as property and equipment) are initially reported at historical cost.
2. Understand the rationale for assigning the cost of these operating assets to expense over time if the item has a finite life.
3. Recognize that these assets are reported on the balance sheet at book value, which is cost less accumulated depreciation.
4. Explain the reason for not reporting property and equipment at fair value except in specified circumstances.

Question: Wal-Mart Stores Inc. owns thousands of huge retail outlets and supercenters located throughout the United States and many foreign countries. These facilities contain a wide variety of machinery, fixtures and the like such as cash registers and shelving. On its January 31, 2025, balance sheet, Wal-Mart reports "property and equipment, net" of just under $120 billion, a figure that made up almost 46 percent of the company's total assets. This monetary amount was more than twice as large as any other asset reported by this company. Based on sheer size, the information conveyed about this group of accounts is extremely significant to any decision maker analyzing Wal-Mart or other similar companies. In creating financial statements, what is the underlying meaning of the figure reported for property, equipment, and the like? What information is conveyed by the almost $120 billion balance disclosed by Wal-Mart?

Answer: According to U.S. GAAP, the starting basis for the monetary figure to be reported by a company for property, equipment, and other tangible operating assets with a life of over one year (as with inventory and several other assets) is historical cost. The amount sacrificed to obtain land, machinery, buildings, furniture, and so forth can be objectively determined based on an arm's length transaction. A willing buyer and a willing seller, both acting in their own self-interests, agreed on this exchange price as being satisfactory.

Thus, the cost incurred to obtain property and equipment provides vital information about management policy and decision making. It also serves as the initial figure appearing on the balance sheet for any item classified in this manner. The buyer has voluntarily chosen to relinquish the specified amount of resources to gain the asset so this cost could be reasonably considered to be fair value as well. After the date of acquisition, the reported balance will probably never again reflect fair value.

Subsequently, for any of these operating assets that has a finite life (and most assets other than land do have finite lives), the matching principle necessitates that the historical cost be allocated to expense over the anticipated years of service. This expense is recognized systematically each period as the company utilizes the asset to generate revenue. Expenses are matched with revenues. For example, if equipment is used for ten years, all (or most) of its cost is assigned to expense over that period. This accounting is very similar to the handling of prepaid expenses such as rent as discussed in an earlier chapter. Cost is first recorded as an asset and then moved to expense over time in some logical fashion. At any point, the reported asset is the original cost less the portion of that amount that has been reclassified to expense. That is the most likely meaning of the $120 billion figure reported by Wal-Mart.

Question: The basic accounting for property and equipment certainly resembles that utilized for prepaid expenses such as rent and insurance. Do any significant differences exist between the method of reporting prepaid expenses and the handling of operating assets like machinery?

Answer: One important mechanical distinction does exist when comparing the accounting for prepayments and that used for property and equipment having a finite life. With a prepaid expense (such as rent), the asset is directly reduced over time as the cost is assigned to expense. Prepaid rent balances get smaller each day as the period of usage passes.

In reporting property and equipment, the asset does not physically shrink. As the utility is consumed over time, buildings and equipment do not get smaller; they only get older. To reflect that reality, a separate **accumulated depreciation** account[1] is created to measure the total amount of the asset's cost that has been expensed to date. Through this approach, information about the original cost continues to be available. For example, if equipment is reported as $30,000 and the related accumulated depreciation currently holds a balance of $10,000, the reader knows that the asset originally cost $30,000 but $10,000 of that amount has been moved to expense since the date of acquisition.

For reporting purposes, accumulated depreciation is subtracted from the historical cost of the asset to arrive at the net figure to be shown on the balance sheet. The remaining cost-based amount is often referred to as the net **book value** of the asset. If cost is $30,000 and accumulated depreciation is $10,000, net book value of $20,000 appears in the financial statements. The over $120 billion net figure reported by Wal-Mart is the cost of its property and equipment that has not yet been assigned to expense. It is the historical cost of those assets (approximately $232 billion) less accumulated depreciation (almost $112 billion—the amount of the cost already recorded as an expense).

Four accounts make up the property and equipment reported by Wal-Mart:

- Land
- Buildings and improvements
- Fixtures and equipment
- Transportation equipment

These are common titles but a variety of other names are also used to report similar asset groups. Examples include property, plant and equipment (abbreviated as PP&E), fixed assets, and plant assets. Regardless of the name that is applied, cost is reported initially and then depreciated unless—like land—the asset has an infinite life.

Check Yourself

Target Corporation reported for 2025 on their balance sheet that Property, Plant and Equipment, Net was $33 billion. Target shows that to calculate that net amount $26 billion has been subtracted as accumulated depreciation. What amount did Target's property, plant and equipment cost Target to purchase?

A. $33 billion

B. $26 billion

C. $59 billion

D. $7 billion

The answer is C. Target reports that for year ended 2025 they owned Property, Plant and Equipment that originally cost $59 billion and of that cost $26 billion had been moved to expense (used up). This left a net amount on the balance sheet of $33 billion left to use in the future.

Question: Wal-Mart reports property and equipment with a book value of $120 billion. However, that figure has virtually nothing to do with the value of these assets. They might actually be worth hundreds of billions. Decision makers analyze financial statements in order to make decisions about an organization at the current moment. Are these decision makers not more interested in the fair value of these assets than in what remains of historical cost? Why are property and equipment not reported at fair value?
Is fair value not a much more useful piece of information than cost minus accumulated depreciation when assessing the financial health and prospects of a business?

Answer: The debate among accountants, company officials, investors, creditors, and others over whether various assets should be reported based on historical cost or fair value has raged for decades. There is no easy resolution. Good points can be made on each side of the argument. As financial accounting has evolved, rules for reporting certain assets (such as many types of stock and debt investments where exact market prices can be readily determined) have been changed to abandon historical cost in favor of reflecting fair value. However, no such radical changes in U.S. GAAP have taken place for property and equipment. Reporting has remained relatively unchanged for many decades. Unless the value of one of these assets has been impaired or it is going to be sold in the near future, historical cost remains the basis for balance sheet presentation.

The fair value of property and equipment is a reporting alternative preferred by some decision makers, but only if the amount is objective and reliable. That is where the difficulty begins. Historical cost is both an objective and a reliable measure, determined by a willing buyer and a willing seller. In contrast, any gathering of "experts" could assess the value of a large building or an acre of land at widely differing figures with equal certitude. No definitive value can possibly exist until sold. What is the informational benefit of a number that is so subjective? Additionally, the asset's value might change radically on a daily basis rendering previous assessments useless. For that reason, historical cost, as adjusted for accumulated **depreciation,** remains the accepted method for reporting property and equipment on an organization's balance sheet.

This use of historical cost is supported by the going concern assumption that has long existed as part of the foundation for financial accounting. In simple terms, a long life is anticipated for virtually all organizations. Officials expect operations to continue for the years required to fulfill the goals that provide the basis for their decisions. They do not plan to sell property and equipment prematurely but rather to utilize these assets for their entire lives. Consequently, financial statements are constructed assuming the organization will function until all of its assets are consumed. Unless impaired or a sale is anticipated in the near future, the fair value of property and equipment is not truly of significance to the operations of a business. It might be interesting information but it is not actually of much importance if no sale is contemplated.

Talking with an Independent Auditor about International Financial Reporting Standards (Continued)

Following is a continuation of our interview with Robert A. Vallejo, partner with the accounting firm PricewaterhouseCoopers.

Question: In U.S. GAAP, land, buildings, and equipment have traditionally been reported at historical cost less the accumulated depreciation recognized to date. Adjustment to fair value is prohibited unless the asset's value has been impaired. Because of the conservative nature of accounting, increases in value are ignored completely until proven through a disposal. Thus, land might be worth $20 million but only shown on the balance sheet as $400,000 if that amount reflects cost. According to IFRS, can increases in the fair value of these assets be reported?

Rob Vallejo: Under IFRS, a company can elect to account for all or specific types of assets using fair value. In that instance, the designated assets are valued each reporting period and written up or down accordingly. Based on my experience working abroad and from speaking with my colleagues in Europe, few companies appear to elect to account for fixed assets using fair value. I am guessing that this decision is because of the administrative challenges of determining fair value and the earnings volatility that would be created by such a policy. Reported net income could bob up and down erratically as fair values fluctuated. Company officials rarely like to see such swings. However, in the right circumstances, using fair value might be a reasonable decision for some companies.

Key Takeaways

Land, buildings, and equipment are reported on a company's balance sheet at net book value, which is cost less any of that figure that has been assigned to expense. Over time, the expensed amount is maintained in a contra asset account known as accumulated depreciation. Thus, the asset's cost remains readily apparent as well as the net book value. Land and any other asset that does not have a finite life remain at cost. Unless the value of specific items has been impaired or an asset is to be sold in the near future, fair value is not used for reporting land, buildings, and equipment. It is not viewed as an objective or reliable amount. In addition, because the asset is not expected to be sold, fair value is of limited informational use to decision makers.

[1]As discussed in connection with accounts receivable and the allowance for doubtful accounts, an account that appears with another but as a direct reduction is known as a contra account. Accumulated depreciation is a contra account that decreases the reported cost of property and equipment to reflect the portion of that cost that has now be assigned to expense.

4.1: The Reporting of Property and Equipment is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

4.2: Determining Historical Cost and Depreciation Expense

Learning Objectives

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

1. Determine the guiding accounting rule that helps ascertain which costs are capitalized in connection with property and equipment and which are expensed.
2. List the variables that impact the amount of depreciation to be expensed each period.
3. Recognize that the straight-line method predominates in practice but any system that provides a rational approach can be used to create a pattern for depreciation.

Question: Businesses hold numerous types of assets, such as receivables, inventory, cash, investments, and patents. Proper classification is important for the clarity of the reported information. What requirements must be met for an asset to be classified as part of a business's property and equipment?

Answer: To be included within the property and equipment category, an asset must first have tangible physical substance and be expected to be used for longer than a single year. Furthermore, it must serve to generate revenues within the normal operating activities of the business. It cannot be held for immediate resale, like inventory.

A building used as a warehouse and machinery operated in the production of inventory both meet these characteristics. Other examples include computers, furniture, fixtures, and equipment. Conversely, land acquired as a future plant site and a building held for speculative purposes are both classified with investments (or, possibly, "other assets") on the owner's balance sheet rather than as property and equipment. Neither is used at the current time to help generate operating revenues.

Question: The basis for reporting property and equipment is historical cost. What amounts are included in determining the cost of such assets? Assume, for example, that Wal-Mart purchases a parcel of land and then constructs one of its retail stores on the site. Wal-Mart also buys a new cash register to use at this outlet. Initially, such assets are reported at cost. For property and equipment, how is historical cost defined?

Answer: In the previous chapter, the cost of a company's inventory was identified as the sum of all normal and necessary amounts paid to get the merchandise into condition and position to be sold. Property and equipment is not bought for resale so this rule cannot be followed here without some modification. Instead, all expenditures are included within the cost of property and equipment if the amounts are normal and necessary to get the asset into condition and position to assist the company in earning revenues. That is their purpose: to generate profits by helping to create the sale of goods and services.

Land can serve as an example. When purchased, the various normal and necessary expenditures made by the owner to ready the property for its intended use are capitalized to arrive at the cost to be reported. These amounts include payments made to attain ownership as well as any fees required to obtain legal title. If the land is acquired as a building site, money spent for any needed grading and clearing is also included as a cost of the land rather than as a cost of the building or as an expense. These activities readied the land for its ultimate use.

Buildings, machinery, furniture, equipment and the like are all reported in a similar fashion. For example, the cost of constructing a retail store includes money spent for materials and labor as well as charges for permits and the fees charged by architects and engineers. These are normal and necessary to get the structure into condition and position to help generate revenues.

As another example, the cost of a new cash register might well include shipping charges, installation fees, and training sessions to teach employees to use the asset. These costs all meet the criterion for capitalization. They appear to be normal and necessary to permit use of the asset for its intended purpose. Hence, a new cash register bought for $4,100 might actually be reported as an asset by its owner at $5,300 as follows:

Figure 4.1 Capitalized Cost of Equipment

Invoice Price—Charged by Seller	$4,100
Shipping Costs from Manufacturer	300
Installation	400
Employee Training Sessions	500
Cost of Cash Register	$5,300

Check Yourself

On the 2025 balance sheet for Checkers, Inc. the company reports land cost of $50,000 and building cost (before accumulated depreciation) of $250,000 separately. During 2026, Checkers purchases a piece of land for $80,000 and spends $3,000 making sure that ownership is transferred correctly to Checkers. The land must be leveled and graded at a cost of $10,000 before Checkers builds their new outlet on the land at a cost of $420,000. This is the only new purchase of Property, Plant and Equipment during 2026. Which of the following would be the proper reporting at the end of 2026 on the balance sheet?

A. Land cost $80,000 and Building Cost $433,000

B. Land cost $143,000 and Building Cost $670,000

C. Land cost $133,000 and Building Cost $680,000

D. Land cost $63,000 and Building Cost $760,000

The answer is B. The land cost carried over from 2025 of $50,000 plus all the costs necessary to get the new purchase ready for use – $80,000 + 3,000 + 10,000 = $143,000. The building cost was 250,000 from 2025 plus the $420,000 paid in the 2026 = 670,000.

Question: If a company pays $600,000 on January 1, Year One to rent a building to serve as a store for five years, a prepaid rent account (an asset) is established for that amount. Because the rented facility will be used to generate revenues throughout this period, a portion of the cost is reclassified annually as an expense to comply with the matching principle. At the end of Year One, $120,000 (or one-fifth) of the cost is moved from the asset balance into rent expense by means of an adjusting entry. As a result, the prepaid rent on the balance sheet drops to $480,000, the amount paid for the four remaining years.

If, instead, the company buys a building with an expected five-year life [1] for $600,000, the accounting is quite similar. The initial cost is capitalized to reflect the future economic benefit. Once again, an expense is then recorded at the end of Year One for a portion of this cost to satisfy the matching principle. This expense is referred to as depreciation. Should the Year One depreciation recognized in connection with this acquired building also be $120,000?
How is the annual amount of depreciation expense determined for reporting purposes?

Answer: The specific amount of depreciation expense recorded each year for buildings, machinery, furniture, and the like is based on four variables:

1. The historical cost of the asset
2. Its expected useful life
3. Any anticipated residual (or salvage) value
4. An allocation pattern

After total cost is computed, officials estimate the useful life based on company experience with similar assets in the past or other sources of information such as guidelines provided by the manufacturer[2]. In a similar fashion, officials arrive at an expected residual value—an estimate of the likely worth of the asset at the end of its useful life to the company. Because both life expectancy and residual value are no more than guesses, depreciation is simply a mechanically derived pattern that allocates the asset's cost to expense over its expected years of use.

To illustrate, assume a building is purchased by a company on January 1, Year One, for cash of $600,000. Based on experience with similar assets, officials believe that this structure will be worth only $30,000 at the end of an expected five-year life. U.S. GAAP does not require any specific computational method for determining the annual allocation of the asset's cost to expense. Over

seventy years ago, the Committee on Accounting Procedure (the authoritative body at the time) issued Accounting Research Bulletin 43 which stated that any method could be used to determine annual depreciation if done in a “systematic and rational manner.” This guidance remains in effect today.

Consequently, a vast majority of reporting companies (including Wal-Mart) have chosen to adopt the straight-line method to assign the cost of property and equipment to expense over their useful lives. The estimated residual value is subtracted from cost to arrive at the asset’s depreciable base. This figure is then expensed evenly over the expected life. It is systematic and rational: **Straight-line depreciation** allocates an equal expense to each period in which the asset is used to generate revenue.

Straight-line method:

(cost – estimated residual value) = depreciable base

depreciable base/expected useful life = annual depreciation

($600,000 – $30,000) = $570,000/5 years = depreciation expense of $114,000 per year

Question: *After depreciation has been calculated for the current period, how is this allocation of the asset’s cost to expense recorded within the company’s accounting system?*

Answer: An adjusting entry is prepared at the end of each period to move the assigned cost from the asset account on the balance sheet to expense on the income statement. To reiterate, the building account is not directly reduced. A separate negative or contra account (accumulated depreciation) is created to reflect the total amount of the cost that has been expensed to date. Thus, the asset’s present book value as well as its original historical cost are both still in evidence.

The entries to record the cost of acquiring this building and the annual depreciation expense over the five-year life are as follows. The straight-line method is used here to determine the individual allocations to expense. Now that students should be familiar with using debits and credits for recording, the number in parenthesis is included (where relevant to the discussion) to indicate the total account balance *after* the entry is posted (the running total in the T account). As indicated in an earlier chapter, revenues, expenses, and dividends are closed out each year. Thus, the depreciation expense reported on each income statement measures only the expense assigned to that period.

Figure 4.2 Building Acquisition and Straight-Line Depreciation

1/1/1	Building Cash	$600,000 ($600,000)	 $600,000
12/31/1	Depreciation Expense Accumulated Depreciation—Building	114,000 (114,000)	 114,000 (114,000)
12/31/2	Depreciation Expense Accumulated Depreciation—Building	114,000 (114,000)	 114,000 (228,000)
12/31/3	Depreciation Expense Accumulated Depreciation—Building	114,000 (114,000)	 114,000 (342,000)
12/31/4	Depreciation Expense Accumulated Depreciation—Building	114,000 (114,000)	 114,000 (456,000)
12/31/5	Depreciation Expense Accumulated Depreciation—Building	114,000 (114,000)	 114,000 (570,000)

Because the straight-line method is applied, depreciation expense is a consistent $114,000 each year. As a result, the net book value reported on the balance sheet drops during the asset's useful life from $600,000 to $30,000. At the end of the first year, it is $486,000 ($600,000 cost minus accumulated depreciation $114,000). At the end of the second year, net book value has been reduced to $372,000 ($600,000 cost minus accumulated depreciation of $228,000). This pattern continues over the entire five years.

Check yourself

If Downtown Company purchases a machine that costs $120,000 at the beginning of year 1 and is estimated to have a useful life of 7 years and has residual value of $10,000 then depreciation expense would be recorded for how much for **year 2** of its useful life?

A. $10,000

B. $110,000

C. $ 17,143

D. $ 15,714

The answer is D. The depreciation for each year is the same using the straight line method and the calculation would be ($120,000 – $10,000) / 7 = $15,714 (rounded)

Key Takeaways

Tangible operating assets with lives of over a year are initially reported at historical cost. All expenditures are capitalized if they are normal and necessary to put the property into the position and condition to assist the company in generating revenue. If the asset has a finite life, this cost is then assigned to expense over the years of expected use in some systematic and rational pattern. Many companies apply the straight-line method, which assigns an equal amount to every full year. In that approach, the expected residual value is subtracted from cost to get the depreciable base that is allocated evenly over the anticipated years of use by the company.

[1]The estimated lives of property and equipment varies widely. For example, in notes to its financial statements as of January 31, 2025, and for the year then ended, Wal-Mart disclosed that the expected lives of its buildings and improvements ranged from 3 years to 40.

[2]As mentioned previously, land does not have a finite life and is, therefore, not subjected to the recording of depreciation expense.

4.2: Determining Historical Cost and Depreciation Expense is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

4.3: Alternative Patterns for Calculating Depreciation

Learning Objectives

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

1. Explain the justification for accelerated methods of depreciation.
2. Compute depreciation expense using the double-declining balance method.
3. Realize that the overall impact on net income is not affected by a particular cost allocation pattern.
4. Describe the units-of-production method, including its advantages and disadvantages.

Question: Straight-line depreciation certainly qualifies as systematic and rational. The same amount of cost is assigned to expense during each period of use. Because no specific method is required by U.S. GAAP, do companies ever use alternative approaches to create other allocation patterns for depreciation? If so, how are these additional methods justified?

Answer: The most common alternative to the straight-line method is **accelerated depreciation**, which records a larger expense in the initial years of an asset's service. The primary rationale for this pattern is that property and equipment often produce higher revenues earlier in their lives because they are newer. The matching principle would suggest that recognizing more depreciation in these periods is appropriate to better align the expense with the revenues earned.

A second justification for accelerated depreciation is that some types of property and equipment lose value more quickly in their first few years than they do in later years. Automobiles and other vehicles are a typical example of this pattern. Recording a greater expense initially is said to better reflect reality.

Over the decades, a number of equations have been invented to mathematically create an accelerated depreciation pattern, high expense at first with subsequent cost allocations falling throughout the life of the property. The most common is the **double-declining balance method (DDB)**. When using DDB, annual depreciation is determined by multiplying the book value of the asset times two divided by the expected years of life. As book value drops, annual expense drops. This formula has no internal logic except that it creates the desired pattern, an expense that is higher in the first years of operation and less after that. Although **residual value is not utilized** in this computation, the final amount of depreciation recognized must be manipulated to arrive at this proper ending balance.

Depreciation for the building bought in the earlier section for $600,000 with an expected five-year life and a residual value of $30,000 is calculated as follows if DDB is applied.

(cost – accumulated depreciation) × 2/expected life = depreciation expense for period

Year One:

($600,000 – $0) = $600,000 × 2/5 = $240,000 depreciation expense

Year Two:

($600,000 – $240,000) = $360,000 × 2/5 = $144,000 depreciation expense *note using the depreciation from year 1 as accumulated depreciation*

Year Three:

($600,000 – $384,000) = $216,000 × 2/5 = $86,400 depreciation expense *note using the depreciation from year 1 and 2 as accumulated depreciation*

Year Four:

($600,000 – $470,400) = $129,600 × 2/5 = $51,840 depreciation expense

Year Five:

($600,000 – $522,240) = $77,760,

so depreciation for Year Five must be set at $47,760 to arrive at the expected residual value of $30,000. This final expense is always the amount needed to arrive at the expected residual value.

Note that the desired expense pattern has resulted. The expense starts at $240,000 and becomes smaller (declines) in each subsequent period.

Figure 4.3 Building Acquisition and Double-Declining Balance Depreciation

1/1/1	Building	$600,000	($600,000)		
	Cash			$600,000	
12/31/1	Depreciation Expense	240,000	(240,000)		
	Accumulated Depreciation —Building			240,000	(240,000)
12/31/2	Depreciation Expense	144,000	(144,000)		
	Accumulated Depreciation —Building			144,000	(384,000)
12/31/3	Depreciation Expense	86,400	(86,400)		
	Accumulated Depreciation —Building			86,400	(470,400)
12/31/4	Depreciation Expense	51,840	(51,840)		
	Accumulated Depreciation —Building			51,840	(522,240)
12/31/5	Depreciation Expense	47,760	(47,760)		
	Accumulated Depreciation —Building			47,760	(570,000)

Accumulated Depreciation T account			
Debit	Credit		
	Year 1	240,000	
	Year 2	144,000	Running total 384,000
	Year 3	86,400	Running total 470,400
	Year 4	51,840	Running total 522,240
	Year 5 - 30,000	47,760	Total of 570,000 or 600,000

So while both straight line and double declining balance methods end up with the same total depreciation over 5 years – the amount of depreciation recorded each year is different. Double declining balance records more depreciation and thus will have lower net income in the early years while straight line will have lower net income in the later years.

Check Yourself

If Downtown Company purchases a machine for $120,000 with a useful life of 7 years and an estimated residual value of $10,000 at the beginning of year 1, how much depreciation would be recorded in **YEAR 2** of its useful life using **Double Declining Balance**?

A. $24,490

B. $31,428

C. $34,286

D. $28,571

The correct answer is A. For year one the calculation would be 120,000 x 2 / 7 = 34,286. Subtract that accumulated depreciation from 120,000. So (120,000 – 34,286) x 2 / 7 = 24,490.

Question: The two methods demonstrated here for establishing a depreciation pattern are based on time, five years to be precise. In most cases, though, it is the physical use of the asset rather than the passage of time that is actually relevant to this process. Use is the action that generates revenues. How is the depreciation of a long-lived tangible asset determined if usage can be measured? For example, assume that a limousine company buys a new vehicle for $90,000 to serve as an addition to its fleet. Company officials expect this limousine to be driven for three hundred thousand miles and then have no residual value. How is depreciation expense determined each period?

Answer: Depreciation does not have to be based on time; it only has to be computed in a systematic and rational manner. Thus, the **units-of-production method (UOP)** is another alternative that is occasionally encountered. UOP is justified because the periodic expense is matched with the work actually performed. In this illustration, the limousine's depreciation can be computed using the number of miles driven in a year, an easy figure to determine.

($90,000 less $0)/300,000 miles = $0.30 per mile

Depreciation is recorded at a rate of $0.30 per mile. The depreciable cost basis is allocated evenly over the miles that the vehicle is expected to be driven. UOP is a straight-line method but one that is based on usage (miles driven, in this example) rather than years. Because of the direct connection between the expense allocation and the work performed, UOP is a very appealing approach. It truly mirrors the matching principle. Unfortunately, measuring the physical use of most assets is rarely as easy as with a limousine.

For example, if this vehicle is driven 80,000 miles in Year One, 120,000 miles in Year Two, and 100,000 miles in Year Three, depreciation will be $24,000, $36,000, and $30,000 when the $0.30 per mile rate is applied.

Figure 4.4 Depreciation—Units-of-Production Method

1/1/1	Vehicle Cash	$90,000 ($90,000)	 $90,000
12/31/1	Depreciation Expense Accumulated Depreciation —Vehicle	24,000 (24,000)	 24,000 (24,000)
12/31/2	Depreciation Expense Accumulated Depreciation —Vehicle	36,000 (36,000)	 36,000 (60,000)
12/31/3	Depreciation Expense Accumulated Depreciation —Vehicle	30,000 (30,000)	 30,000 (90,000)

See the running total for the accumulated depreciation T account in the far right column (with no residual value the depreciation is all the way to 90,000 - the cost of the limo.

Estimations rarely prove to be precise reflections of reality. This vehicle will not likely be driven exactly three hundred thousand miles. If used for less and then retired, both the cost and accumulated depreciation are removed. A loss is recorded equal to the remaining book value unless some cash or other asset is received. If driven more than the anticipated number of miles, depreciation stops at three hundred thousand miles. At that point, the cost of the asset will have been depreciated completely.

Check Yourself

Which of the following is true with regard to units of production calculation of depreciation?

A. Residual value is ignored in the calculation just like double declining balance.

B. It requires two steps – cost per unit calculation and multiply by units to get depreciation expense.

C. Over the life of an asset the units of production method results in higher total depreciation than double declining balance.

D. Units of production is probably the worst method for matching revenues with expenses.

The answer is B. Residual value is subtracted when calculating the cost per unit and all methods of depreciation must have the same total depreciation amount. Calculating depreciation requires two steps – cost per unit and then multiplying that cost by the number of units for the time period to get the depreciation expense for that time period.

Key Takeaway

Cost allocation patterns for determining depreciation exist beyond just the straight-line method. Accelerated depreciation records more expense in the earlier years of use than in later periods. This pattern is sometimes considered a better matching of expenses with revenues and a closer image of reality. The double-declining balance method is the most common version of accelerated depreciation. Its formula was derived to create the appropriate allocation pattern. The units-of-production method is often used for property and equipment where the quantity of work performed can be easily monitored.

4.3: Alternative Patterns for Calculating Depreciation is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

4.4: Recording Depreciation Expense for a Partial Year

Learning Objectives

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

1. Understand the need to record depreciation for the current period prior to the disposal of property or equipment.
2. Construct the journal entry to record the disposal of property or equipment and the recognition of a gain or loss.
3. Explain the half-year convention and the reason that it is frequently used by companies for reporting purposes.

Question: Property and equipment are occasionally sold before the end of their estimated lives. A company's operational needs might change or officials could want the benefit of a newer or more efficient model. What accounting is necessary in the event that a piece of property or equipment is sold prior to the conclusion of its useful life? In the example of a building purchased and depreciated in section 2, assume that after the adjusting entry for depreciation is made on December 31, Year Two, the building is sold for $290,000 cash. How is that transaction recorded?

Answer: Accounting for the disposal of property and equipment is relatively straightforward.

First, to establish account balances that are appropriate at the date of sale, depreciation is recorded for the period of use during the current year. In this way, the expense is matched with any revenues earned in the current period.

Second, the amount received from the sale is recorded while the book value of the asset (both its cost and accumulated depreciation) is removed. If the owner receives less for the asset than this book value, a loss is recognized for the difference, which decreases reported net income. If more is received than book value, the excess is recorded as a gain so that net income increases.

Because the above building is sold for $290,000 on December 31, Year Two, when the book value is $372,000 (cost of $600,000 less accumulated depreciation of $228,000 using the straight line method), a loss of $82,000 is reported by the seller ($372,000 book value less $290,000 proceeds). The following entry is recorded after the depreciation adjustment for the period is made.

Figure 4.5 Sale of Building at a Loss

12/31/2	Cash	290,000	
	Accumulated Depreciation—Building	228,000	
	Loss on Sale of Building	82,000	
	Building		600,000

ASSETS						= LIABILITIES		+ EQUITY	
CURRENT		LONG TERM						RETAINED EARNINGS	
Cash		Building		– Accumulated Depreciation (contra account)				– Loss	
Debit (Increase)	Credit (Decrease)	Debit (Increase)	Credit (Decrease)	Debit (Decrease)	Credit (Increase)			Debit (Increase)	Credit (Decrease)
290,000			600,000	228,000				82,000	

See the changes to the accounting equation and T accounts based on the journal entry to record the sale. The 600,000 for the building had been recorded in an earlier year and carried forward from last year. Both the building and the accumulated

depreciation associated with that building must go to zero with the sale.

Conversely, if this building is sold on that date for $440,000 rather than $290,000, the company receives $68,000 more than book value ($440,000 less $372,000) so that a gain of that amount is recognized.

Figure 4.6 Sale of Building at a Gain

12/31/2	Cash	440,000	
	Accumulated Depreciation—Building	228,000	
	Building		600,000
	Gain on Sale of Building		68,000

Note that the debit to Accumulated Depreciation and credit to building is the same whether it is sold at a gain or loss.

Although gains and losses appear on the income statement, they are often shown separately from revenues and expenses. In that way, a decision maker can determine both the income derived from primary operations (revenues less expenses) and the amount that resulted from tangential activities such as the sale of a building or other property (gains and losses).

Check Yourself

At the beginning of 2024, Arcsoft, Inc. purchased a delivery van for $30,000. Arcsoft used it for 2024, 2025, 2026, 2027 and 2028 in their business. Over those years, Arcsoft accumulated $25,000 in depreciation on the van. At the beginning of 2029, Arcsoft sold the van for $3,500 in cash. Which of the following is true with regard to Arcsoft's sale of the van in 2029?

A. Net income will be higher in 2029 because of the sale.

B. Current assets will be lower in 2029 because of the sale.

C. A debit of $25,000 to accumulated depreciation will be recorded because of the sale.

D. The loss on the sale recorded in 2029 will be $3,500.

The correct answer is C. To record the sale, a credit to vehicles for $30,000 and a debit to accumulated depreciation for $25,000 will be recorded. This is along with a debit to cash for $3,500 increasing current assets and a debit to loss for $1,500 which reduces net income in 2029.

Question: In the reporting above, the building was bought on January 1 and sold on December 31 so that depreciation was always determined and recorded for a full year. What amount of depreciation is appropriate if property or equipment is held for less than twelve months during a year? Virtually all such assets are bought or sold during the year so that a partial year is appropriate.

Answer: The recording of depreciation follows the matching principle. If an asset is owned for less than a full year, it does not help generate revenues for all twelve months. The amount of expense should be reduced accordingly. For example, if the above building is purchased on April 1, Year One, depreciation expense of only $85,500 (9/12 of the full-year amount of $114,000) is recognized on December 31, Year One. Similarly, if an asset is sold on a day other than December 31, less than a full year's depreciation is assigned to the year of sale. Once again, revenue is not generated for the entire period; depreciation expense must also be recognized proportionally.

To illustrate, assume the above building was purchased on April 1 of Year One for $600,000 and then sold for $350,000 on September 1 of Year Three. As calculated above, depreciation for Year One is $85,500. Depreciation for the final eight months that it was used in Year Three is $76,000 (8/12 of $114,000). The following journal entries reduce the asset's book value to $324,500 (cost of $600,000 less accumulated depreciation of $275,500). Cash of $350,000 is collected from the sale. Thus, a gain of $25,500 is recognized ($350,000 less $324,500).

Figure 4.7 Acquisition, Depreciation, and Sale of Building

4/1/1	Building	$600,000 ($600,000)	
	Cash		$600,000
12/31/1	Depreciation Expense	85,500 ($85,500)	
	Accumulated Depreciation —Building		85,500 (85,500)
12/31/2	Depreciation Expense	114,000 ($114,000)	
	Accumulated Depreciation —Building		114,000 (199,500)
9/1/3	Depreciation Expense	76,000 ($76,000)	
	Accumulated Depreciation —Building		76,000 (275,500)
9/1/3	Cash	350,000	
	Accumulated Depreciation —Building	275,500	
	Building		600,000
	Gain on Sale of Building		25,500

Question: Monitoring the specific days on which depreciable assets are bought and sold seems like a tedious process. Do companies use a simpler method for assigning depreciation when a piece of property or equipment is held for less than a full year?

Answer: Most companies hold many depreciable assets, often thousands. Depreciation is nothing more than a mechanical cost allocation process. It is not an attempt to mirror current value. Consequently, company officials often prefer not to invest the time and effort needed to keep track of the specific number of days or weeks of an asset's use during the years of purchase and sale. As a result, depreciation is often calculated to the nearest month when one of these transactions is made. A full month of expense is recorded if an asset is held for fifteen days or more whereas no depreciation is recognized in a month where usage is less than fifteen days. No genuine informational value comes from monitoring the depreciation of assets down to days, hours, and minutes. An automobile acquired on March 19, for example, is depreciated as if bought on April 1. A computer sold on November 11 is assumed to have been used until October 31.

As another accepted alternative, many companies apply the **half-year convention** (or some variation). When property or equipment is owned for any period less than a full year, a half year of depreciation is automatically assumed. Maintenance of exact records is not necessary. Long-lived assets are typically bought and sold at various times throughout each period so that, on the average, one-half year is a reasonable assumption. As long as such approaches are applied consistently, reported figures are viewed as fairly presented. Property and equipment bought on February 3 or sold on November 27 is depreciated for exactly one-half year in both situations. Neither the half year convention or any other simplification applies to the Units of Production cost allocation pattern. Because the depreciation is determined using units rather than time there is no need to check the dates or use simplified methods - just count up the units produced during the year or partial year and you are ready to calculate.

Check Yourself

Chicken Little, Inc. purchased sophisticated communication equipment for $370,000 on May 6th, 2025. The useful life of this equipment is 10 years and the residual value is $20,000. If Chicken Little uses the half year convention and the straight line method, how much depreciation would they record in 2025 on this equipment?

A. $37,000

B. $17,500

C. $18,500

D. $11,667

The answer is B. Depreciation is calculated by (370,000 – 20,000)/10 = $35,000 per year. Applying the half year convention, depreciation for one half of the year is recorded for the first year the asset is purchased regardless of the date of purchase. So 35,000 / 2 = 17,500. If the half year convention was not used, we would use the purchase date of May 6th to calculate depreciation starting with May 1 (eight months).

Key Takeaways

Depreciation expense is recorded for property and equipment at the end of each fiscal year and also at the time of an asset's disposal. To record a disposal, cost and accumulated depreciation are removed. Any proceeds are recorded and the difference between the amount received and the book value is recognized as a gain (if more than book value is collected) or a loss (if less is collected). Many companies automatically record depreciation for one-half year for any period of less than a full year. The process is much simpler and, as a mechanical allocation process, no need for absolute precision is warranted.

4.4: Recording Depreciation Expense for a Partial Year is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

4.5: Recording Expenditures That Affect Older Assets

Learning Objectives

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

1. Know when expenditures must be capitalized for an asset that has been in use for some time and the impact on future depreciation expense calculations.

Question: Assume that a building is acquired at a cost of $1,257,500. Assume further that it has an expected life of twenty years and straight-line depreciation is applied with no residual value. Thus, after eight years, accumulated depreciation is $503,000 ($1,257,500 × 8 years/20 years). At that point, the company spends an additional $150,000 on the building. Should an expenditure associated with property and equipment that is already in use be capitalized (added to the asset account) or expensed immediately?

Answer: The answer to this question depends on the impact that this work has on the building. In many cases, additional money is spent simply to keep the asset operating with no change in expected life or improvement in future productivity. Such costs are recorded as maintenance expense if they were anticipated or repair expense if unexpected. For example, changing the oil in a truck at regular intervals is a maintenance expense whereas fixing a dent from an accident is a repair expense. This distinction has no impact on reported income.

Figure 4.7 Recording of Cost to Maintain or Repair Asset

Maintenance (or Repair) Expense	150,000	
Cash		150,000

However, if the $150,000 cost increases the future operating capacity of the asset, the amount should be capitalized. The building might have been made bigger, more efficient, more productive, or less expensive to operate. If the asset has actually been improved by the cost incurred, historical cost is raised.

Figure 4.8 Cost Capitalized Because of Increase in Operating Capacity

Building	150,000	
Cash		150,000

Assuming that no change in either the useful life or the residual value occurs as a result of this work, depreciation expense will be $75,375 in each of the subsequent twelve years. The newly increased book value is simply allocated over the useful life that remains.

($1,257,500 +$150,000 – $503,000)/12 remaining years = $75,375 (New book value divided by remaining useful life)

Another possibility does exist. The $150,000 might extend the building's life without creating any other improvement. Because the building will now generate revenue for a longer period of time than previously expected, this cost is capitalized. A clear benefit has been gained from the amount spent. The asset is not physically bigger or improved but its estimated life has been extended. Consequently, the building is not increased directly, but instead, accumulated depreciation is reduced. In effect, this expenditure has recaptured some of the previously expensed utility.

Figure 4.9 Cost Capitalized Because Expected Life Is Extended

Accumulated Depreciation	150,000	
Cash		150,000

Assuming the $150,000 payment extends the remaining useful life of the building from twelve to eighteen years with no accompanying change in residual value, depreciation expense will be $50,250 in each of these remaining eighteen years. Once again, the book value has increased but, in this situation, the life of the asset has also been lengthened.

reduced accumulated depreciation: $503,000 – $150,000 = $353,000

adjusted net book value: $1,257,500 – $353,000 = $904,500

annual depreciation: $904,500/18 years = $50,250 Still the new book value divided by remaining useful life

Check Yourself

Vlad, Inc. owns an asset that originally cost $80,000 and they have accumulated $55,000 in depreciation over the years. Vlad spends $26,000 in cash on making the asset more efficient and better at the beginning of 2025. This improvement will make it so the asset will have a remaining useful life of 5 years with no residual value. What depreciation amount should Vlad record for this asset in 2025 using the straight line method?

A. $10,200

B. $26,000

C. $35,000

D. $5,100

The answer is A. With the improvement making the asset last longer and more efficient the $26,000 will be added to the original cost. The new book value will be 80,000 + 26,000 – 55,000 = $51,000. This will be divided by the remaining useful life of 5 years to get $10,200.

Key Takeaways

Subsequent costs incurred in connection with property and equipment are capitalized if the asset has been made bigger or better in some way. If the length of the remaining useful life is extended, capitalization is established by reducing accumulated depreciation.

4.5: Recording Expenditures That Affect Older Assets is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

4.6: Identifying and Accounting for Intangible Assets

Learning Objectives

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

1. List the characteristics of intangible assets and provide several common examples.
2. Understand that intangible assets are becoming more important to businesses and, hence, are gaining increased attention in financial accounting.
3. Record the acquisition of an intangible asset.
4. Describe the amortization process for intangible assets.
5. Explain the accounting used in reporting an intangible asset that has increased in value.

Question: Not so many years ago, most large companies reported significant amounts of property and equipment on their balance sheets but considerably smaller figures for **intangible assets**. *Businesses were often referred to as "bricks and mortar" operations because much of their money was invested in buildings, machinery, and similar long-lived tangible assets.*

Today, the basic nature of many corporate operations has changed dramatically. As of June 30, 2024, Microsoft Corporation reported a total of $147 billion for its "goodwill" and "intangible assets, net" versus a mere $136 billion in "property and equipment, net of accumulated depreciation."

The rise in the value and importance of intangible assets might well be the biggest change experienced in the reporting of businesses over the last 30 years. The sudden growth of Internet and technology companies like Microsoft and Yahoo! has focused attention on the significance of ideas and innovation for achieving profits.

Financial accounting rules evolve as the nature of business moves forward over time. Not surprisingly, much debate has taken place recently concerning the methods by which intangible assets are reported in a set of financial statements. A relatively minor topic in the past has gained a genuine level of importance. Should an idea or an invention be reported in the same manner as a building or a machine? For financial accounting, that is a very important question. As a starting point for this discussion, the basic nature of intangible assets needs to be understood. What is an intangible asset and what are some common examples?

Answer: As the title implies, an intangible asset is one that lacks physical substance. It cannot be touched but is expected to provide future benefits for longer than one year. More specifically, it will assist the reporting company in generating revenues during future periods. Except for a few slight variations, intangible assets are reported in a manner similar to a building or equipment. Historical cost serves as the basis for reporting. If the intangible has a finite life, the depreciation process (although the term "amortization" is normally utilized in connection with intangibles) reclassifies this cost from asset to expense over that estimated period.

FASB attempted to provide structure for the reporting process by placing all intangibles into six major categories:

1. Artistic-related (such as copyrights)
2. Technology-related (patents)
3. Marketing-related (trademarks)
4. Customer-related (a database of customer information)
5. Contract-related (franchises)
6. Goodwill

Notice that in all cases (except for goodwill, which will be explained later in this chapter), each intangible asset is actually an established right of usage. For example, according to the Web site for the United States Copyright Office, a copyright provides its owner with the right to use "literary, dramatic, musical, artistic, and certain other intellectual works." Similarly, the United States Patent and Trademark Office Web site explains that "a patent for an invention is the grant of a property right to the inventor."

In simple terms, an intangible asset is usually a right that helps the owner to generate revenues.

Check Yourself

Which of the following is NOT correct with regard to accounting for intangible assets?

A. Fair value instead of historical cost is used most often to record the acquisition.

B. For those with finite lives, the cost is moved to expense over their useful lives.

C. Intangible assets are generally rights that help the owner generate revenues.

D. Amortization is the term used to describe moving the cost to an expense.

A is correct. Like property, plant and equipment, historical cost is generally the basis used to record intangible assets.

Question: Intangible assets are accounted for in a manner that is similar to property and equipment. Assume that an automobile company is creating a television commercial for one of its new products. On January 1, Year One, the company pays $1 million cash to a famous musican (such as Ed Sheeren) for the right to use a well-known song in this video. Ed holds the legal copyright on this piece of music and agrees to share that right with the automobile company so that the song can be played in one or more commercials. What accounting is made by a company that acquires an intangible asset such as a copyright?

Answer: The buyer of an intangible asset prepares a journal entry that is basically identical to the acquisition of inventory, land, or a machine. As with all those other assets, the intangible is recorded initially at historical cost.

Figure 4.10 January 1, Year One—Acquisition of Right to Use Copyrighted Song

Copyright	1,000,000	
Cash		1,000,000

Many intangible assets have defined legal lives. For example, copyrights extend for seventy years beyond the creator's life. Acquired intangibles (such as the copyright for this song) often have lives legally limited by the contractual agreement. However, the true useful life of most intangibles is generally only a small number of years. Few intangibles manage to help a company generate revenues for decades. **Amortization** of the cost should extend over the shorter of the asset's useful life or its legal life.

To illustrate, assume that this piece of music is expected to be included by the automobile company in its commercials for the next four years and then a different advertising campaign will be started. Annual amortization is $250,000 ($1 million cost/4 year life) if the straight-line method is applied (which is normal for intangible assets).

Figure 4.11 December 31, Year One—First Year Amortization of Copyright Cost

Amortization Expense	250,000	
Copyright		250,000

At the end of the first year, the copyright appears on the balance sheet of the automobile company as $750,000, the remainder of its historical cost. Note that the credit in this adjusting entry is a direct decrease in the asset account. Although establishing a separate contra account (such as accumulated amortization) is permitted, most companies simply reduce the intangible asset balance because the utility is literally shrinking. Depreciation of a building or equipment does not mean that the asset is getting smaller; a four-story building remains a four-story building throughout its life. Reducing the building account would not reflect reality. In contrast, the above right to use this song did get smaller. The company went from holding a copyright to play this music in its commercials for an expected four years to a copyright that will only be used for three more years.

Question: In the above example, the automobile company acquired the right to use this music for $1 million. That was its historical cost, the figure to be reported for the asset on the company's balance sheet. The number was objectively determined and the accounting straightforward. However, the artist who originally created the music (or his or her company) still holds the original copyright. As indicated by this sale, the rights to this music are extremely valuable. How does the creator report an intangible asset

such as a copyright? Should the copyright to this piece of music now be reported by the artist (Ed Sheeren) at its proven value of $1 million?

Answer: Depending on the specific terms of the contract, the creator often continues to possess the copyright and maintains the asset on its own balance sheet. In most cases, the original artist only conveyed permission to the company to use this music for specific purposes or a set time period. However, the copyright does not appear on the creator's books at its $1 million value; rather, it remains at historical cost less any amortization to date. That is the reporting basis for intangible assets according to U.S. GAAP in the same way as for land, buildings, and equipment.

Historical cost for copyrights and other similar intangibles typically includes attorney fees as well as any money spent for legal filings and registration with the appropriate authorities. Subsequently, such intangible assets are sometimes the subject of lawsuits if other parties assert claims to the same ideas and creations. The cost of a successful defense is also capitalized and then amortized over the shorter of the remaining legal life or the estimated useful life.

Check Yourself

A license is another type of intangible asset that allows a company to do something specific for a specified length of time. A license to sell alcohol in Pennsylvania is that kind of asset. If BB Inc. pays $350,000 for a liquor license on January 1, 2025 that will allow for the sale of alcohol in their restaurant for 15 years, what should BB record as amortization for 2025?

A. $35,000

B. $30,000

C. $23,333

D. $15,000

The answer is C. The license has a useful life of 15 years and no residual value (completely worthless at the end) and intangible assets are amortized using straight line. So 350,000 / 15 = 23,333 rounded

Talking with an Independent Auditor about International Financial Reporting Standards (Continued)

Following is a continuation of our interview with Robert A. Vallejo, partner with the accounting firm PricewaterhouseCoopers.

Question: Under U.S. GAAP, intangible assets with a finite life are reported at historical cost less any accumulated amortization recognized to date. Except in impairment cases, fair value is ignored completely. How are intangible assets reported when IFRS standards are applied?

Robert Vallejo: Unless a company chooses to revalue its intangible assets regularly (an option that is available under IFRS but rarely chosen in practice because it must then be done over time), the accounting under U.S. GAAP and IFRS is basically the same. After initial recognition under IFRS, intangible assets are carried at cost less accumulated amortization (as well as any impairment losses). If an active market is available, fair value of all similar intangible assets can be chosen but, again, that value must then be updated frequently. Per IAS 38, Intangible Assets, the method of amortization that is used should reflect the pattern in which the asset's future economic benefits are expected to be realized by the entity. If that pattern cannot be determined reliably, the straight-line method of amortization must be used.

Key Takeaway

The reporting of intangible assets has grown in significance in recent years because of the prevalence and success of technology and electronics companies. For the most part, intangible assets provide a company with a right to use an idea, invention, artistic creation, or the like. Copyrights, patents, and trademarks are common examples. They are recorded at historical cost which is then amortized to expense over the shorter of the legal life or the useful life of the intangible. The accounting resembles that of property and equipment so that, for example, increases in value are not reported.

4.6: Identifying and Accounting for Intangible Assets is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

4.7: The Balance Sheet Reporting of Intangible Assets

Learning Objectives

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

1. Explain the preferred use of historical cost as the basis for recording property and equipment and intangible assets.
2. Realize that the use of historical cost means that a company's intangible assets such as patents and trademarks can be worth much more than is shown on the balance sheet.
3. Recognize that large reported intangible asset balances can result from their acquisition either individually or through the purchase of an entire company that holds valuable intangible assets.
4. Show the method of recording intangible assets when the owner is acquired by a parent company.

Question: Much was made in earlier chapters about the importance of painting a portrait that fairly presents the financial health and future prospects of an organization. Many companies develop copyrights and other intangible assets that have incredible value but little or no actual cost. Trademarks provide an excellent example. The golden arches that represent McDonald's must be worth billions but the original design cost was probably not significant and has likely been amortized to zero by now. Could the balance sheet of McDonald's possibly be considered as fairly presented if the value of its primary trademark is omitted?

Many other companies, such as Walt Disney, UPS, Google, Apple, Coca-Cola, and Nike, rely on trademarks to help create awareness and brand loyalty around the world. Are a company's reported assets not understated if the value of a trademark is ignored despite serving as a recognizable symbol to millions of potential customers? With property and equipment, this concern is not as pronounced because those assets tend to have significant costs whether bought or constructed. Internally developed trademarks and other intangibles often have little actual cost despite eventually gaining immense value.

Answer: Reported figures for intangible assets such as trademarks may indeed be vastly understated on a company's balance sheet when compared to their fair values. Decision makers who rely on financial statements need to understand what they are seeing. U.S. GAAP requires that companies follow the historical cost principle in reporting many assets. A few exceptions do exist and several are examined at various points in this textbook. For example, historical cost may have to be abandoned when applying the lower-of-cost-or-market rule to inventory and also when testing for possible impairment losses of property and equipment. Those particular departures from historical cost were justified because the asset had lost value. Financial accounting tends to follow the principle of conservatism. Reporting an asset at a balance in excess of its historical cost basis is much less common.

In financial accounting, what is the rationale for the prevalence of historical cost, which some might say was an obsession? As discussed in earlier chapters, cost can be reliably and objectively determined. It does not fluctuate from day to day throughout the year. It is based on an agreed-upon exchange price and reflects a resource allocation judgment made by management. Cost is not an estimate so it is less open to manipulation. While fair value may appear to be more relevant, different parties might arrive at significantly different figures. What are the golden arches really worth to McDonald's as a trademark? Is it $100 million or $10 billion? Six appraisals from six experts could suggest six largely different amounts.

Plus, if the asset is not going to be sold, is the fair value of any relevance at the current time?

Cost remains the basis for reporting many assets in financial accounting, though the reporting of fair value has gained considerable momentum. It is not that one way is right and one way is wrong. Instead, decision makers need to understand that historical cost is the generally accepted accounting principle that is currently in use for assets such as intangibles. For reporting purposes, it does have obvious flaws. Unfortunately, any alternative number that can be put forth to replace historical cost also has its own set of problems. At the present time, authoritative accounting literature holds that historical cost is the appropriate basis for reporting intangibles.

Even though fair value accounting seems quite appealing to many decision makers, accountants have proceeded slowly because of potential concerns. For example, the 2001 collapse of Enron Corporation was the most widely discussed accounting scandal to occur in recent decades. Many of Enron's reporting problems began when the company got special permission (because of the unusual nature of its business) to report a number of assets at fair value (a process referred to as "mark to market")[1]. Because fair value was not easy to determine for many of those assets, Enron officials were able to manipulate reported figures to make the

company appear especially strong and profitable[2]. Investors then flocked to the company only to lose billions when Enron eventually filed for bankruptcy. A troubling incident of this magnitude makes accountants less eager to embrace the reporting of fair value except in circumstances where very legitimate amounts can be determined. For property and equipment as well as intangible assets, fair value is rarely so objective that the possibility of manipulation can be eliminated.

Question: Although a historical cost basis is used for intangible assets rather than fair value, Microsoft Corporation still reported $147 billion as "goodwill and intangible assets, net" in 2024. Even the size of these numbers is not particularly unusual for intangible assets in today's economic environment. As of June 30, 2024, for example, the balance sheet for Procter & Gamble listed **goodwill** *of $40 billion and trademarks and other intangible assets, net of $22 billion. If historical cost is often insignificant, how do companies manage to report such immense amounts of intangible assets?*

Answer: Two possible reasons exist for intangible asset figures to grow to an incredible size on a company's balance sheet. First, instead of being internally developed, assets such as copyrights and patents are often acquired from outside owners. Reported balances then represent the historical costs of these purchases which were likely based on fair value. Large payments may be necessary to acquire such rights if their value has been firmly established.

Second, Microsoft, and Procter & Gamble could have bought one or more entire companies so that all the assets (including a possible plethora of intangibles) were obtained. In fact, such acquisitions often occur specifically because one company wants to gain valuable intangibles owned by another. In February 2008, Microsoft offered over $44 billion in hopes of purchasing Yahoo! for exactly that reason. Yahoo! certainly did not hold property and equipment worth $44 billion. Microsoft was primarily interested in acquiring a wide variety of intangibles owned by Yahoo! Although this proposed takeover was never completed, the sheer size of the bid demonstrates the staggering value of the intangible assets that today's companies often possess.

If a company buys a single intangible asset directly from its owner, the financial reporting follows the pattern previously described. Whether the asset is a trademark, franchise, copyright, patent, or the like, it is reported at the amount paid with that cost then amortized over the shorter of its useful life or legal life. Intangible assets that do not have finite lives are not amortized and will be discussed later in this chapter.

Reporting the assigned cost of intangible assets acquired when one company (often referred to as "the parent") buys another company ("the subsidiary") is a complex issue discussed in detail in upper-level Advanced Accounting courses. In simple terms, all the subsidiary's assets (inventory, land, buildings, equipment and the like) are given a **fair value** and recorded at that amount by the parent as the new owner. This process is referred to as the production of consolidated financial statements. Each intangible asset held by the subsidiary that meets certain rules is identified and also consolidated by the parent at its **fair value**. The assumption is that a portion of the price conveyed to buy the subsidiary is actually being paid to obtain these identified intangible assets. Thus, to the parent company, fair value reflects the cost that was conveyed to gain the intangible asset.

For example, assume Big Company pays $10 million in cash to buy all the stock of Little Company. Among the assets owned by Little are three intangibles (perhaps a copyright, patent, and trademark) that are each worth $1 million. Little also owns land worth $7 million. The previous book value of these assets is not relevant to Big. Following the takeover, Big reports each of the intangibles on its own balance sheet at $1 million. This portion of the acquisition value is assumed to be the historical cost paid by Big to obtain these assets. A company that buys a lot of subsidiaries will often report large intangible asset balances. When Big buys Little Company, it is really gaining control of all of these assets and records the transaction as follows. This entry will lead to the consolidation of the balance sheet figures.

Figure 4.11 Big Company Buys Little Company, Which Holds Assets with These Values

Copyright	1,000,000	
Patents	1,000,000	
Trademarks	1,000,000	
Land	7,000,000	
Cash		10,000,000

Check Yourself

When acquiring the stock or the entire company in an acquisition, which of the following are true?

A. The acquisition is seldom about gaining control of intangible assets.

B. The acquired intangible assets are recorded on the balance sheet of the buying company at **fair value**.

C. The cost of the assets to the company being acquired is the most important amount in recording an acquisition.

D. The amounts from the acquired company are kept on separate balance sheets and not consolidated.

The answer is B. The journal entry to record the acquisition of stock debits the newly controlled assets for their fair value with the credit to cash for the amount paid for the stock. Note that in the acquisition of all the stock of a company, stock is not used in the journal entry.

Key Takeaway

Many intangible assets (such as trademarks and copyrights) are reported on the balance sheet of their creator at a value significantly below actual worth. They are shown at cost less any amortization. Development cost is often relatively low in comparison to the worth of the right. However, the reported amount for these assets is not raised to fair value. Such numbers are subjective and open to sudden changes. Furthermore, if the intangible is not held for sale, fair value is of questionable relevance. Companies, though, often pay large amounts to buy intangibles or acquire entire companies that hold numerous intangibles. In accounting for the acquisition of a company, fair value should be assigned to each identifiable subsidiary intangible asset.

[1]Unique accounting rules have long existed in certain industries to address unusual circumstances. College accounting textbooks such as this one tend to focus on general rules rather than delve into the specifics of accounting as it applies to a particular industry.

[2]For a complete coverage of the history and ramifications of the Enron scandal, both the movie and the book *The Smartest Guys in the Room* are quite informative and fascinating.

4.7: The Balance Sheet Reporting of Intangible Assets is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

4.8: Recognizing Intangible Assets Owned by a Subsidiary

Learning Objectives

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

1. Explain that only those subsidiary intangible assets that meet either of two criteria are recognized separately by a parent after an acquisition.
2. List the two criteria for subsidiary intangibles to be reported by a parent as assets on its consolidated balance sheet.
3. Make the parent's journal entry to record the acquisition of a new subsidiary based on the fair value of its assets and liabilities.
4. Compute the amount to be reported as goodwill on a consolidated balance sheet when a parent acquires a new subsidiary.
5. Understand that amounts attributed to goodwill are not amortized to expense but rather are checked periodically for loss of value.

Question: When one company buys another, the subsidiary is often holding rights to numerous intangibles. As mentioned, acquisitions often take place to gain those rights. The parent places those assets that qualify on its own balance sheet at fair value to show that a portion of the amount paid for the subsidiary was the equivalent of an acquisition price for these items. That is a major reason why companies such as Microsoft and Procter & Gamble report billions of dollars in intangible assets. They have probably purchased many of them by acquiring entire companies.

However, according to U.S. GAAP, certain requirements have to be met before such intangibles are recognized as assets on a consolidated balance sheet following a takeover. What rules must be satisfied for an acquiring company to record an intangible (previously owned by an acquired company) as an asset? A new subsidiary could very well have hundreds of intangibles: patents, copyrights, databases, smart employees, loyal customers, logos, and the like. When the company is acquired, which of these intangibles are recognized on the consolidated balance sheet produced by the new parent?

Answer: FASB has stated that a parent company must identify all intangibles held by a subsidiary on the date of acquisition. For consolidation, the fair value of each of these intangibles is recorded by the parent as an asset but only if contractual or other legal rights have been gained or if the intangible can be separated and sold. This guideline serves as a minimum standard for recognition of intangible assets in a corporate takeover:

1. contractual or other legal rights have been gained or
2. the intangible can be separated from the subsidiary and sold.

Patents, copyrights, trademarks, and franchises clearly meet the first of these criteria. Legal rights are held for patents, copyrights, and trademarks while contractual rights provide the right to operate franchises. By acquiring the subsidiary, the parent now owns these same rights and should record them on the consolidated balance sheet at fair value.

Other intangibles that can be separated from the subsidiary and sold should also be consolidated at fair value. For example, an acquired company might have a database containing extensive information about its customers. After purchasing the subsidiary, this information could be separated from that company and sold. Thus, on the date the subsidiary is purchased, the parent should recognize this database as an intangible asset at fair value to reflect the portion of the acquisition price paid to acquire it.

Question: When one company buys another, payment amounts will likely be negotiated to compensate the seller for intangibles where contractual or legal rights are held or where the asset can be separated and then sold. Thus, parent companies who buy subsidiaries (especially in industries such as technology) will likely recognize significant intangible asset balances on the subsequently consolidated balance sheet.

However, some intangibles have value but fail to meet either of these two criteria. Customer loyalty, for example, is vitally important to the future profitability of a company, but neither contractual nor legal rights are present and loyalty cannot be separated from a company and sold. Hence, customer loyalty is not reported as an intangible asset despite its value. Much the same can be said for brilliant and creative employees. A value exists but neither rule for recognition is met.

The owners of a company that is being acquired will argue for a higher price if attributes such as these are in place because they provide for higher profitability in the future. The amount paid to obtain the subsidiary is impacted although these intangibles do

not meet the criteria for separate reporting as assets. How is this additional acquisition cost reported by the parent in producing consolidated financial statements?

Assume Giant Corporation pays $16 million to acquire Tiny Corporation. The subsidiary (Tiny) owns property and equipment worth $4 million. It also holds patents worth $6 million, a database worth $2 million, and copyrights worth $3 million. The total value of those assets is only $15 million. For convenience, assume Tiny has no liabilities. Assume that the parent agrees to pay the extra $1 million because the subsidiary has customer loyalty valued at $600,000 and a talented workforce worth $400,000. How is this additional $1 million reported after the takeover?
What recording is made when a parent buys a subsidiary and pays an extra amount because intangibles are present that have value but do not meet the criteria for separate reporting?

Answer: Every subsidiary intangible (such as patents and databases) that meets either of the official criteria is consolidated by the parent at fair value. Any excess price paid over the total fair value of these recorded assets (the extra $1 million in this question) is also reported as an asset. It has a cost and an expected future value. The term that has long been used to report an amount paid to acquire a company that exceeded all the identified and recorded assets is "goodwill." Some amount of goodwill is recognized as a result of most corporate acquisitions. In this example, it specifically reflects the value of the customer loyalty and the quality of the subsidiary's workforce.

If Giant pays $16 million for the stock of Tiny when its reportable assets have a value of only $15 million, the following entry is made by Giant to consolidate the two companies. As shown, the additional $1 million is labeled as goodwill, which will then be included within the intangible assets.

Figure 4.12 Giant Company Buys Tiny Company—$1 Million Paid over Fair Value of Assets

Property and Equipment	4,000,000	
Patents	6,000,000	
Database	2,000,000	
Copyrights	3,000,000	
Goodwill	1,000,000	
Cash		16,000,000

Question: In the above illustration, the parent paid this extra $1 million for specified intangibles. However, the customer loyalty and the talented workforce could not be recorded separately as assets because neither met the required criteria. Instead, a goodwill balance was created.

Is the reporting any different if the parent simply paid this amount as a result of serious negotiations? Assume, for example, that Giant agreed to the additional $1 million to obtain Tiny because that company's owners refused to sell for less. Giant believed that the $16 million price was still a good investment even though it required paying $1 million more than the value of the assets (tangible and intangible) that could be identified. If an acquiring company pays an additional amount to purchase a subsidiary without a specific rationale, is this cost still recorded as goodwill?

Answer: The acquisition of one company by another can require months of intense negotiations. One company wants to collect as much as possible; the other wants to pay as little as possible. Compromise is frequently necessary to arrive at a figure that both parties are willing to accept. In most cases, the new parent has to pay more than the sum of the value of all individual assets to entice the owners of the other company to sell.

Sometimes, as in the initial example with the customer loyalty and talented workforce, the reason for the added amount is apparent. More likely, the increased payment is simply necessary in order to make the deal happen. Because the extra amount is sacrificed to gain control of the subsidiary, it is still labeled by the parent as an asset known as goodwill. The rationale does not impact the accounting. Any extra acquisition price settled on to acquire a subsidiary appears in the parent's balance sheet as goodwill and is shown as an intangible asset.

Check Yourself

Gobble, Inc. agrees to purchase all of the stock of Feed, Inc. for $9 million in cash. Feed has the following assets – Inventory, Machinery, and Patents. Inventory has a cost to Feed of $1.5 million and that is its fair value as well. The machinery has a carrying cost of $3.7 million but a fair value of $4 million. The patent cost Feed $300,000 but has a fair value of $2.5 million. How much goodwill will Gobble record with the purchase of Feed?

A. Zero – cannot be identified specifically.

B. $2.5 million

C. $3.5 million

D. $1.0 million

The answer is D. The fair value of the identified assets from Feed are 1.5 + 4 + 2.5 = $8 million. Gobble paid $9 million so the excess over the identified assets is $1 million.

Question: Buildings, equipment, patents, databases, and the like all have costs that will be assigned to expense over an expected life as they help generate revenues. Goodwill is a different type of asset. It either represents a subsidiary attribute (such as customer loyalty) that is too nebulous to be recognized specifically as an intangible asset or an extra payment made by the parent as a result of the negotiation process. What happens to a cost labeled as goodwill after the date a subsidiary is acquired? How does Microsoft account for their large goodwill balances over time? Is this asset like land that simply continues to be reported at historical cost potentially forever or, possibly, like equipment that is depreciated systematically over some anticipated useful life?

Answer: Because goodwill is the one asset on a balance sheet that is not tied to an identifiable benefit, no attempt is made to determine an anticipated life. Consequently, unlike most intangibles, the assigned cost is not amortized to expense. A goodwill balance can remain unchanged for decades after a subsidiary is purchased. However, the reported figure is reduced immediately if the value is ever judged to be impaired. Attributes such as customer loyalty or a talented workforce might continue in place for years or disappear in a short period of time. If goodwill is merely a premium paid to acquire a subsidiary, the justification for that excess amount could vanish quickly through poor management decisions or environmental factors. The value of all assets is tentative but probably none is more so than goodwill.

Although a cost recorded as goodwill is not amortized over time, its ongoing worth is not assumed. Instead, a test to check for any loss of that value is performed annually. This verification process is more complex than can be covered in an introductory course. The result, though, is important to understand. In the event goodwill has declined in value, an **impairment loss** is recorded to reduce the reported balance.

In 2000, Time Warner and America Online (AOL) merged. Because of the perceived benefit of combing these two companies, a huge premium was paid and reported as goodwill on the consolidated balance sheet. Just two years later, it was obvious that the anticipated synergies from this transaction had not developed as expected. In simple terms, too much had been paid by the owners to create the merger. The value of the combined companies had not achieved their overly optimistic projections. Consequently, goodwill was reduced in 2002 by nearly $100 billion with a loss of that amount being reported by the consolidated company. The goodwill account was not amortized to expense but the eventual impairment had to be recognized.

Check Yourself

Which of the following is true with regard to goodwill after it is acquired?

A. The company who acquired it will never consider its value again.

B. The company who acquired it will test its value each year and record a loss if that value drops.

C. The company who acquired it will amortize the value to expense over a 15 year life.

D. The company who acquired it will reduce retained earnings by the amount paid above the identified value of the assets.

The answer is B. Goodwill does not have a finite life and thus is tested for impairment annually to see if there has been a drop in value.

Key Takeaway

When a parent acquires another company, all intangibles held by that subsidiary must be identified and consolidated at fair value but only if either of two criteria are met. Recognizing these assets is necessary if legal or contractual rights are held or the intangible can be separated from the company and sold. Other amounts are often included in the acquisition price to compensate for identifiable intangibles (such as customer loyalty) that do not meet either of these criteria. Or an extra payment is necessary simply to entice the owner to sell. In either situation, this additional amount is reported as goodwill, an intangible asset that then appears on the consolidated balance sheet. Goodwill is not amortized over time but rather is checked periodically for impairment with a loss recognized if the value has declined.

4.8: Recognizing Intangible Assets Owned by a Subsidiary is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

4.9: Accounting for Research and Development

Learning Objectives

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

1. Define the terms “research” and “development.”
2. Indicate the problem that uncertainty creates in reporting research and development costs.
3. Understand the method by which research and development costs are handled in financial accounting as has been established by U.S. GAAP.
4. Explain the advantages of handling research and development costs in the required manner.
5. Recognize that many companies will report asset balances that are vastly understated as a result of the official handling of research and development costs.

Question: Many companies create internally developed intangibles such as copyrights and trademarks. As has been mentioned previously, the historical cost for such assets is often relatively small, almost inconsequential. However, monetary amounts spent to arrive at ideas that can be turned into new types of marketable products are often enormous. Such expenditures are essential to the future success of many companies. In 2024 alone, Microsoft reported spending $29.5 billion on **research *and* development** *in hopes of discovering new products to patent and sell. During the same one-year period, Bristol-Myers Squibb incurred costs of $11.1 billion on research and development. Those are clearly not inconsequential amounts. What is meant by the term “research”? What is meant by the term “development”? If a company such as Microsoft or Bristol-Myers Squibb spends billions on research and development each year, what accounting is appropriate? Should the company recognize an asset or an expense or some combination? The outcome is uncertain, but the money was spent under the assumption that future economic benefits would be derived.*

For example, assume that a technological company or a pharmaceutical company spends $1 million in Year One to do research on Future Product A. The company then spends another $1 million during the period on development costs for Future Product A. At the end of the year, officials believe that a patent is 80 percent likely for Future Product A. If received, sales can be made. During that time, the company also spends another $1 million in research and $1 million in development in connection with Future Product B. However, at year’s end, the same officials are less optimistic about these results. They believe that only a 30 percent chance exists that this second product will ever receive a patent so that it can be used to generate revenues. According to U.S. GAAP, what reporting is appropriate for the cost of these two projects?

Answer: Research is an attempt made to find new knowledge with the hope that the results will eventually be useful in creating new products or services or significant improvements in existing products or services. Development is the natural next step. It is the translation of that new knowledge into actual products or services or into significant improvements in existing products or services. In simple terms, research is the search for new ideas; development is the process of turning those ideas into saleable products.

Reporting research and development costs poses incredibly difficult challenges for accountants. As can be seen with Microsoft and Bristol-Myers Squibb, such costs are often massive because of the importance of new ideas and products to the future of many organizations. Unfortunately, significant uncertainty is inherent in virtually all such projects. The probability of success can be difficult to determine for years and is open to manipulation for most of that time. Often the only piece of information that is known with certainty is the amount that has been spent.

Thus, except for some relatively minor exceptions, all research and development costs are expensed as incurred according to U.S. GAAP. The probability for success is not viewed as relevant to this reporting. Standardization is very apparent. All companies provide the same information in the same manner. The total cost incurred each period for research and development appears on the income statement as an expense regardless of the chance for success.

Consequently, the accounting for Future Product A and Future Product B is identical. Although one is 80 percent likely to be successful while the other is only 30 percent likely, the research and development expenditures for both are expensed as incurred. No asset is reported despite the possibility of future benefits. The rigidity of this rule comes from the inherent uncertainty as to whether revenues will ever be generated and, if so, for how long. Rather than trying to anticipate success, the conservatism found

in accounting simply expenses all such costs. The percentages associated with the likelihood of receiving a patent and generating future revenues are ignored.

Two major advantages are provided by this approach. First, the amount spent on research and development each period is easy to determine and then compare with previous years and with other similar companies. Decision makers are quite interested in the amount invested in the search for new ideas and products. Second, the possibility for manipulation is virtually eliminated. No distinction is drawn between a likely success and a probable failure. No reporting advantage is achieved by maneuvering the estimation of a profitable outcome.

Check Yourself

Of the $11.1 billion spent by Bristol Myers on research and development in 2024, what is the proper accounting treatment under U.S. GAAP?

A. All $11.1 billion is recorded as an expense and none of it is an asset.

B. The part that is spent on research is recorded as an expense but the development cost is recorded as an asset.

C. The amounts spent on projects with a more than 50% chance of becoming saleable are capitalized as assets.

D. All $11.1 billion is recorded as an asset at cost on the balance sheet.

The answer is A. According to U.S. GAAP all research and development costs are treated as expenses regardless of how likely they will develop into new products.

Question: Companies spend billions of dollars on research and development each year in hopes of creating new products that can be sold in the future. This money would never be spent unless officials believed that a reasonable chance existed to recoup such huge investments. However, whether success is 100 percent likely or only 2 percent, no asset are reported on the balance sheet for these costs. Because all amounts spent on research and development are expensed automatically, are the assets reported by companies in industries such as technology and pharmaceuticals not omitting many of their most valuable future benefits? If a company spends $5 billion to develop a new drug or electronic device that becomes worth $8 billion, does reporting absolutely no asset make sense?

Answer: Even a student in an introductory accounting course can quickly recognize the problems created by a rule requiring that all research and development costs be expensed as incurred. Technology, pharmaceutical, and many other companies must exclude items of significant value from their balance sheets by following U.S. GAAP. While this approach is conservative, consistent, and allows for comparability, the rationale is confusing. The balance sheet hardly paints a fair portrait of the underlying organization. Expensing research and development costs also violates the matching principle. These expenditures are made in the hopes of generating future revenues but the expense is recorded immediately.

Capitalizing these costs so that they are reported as assets is logical but measuring the value of future benefits is extremely challenging. Without authoritative guidance, the extreme uncertainty of such projects would leave the accountant in a precarious position. U.S. GAAP “solves” the problem by eliminating the need for any judgment by the accountant. All costs are expensed. No rule could be simpler to apply.

Consequently, any decision maker evaluating a company that invests heavily in research and development needs to recognize that the assets appearing on the balance sheet are incomplete. Such companies spend money to create future benefits that are not being reported. The wisdom of that approach has long been debated but it is the rule under U.S. GAAP. Difficult estimates are not needed and the possibility of manipulation is avoided.

Talking with an Independent Auditor about International Financial Reporting Standards (Continued)

Following is a continuation of our interview with Robert A. Vallejo, partner with the accounting firm PricewaterhouseCoopers.

Question: Virtually without exception, U.S. GAAP requires that all research and development expenditures must be expensed as incurred. This requirement has existed for over thirty years. Does IFRS handle research and development costs in the same manner?

Robert Vallejo: This is one of the best examples of differences between IFRS and U.S. GAAP. IFRS requires the capitalization of development costs. Guidelines do exist to help determine when a project moves from the research stage into the development stage.

However, once the development stage commences, the costs have to be capitalized and amortized over the anticipated useful life. When companies first adopt IFRS, this will be a change that will require some effort, particularly if development costs are significant, and will have a substantial impact on reported net income.

The difference between U.S. GAAP and IFRS is not a question of right or wrong but rather an example of different theories colliding. U.S. GAAP prefers not to address the uncertainty inherent in research and development programs but rather to focus on comparability of amounts spent (between years and between companies). IFRS, on the other hand, views the failure by U.S. GAAP to recognize assets when future benefits are clearly present as a reporting flaw that should not be allowed.

Key Takeaway

Research and development costs include all amounts spent to create new ideas and then turn them into products that can be sold to generate revenue. Because success is highly uncertain, accounting has long faced the challenge of determining whether such costs should be capitalized or expensed. U.S. GAAP requires that all research and development costs (with a few minor exceptions) be expensed as incurred. This official standard prevents manipulation and allows decision makers to see the amount spent by management for this essential function. However, this method of accounting means that companies (especially in certain industries) often fail to show some of their most valuable assets on their balance sheets.

References

FASB, “Accounting for Research and Development Costs,” *Statement of Financial Accounting Standards No. 2*, October 1974. Within the new *Accounting Standards Codification*, information on the reporting of research and development can be found at FASB ASC 730-10.

4.9: Accounting for Research and Development is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

4.10: End-of-Chapter Exercises

Questions

1. At what value is property, plant, and equipment (PP&E) typically reported on the balance sheet?
2. What is accumulated depreciation?
3. What type of account is accumulated depreciation?
4. Define “book value.”
5. Why is property and equipment not reported at its fair value?
6. Why is land not depreciated?
7. Why would land be classified as an investment rather than PP&E?
8. How does a company determine the historical cost of a property and equipment?
9. Define “useful life.”
10. Define “residual value.”
11. Which method of depreciation allocates an equal amount to each period the asset is used?
12. How does a company determine the gain or loss on the sale of PP&E?
13. What is the half-year convention?
14. What is accelerated depreciation and how is its use justified?
15. How does the units-of-production method differ from straight-line?
16. Define “intangible asset.”
17. Give three examples of intangible assets.
18. At what value are intangible assets typically reported?
19. How does an intangible asset differ from property and equipment?
20. What is amortization?
21. How does a company typically determine the useful life of an intangible?
22. Under what circumstances could the cost to defend an intangible asset in court be capitalized to the asset account?
23. Why are intangibles, like trademarks, not recorded at their market value, which can greatly exceed historical cost?
24. What are the two reasons intangible assets are reported at more than historical cost plus filing and legal costs?
25. When should a parent (acquiring) company record the intangibles of a subsidiary on its balance sheet?
26. What is “goodwill”?
27. Is goodwill amortized like other intangibles?
28. What should companies do with goodwill each reporting period?

True or False

1. 1. ____Almost all property, plant, and equipment (PP&E) is depreciated, which means that its cost is spread over its useful life.
   2. ____ PP&E is a long-term asset.
   3. ____ If an expenditure increases the useful life of an asset, it should be capitalized, not expensed.
   4. ____ The only acceptable method of depreciation is straight-line.
   5. ____ Accumulated depreciation is a contra-asset account.
   6. ____ The purchase price of an asset is capitalized, but costs like transportation and set up of the asset should be expensed as incurred.
   7. ____ Both assets used to generate revenue from operations and assets held as investment property are reported as PP&E on the balance sheet.
   8. ____Typically, intangible assets are shown at their fair val
   9. ____ A patent is an example of an intangible asset.
   10. ____ Amortization of intangibles is usually done over the asset’s legal life.
   11. ____Once a company records goodwill, it will be on the company’s books forever because it is not amortized
   12. ____ If an intangible asset is successfully defended from a legal challenge, legal costs may be capitalized to the asset account.

13. ____When one company acquires another, the acquiring company should continue to report any intangible assets of the purchased company at the same cost used by the purchased company.
14. ____An intangible asset is a right that helps the owner generate revenues.
15. ____Research and development costs that help develop successful programs can be capitalized
16. ____ Intangibles purchased from another company are reported at the amount paid for them less any amortization.

Multiple Choice

1. Which of the following would **not** be subject to amortization?
    1. Goodwill
    2. Patent
    3. Copyright
    4. Trademark
2. Mitchell Inc. developed a product, spending $4,900,000 in research to do so. Mitchell applied for and received a patent for the product in January, spending $34,800 in legal and filing fees. The patent is valid for seventeen years. What would be the book value of the patent at the end of Year 1?
    1. $4,644,518
    2. $34,800
    3. $32,753
    4. $4,611,765
3. Kremlin Company pays $2,900,000 for the common stock of Reticular Corporation. Reticular has assets on the balance sheet with a book value of $1,500,000 and a fair value of $2,500,000. What is goodwill in this purchase?
    1. $1,400,000
    2. $1,000,000
    3. $400,000
    4. $0
4. Which of the following concerning the research and development costs is true?
    1. According to U.S. GAAP, research and development costs must be expensed as incurred.
    2. Current U.S. GAAP reporting for research and development costs violates the matching principle.
    3. International Financial Reporting Standards allow some development costs to be capitalized.
    4. U.S. GAAP reporting for research and development costs is superior to international reporting.
5. Krypton Corporation offers Earth Company $800,000 for a patent held by Earth Company. The patent is currently on Earth Company's books in the amount of $14,000, the legal costs of registering the patent in the first place. Krypton had appraisers examine the patent before making an offer to purchase it, and the experts determined that it could be worth anywhere from $459,000 to $1,090,000. If the purchase falls through, at what amount should Earth Company now report the patent?
    1. $80,000
    2. $14,000
    3. $459,000
    4. $1,090,000
6. On January 1, the Rhode Island Redbirds organization purchased new workout equipment for its athletes. The equipment had a cost of $15,600, transportation costs of $450, and set up costs of $290. The Redbirds spent $350 training their trainers and athletes on its proper use. The useful life of the equipment is five years and has no residual value. How much depreciation expense should the Redbirds take in the first year, if straight-line is being used?
    1. $3,120
    2. $3,268
    3. $3,338
    4. $3,210

7. See the information in number 1 above. Assume the Redbirds decide to use the double-declining balance depreciation method instead. What would Year 1 depreciation expense be?
    1. $6,420
    2. $6,676
    3. $6,240
    4. $6,536
8. At the beginning of the year, the Kelvin Company owned equipment that appeared on its balance sheet as such:

Equipment	$7,000,000
Accumulated Depreciation	($2,000,000)

    The equipment was purchased two years ago and assigned a useful life of six years and a salvage value of $1,000,000. During the first month of the year, Kelvin made modifications to the equipment that increased its remaining useful life from four years to five years. Its salvage value remained unchanged. The cost of these modifications was $50,000. What would be the balance in the accumulated depreciation account of this equipment on 12/31 of that year?
    1. $2,760,000
    2. $3,000,000
    3. $810,000
    4. $2,000,000
9. Maxwell Corporation wishes to sell a building it has owned for five years. It was purchased for $430,000. Maxwell performed additional modifications to the building, which totaled $45,000. On the proposed date of sale, the accumulated depreciation on the building totaled $75,000. The proposed sales price of the building is $380,000. Maxwell is trying to determine the income statement effect of this transaction. What would be Maxwell's gain or loss on this sale?
    1. $20,000 loss
    2. $25,000 gain
    3. $50,000 loss
    4. $95,000 loss

Problems

1. At the beginning of the year, Jaguar Corporation purchased a license from Angel Corporation that gives Jaguar the right to use a process Angel created. The purchase price of the license was $1,500,000, including legal fees. Jaguar will be able to use the process for five years under the license agreement.
    1. Record Jaguar's purchase of the license.
    2. Record amortization of the license at the end of year one.
    3. What is the book value of the license reported on Jaguar's balance sheet at the end of Year One?
2. Yolanda Company created a product for which it was able to obtain a patent. Yolanda sold the patent to Christiana Inc. for $20,180,000 at the beginning of 2024. Christiana paid an additional $200,000 in legal fees to properly record the patent. At the beginning of 2024, Christiana determined that the patent had a remaining life of seven years.
    1. Record Christiana's purchase of the patent showing journal entry and T accounts.
    2. Record amortization of the patent at the end of 2024 and 2025 showing journal entries and T accounts.
    3. What is the book value of the patent reported on Christiana's balance sheet at the end of 2025?
    4. During 2026, Christiana is sued by Bushnell Corporation, who claims that it has a patent on a product similar to the one held by Christiana and that Bushnell's patent was registered first. After a lengthy court battle, in December of 2027, Christiana discovers that it has successfully defended its patent. The defense of the patent cost Christiana $1,700,000 in legal fees. Record any necessary journal entries dealing with the court battle.

5. Christiana reaffirms that the patent has a remaining life of three years (including 2027) on December 31, 2027. Record amortization expense on this date.
6. What is the book value of the patent reported on Christiana's balance sheet at the end of 2027?

3. Star Corporation purchases the stock of Trek Inc. for $67,856,000. Star Corporation is gaining the following assets and liabilities:

	Value on Trek's Books	Current Market Value
Inventory	$556,000	$556,000
Land	$2,250,000	$48,500,000
Trademarks	$640,000	$16,500,000
Patent	$39,000	$2,950,000
Accounts Payable	$650,000	$650,000

Prepare the journal entry for Star to record the purchase of Trek.

4. Assume the same facts as in problem 3 above, but assume that Star pays $90,000,000 for Trek.
   1. When a purchasing company pays more than the fair market value of the assets of a company being acquired, what is this excess payment called?
   2. Why might Star be willing to pay more than $67,856,000for Trek?
   3. Record the purchase of Trek by Star given this new purchase amount of $90,000,000.
5. Springfield Corporation purchases a new machine on March 3, 2025 for $48,600 in cash. It pays an additional $3,200 to transport and set up the machine. Springfield's accountant determines that the equipment has $6,000 residual value and that the useful life is eight years. It is expected to generate 2,400,000 units during its life. Assume Springfield employs the **half-year convention**.
   1. Record the purchase of the machine (show journal entry and T accounts).
   2. Assume that Springfield uses the straight-line method of depreciation. Show journal entries and T accounts needed to record depreciation expense for the first two years of the machine's life.
   3. Assume that Springfield uses the double-declining balance method of depreciation. Show journal entries and T accounts for the first two years of the machine's life.
   4. Assume that Springfield uses the units-of-production method of depreciation. During Year 1, the machine produces 260,000 units. During Year 2, the machine produces 290,000 units. Show journal entries and T accounts for the first two years of the machine's life.
6. On April 1, 2025, Chang and Chang Inc. invested in a new machine to manufacture soccer balls. The machine is expected to manufacture 1,400,000 balls over its life of three years and then it will be scrapped. The machine cost $50,000 including normal and necessary costs of setting it up. Chang will use units-of-production to depreciate the machine.
   1. Show the journal entries and T accounts to record depreciation for 2025 and 2026 assuming that 420,000 balls were manufactured and sold in 2025 and 565,000 were manufactured and sold in 2026.
   2. On January 1, 2027, Chang decides to get out of the soccer ball business, and sells the machine for $15,000. Record this journal entry.
7. Gameplay Company operates in mall locations and sells videogame equipment and games. The company purchased furniture and fixtures to use in one of its stores for $750,000 in January of 2023. The furniture and fixtures were being depreciated using the straight-line method over 7 years with a residual value of $50,000. At the end of December 2027, Gameplay decided to close the location and entered into an sales agreement with Allero Corporation. Allero agreed to give Gameplay cash of $350,000 in exchange for the furniture and fixtures from this store.

1. Show the journal entry and T account for the end of 2023 to record depreciation on the furniture and fixtures.
2. Make the depreciation entry for the furniture and fixtures that would be necessary in December 2027, assuming that no entries have been made during the year.
3. Determine the book value of the furniture and fixtures on the date of exchange.
4. Record the journal entry Gameplay would make for this exchange.
5. Where would Gameplay report the gain or loss you determined in 4. above?

Comprehensive Problem

This problem will carry through several chapters, building in difficulty. It allows students to continuously practice skills and knowledge learned in previous chapters.

In Chapter 3 “Why Does a Company Need a Cost Flow Assumption in Reporting Inventory?”, you prepared Webworks statements for September. They are included here as a starting point for October.

Here are Webworks financial statements as of September 30.

Webworks
Income Statement
As of September 30

Revenue	$11,400
Cost of Goods Sold	(5,315)
Gross Profit	6,085
Other Expenses	(3,435)
Earning before Tax	2,650
Tax Expense	(795)
Net Income	$1,855

Webworks
Stmt. of Retained Earnings
As of September 30

Retained Earnings, September 1	$2,790
Net Income	1,855
Retained Earnings, September 30	$4,645

Webworks
Balance Sheet
September 30

Assets		Liabilities	
Current		**Current**	
Cash	$3,300	Accounts Payable	$1,285
Accounts Receivable	1,750	Salaries Payable	300
Less Allowance for Doubtful Accounts	(175)	Unearned Revenue	100
Net Accounts Receivable	1,575		
Merchandise Inventory	1,385		
Supplies Inventory	70		
Total Current Assets	$6,330	Total Current Liabilities	$1,685
Noncurrent		**Noncurrent**	
Equipment	$7,000	Notes Payable	$5,000
		Owners' Equity	
		Capital Stock	$2,000
		Retained Earnings	4,645
		Total Owners' Equity	$6,645
Total Assets	$13,330	Total Liabilities & Owners' Equity	$13,330

The following events occur during October:

a. Webworks purchases supplies worth $100 on account.

b. Webworks paid $600 in rent for October, November, and December.

c. At the beginning of October, Webworks had nine keyboards costing $105 each and forty flash drives costing $11 each. Webworks uses periodic FIFO to cost its inventory.

d. On account, Webworks purchases fifty keyboards for $110 each and 100 flash drives for $12 each.

e. Webworks starts and completes seven more Web sites and bills clients for $3,900.

f. Webworks pays Nancy $700 for her work during the first three weeks of October.

g. Webworks sells 50 keyboards for $7,500 and 100 flash drives for $2,200 cash.

h. The Web site paid for in August and started in September was completed. The client had originally paid $100 in advance.

i. Webworks paid off the remainder of its note payable.

j. Webworks collects $4,000 in accounts receivable.

k. Webworks pays off its salaries payable from October.

l. Webworks pays off $6,000 of its accounts payable.

m. One Web site client is dissatisfied with the work done and refuses to pay his bill. Rather than incur the expense of taking the client to court, Webworks writes off the account in the amount of $200.

n. Webworks pays Leon a salary of $2,000.

o. Webworks purchased office furniture on account for $1,000, including transportation and setup.

p. Webworks pays taxes of $868 in cash.

Required:

A. Prepare journal entries for the above events.

B. Post the journal entries to T-accounts.

C. Prepare an unadjusted trial balance for Webworks for October.

D. Prepare adjusting entries for the following and post them to your T-accounts.

q. Webworks owes Nancy $100 for her work during the last week of October.

r. Leon's parents let him know that Webworks owes $300 toward the electricity bill. Webworks will pay them in November.

s. Webworks determines that it has $50 worth of supplies remaining at the end of October.

t. Prepaid rent should be adjusted for October's portion.

u. Webworks is continuing to accrue bad debts at 10 percent of accounts receivable.

v. A CPA tells Leon that Webworks should be depreciating its equipment and furniture. The CPA recommends that Webworks use the straight-line method with a four-year life for the equipment and a five-year life for the furniture. Normally, when an error is made, such as not depreciating equipment, the company must go back and restate prior financial statements correctly. Since Webworks is only generating these monthly statements for internal information, the CPA recommends that Leon just "catch up" the prior month's depreciation on the equipment this month. So when Webworks records October's equipment depreciation, it will also record the deprecation that should have been taken in July, August and September. The depreciation on the furniture should just be for one month. Round to the nearest whole number.

E. Prepare an adjusted trial balance.

F. Prepare financial statements for October.

The following events occur during November:

a. Webworks starts and completes eight more Web sites and bills clients for $4,600.

b. Webworks purchases supplies worth $80 on account.

c. At the beginning of November, Webworks had nine keyboards costing $110 each and forty flash drives costing $12 each. Webworks uses periodic FIFO to cost its inventory.

d. On account, Webworks purchases sixty keyboards for $111 each and ninety flash drives for $13 each.

e. Webworks pays Nancy $800 for her work during the first three weeks of October.

f. Webworks sells 60 keyboards for $9,000 and 120 flash drives for $2,400 cash.

g. A local realtor pays $400 in advance for a Web site. It will not be completed until December.

h. Leon read about a new program that could enhance the Web sites Webworks is developing for clients. He decides to purchase a license to be able to use the program for one year by paying $2,400 cash. This is called a “license agreement” and is an intangible asset.

i. Webworks collects $4,200 in accounts receivable.

j. Webworks pays off its salaries payable from November.

k. Webworks pays off $9,000 of its accounts payable.

l. Webworks pays Leon a salary of $2,000.

m. Webworks wrote off an uncollectible account in the amount of $100.

n. Webworks pays taxes of $1,135 in cash.

Required:

A. Prepare journal entries for the above events.

B. Post the journal entries to T-accounts.

C. Prepare an unadjusted trial balance for Webworks for November.

D. Prepare adjusting entries for the following and post them to your T-accounts.

o. Webworks owes Nancy $150 for her work during the last week of November.

p. Leon’s parents let him know that Webworks owes $290 toward the electricity bill. Webworks will pay them in December.

q. Webworks determines that it has $20 worth of supplies remaining at the end of November.

r. Prepaid rent should be adjusted for November’s portion.

s. Webworks is continuing to accrue bad debts at 10 percent of accounts receivable.

t. Webworks continues to depreciate its equipment over four years and its furniture over five years, using the straight-line method.

u. The license agreement should be amortized over its one-year life.

v. Record cost of goods sold.

E. Prepare an adjusted trial balance.

F. Prepare financial statements for November.

4.10: End-of-Chapter Exercises is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

CHAPTER OVERVIEW

5: In a Set of Financial Statements, What Information Is Conveyed about Liabilities?

5.1: Basic Reporting of Liabilities
5.2: Reporting Current Liabilities Such as Gift Cards
5.3: Accounting for Contingencies
5.4: Accounting for Product Warranties
5.5: Debt Financing
5.6: The Issuance of Notes and Bonds
5.7: Pricing and Reporting Term Bonds
5.8: Accounting for Leases and Installment Notes
5.9: End-of-Chapter Exercises

5: In a Set of Financial Statements, What Information Is Conveyed about Liabilities? is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

5.1: Basic Reporting of Liabilities

Learning Objectives

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

1. Define a “liability” by listing its essential characteristics.
2. Differentiate a current liability from a noncurrent liability.
3. Explain the significance that current liabilities have for investors and creditors who are studying the prospects of an organization.
4. Indicate the appropriate timing for the recognition of a liability.

Question: The June 30, 2024 consolidated balance sheet for The Procter & Gamble Company and its subsidiaries reports total **liabilities** *of over $71.8 billion, including current liabilities of approximately $33.6 billion. That seems to be a rather large figure, especially for an organization holding only $9.5 billion in cash and cash equivalents.*

For reporting purposes, the **current liabilities** *were divided into several specific categories*:

- *Accounts payable*
- *Accrued and other liabilities*
- *Debt due within one year*

When creating a balance sheet, what is reported as a liability? Why are some liabilities shown as current whereas others are not? How does an accountant draw a distinction between liabilities that are labeled as current and those that are reported as noncurrent (sometimes referred to as long-term liabilities)?

Answer: A liability is an obligation owed to a party outside the reporting organization—a debt that can be stated in monetary terms. Liabilities normally require the payment of cash but may at times be settled by the conveyance of other assets or the delivery of services. Some reported liabilities are for definite amounts, although a number are no more than estimations.

The distinction between current and **noncurrent liabilities** is a function of time. A debt that is expected to be satisfied within one year from the date of the balance sheet is classified as a current liability[1]. Amounts owed for rent, insurance, utilities, inventory purchases, and the like usually fall into this category. If payment will not be made until after that one-year interval, the liability is reported as noncurrent. Bonds and notes payable are common examples of noncurrent debts as are liabilities for employee pensions, long-term leases, and deferred income taxes. Current liabilities appear before noncurrent liabilities on a balance sheet.

Question: Below is the current liability section of the balance sheet reported by Eli Lilly and Subsidiaries as of December 31, 2024. Note that additional information about at least one of these liabilities is provided in the notes to the company’s financial statements.

Liability Section of Balance Sheet, Eli Lilly and Subsidiaries as of December 31, 2024.

Current Liabilities	
Short-term borrowings and current maturities of long-term debt (Note 11)	$ 5,117.1
Accounts payable	3,228.6
Employee compensation	2,093.9
Sales rebates and discounts	11,539.3
Dividends payable	1,346.3
Other current liabilities	5,051.4
Total current liabilities	28,376.6

All numbers in millions.

Decision makers who analyze an organization such as Eli Lilly usually spend considerable time studying the data available about liabilities, often focusing on current liabilities. Why is information describing liabilities, especially the size and composition of current liabilities, considered so important when assessing the financial position and economic health of a business?

Answer: Liabilities represent claims to assets. Debts must be paid as they come due or the entity risks damaging its future ability to obtain credit or even the possibility of bankruptcy. To stay viable, organizations need to be able to generate sufficient cash on an

ongoing basis to meet all obligations. Virtually no other goal can be more important, both to company officials and any external decision makers assessing an entity's financial well being and potential for future success.

In general, the higher a liability total is in comparison to the reported amount of assets, the riskier the financial position. The future is always cloudy for a company when the size of its debts begins to approach the total of its assets. The amount reported as current liabilities is especially significant in this analysis because those debts must be satisfied in the near future. Sufficient cash has to be available quickly, often within weeks or months. Not surprisingly, analysts become concerned when current liabilities grow to be relatively high in comparison with current assets because the organization might not be able to meet those obligations as they come due.

Check Yourself

When considering the financial well being of a company, which of the following would NOT be an important consideration?

A. Current liabilities are more critical than long term liabilities because they must be met soon.

B. Too many liabilities relative to assets and cash flow could increase the company's risk of bankruptcy.

C. Current liabilities are those obligations that must be paid in the next 90 days.

D. Bonds and notes payable are commonly shown as long term liabilities.

The answer is C. Current liabilities are obligations due in one year.

Question: An organization is not inclined to report more liabilities than necessary because of potential damage to the image being portrayed. The inclusion of debts tends to make a company look riskier to creditors and investors. Thus, the danger that officials will report an excessive amount of liabilities seems slight. Balance sheets look better to decision makers if fewer obligations are present to drain off resources. Consequently, where possible, is there not a tendency for officials to limit the debts that are reported? At what point does an entity have to recognize a liability? How does U.S. GAAP ensure that all liabilities are appropriately included on a balance sheet?

Answer: FASB *Statement of Financial Accounting Concepts* defines many of the elements found in a set of financial statements. According to this guideline, liabilities should be recognized when several specific characteristics all exist:

1. there is a probable future sacrifice
2. of the reporting entity's assets or services
3. arising from a present obligation that is the result of a past transaction or event.

To understand the reporting of liabilities, several aspects of these characteristics are especially important to note. First, the obligation does not have to be absolute before recognition is required. A future sacrifice only has to be "probable." This standard leaves open a degree of uncertainty.

As might be expected, determination as to whether a potential payment is probable can be the point of close scrutiny when independent CPAs audit a set of financial statements. The line between "probable" and "not quite probable" is hardly an easily defined benchmark.

Second, for reporting to be required, a debt must result from a past transaction or event.

- An employee works for a company and is owed a salary. The work is the past event that creates the obligation.
- A vendor delivers merchandise to a business. Acquisition and receipt of these goods is the past event that creates the obligation.

Third, the past transaction or event must create a present obligation. In other words, an actual debt must exist and not just a potential debt. Ordering a piece of equipment is a past event but, in most cases, no immediate obligation is created. In contrast, delivery of this equipment probably does obligate the buyer and, thus, necessitates the reporting of a liability. Often, in deciding whether a liability should be recognized, the key questions for the accountant are (a) what event actually obligates the company and (b) when did that event occur?

Determining the liabilities to be included on a balance sheet often takes considerable thought and analysis. Accountants for the reporting company produce a list of the debts that meet the characteristics listed above. The independent auditor then spends considerable time and energy searching for any other obligations that might have been omitted, either accidentally or on purpose.

Key Takeaway

Companies are wary of recording liabilities because of the negative impact on reported information. Thus, U.S. GAAP has established rules to help ensure the proper inclusion of liabilities. When specified characteristics are met, a liability is shown. Current liabilities typically are those reported debts that must be satisfied within one year from the balance sheet date. Because a company needs to be able to meet its debts as they come due, analysts pay close attention to this total.

[1]In upper-level accounting courses, the definition of a current liability is refined a bit. It refers to any liability that will require the use of a current asset or the creation of another current liability. However, the one-year standard presented in this textbook is sufficient in a vast majority of cases.

5.1: Basic Reporting of Liabilities is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

5.2: Reporting Current Liabilities Such as Gift Cards

Learning Objectives

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

1. Define and record “accrued liabilities.”
2. Report the sale and redemption of gift cards.
3. Account for gift cards that are not expected to be redeemed.

Question: Current liabilities often include rent payable, salary payable, insurance payable, and the like. These debts are incurred in connection with day-to-day operations. The amounts are known and payment will be made within a relatively short period of time.

Liabilities that result from physical events such as the purchase of inventory or supplies are often reported as accounts payable. Other current debts (interest payable or rent payable, for example) are sometimes combined under the general title of **accrued liabilities** *because they grow gradually over time rather than through a specific transaction. How does an organization determine the amount of current liabilities to be reported on its balance sheet?*

Answer: As discussed in a previous chapter, the timing for the recognition of a purchase is guided by the FOB point specified by the seller or negotiated by the parties. If marked “FOB shipping point,” the liability is reported by the buyer when the goods leave the seller’s place of business. “FOB destination” delays recording until the merchandise is received by the buyer. Unless goods are damaged during transit or a dispute arises over payment for transportation charges, the FOB point is only relevant around the end of a company’s fiscal year as the accountant attempts to classify transactions between one period and the next.

Many other liabilities are not created by a specific event but rather grow gradually day by day. Interest and rent are common examples but salaries, insurance, payroll taxes, and utilities also accrue in the same manner. They increase based on the passage of time. Interest on a loan or the amount due to an employee gets larger on a continual basis. For convenience, accounting systems often ignore the growth in these debts until payment is made or financial statements are prepared. Adjusting entries are required at the end of a period to recognize any accrued liabilities that have otherwise been omitted from the general ledger.

To illustrate, assume a large group of employees earns a total of $10,000 per day. They work Monday through Friday with payment made on the final day of each week. If the company’s year ends on Wednesday, an adjustment is necessary so that the expense on the income statement and the liability on the balance sheet are both presented fairly for the three days that have passed. The following adjustment is made for $30,000 ($10,000 per day for three days) so that the debt incurred for salaries in the first year is reported properly.

Figure 5.1 Year-end Adjusting Entry to Recognize Debt for Three Days’ Work

Wages Expense	30,000	
Wages Payable		30,000

As a second example, assume a company borrows $100,000 from a bank at a 6 percent annual interest rate on December 1 with payment to be made in six months. At the end of that year, the company owes interest but only for one month, an amount that is recognized through the following adjusting entry. Accrued interest of $500 ($100,000 principal × 6 percent × 1/12 year) is reported as of December 31. Note that with interest, the liability and expense are recorded only when time has passed and not when the original amount was borrowed.

Figure 5.2 Year-end Adjusting Entry to Recognize Interest for One Month

Interest Expense	500	
Interest Payable		500

Check Yourself

Ware, Inc. borrowed $250,000 from the bank on September 1, 2025. Ware agreed to pay 7% interest annually on the loan and will make payments only each year on the anniversary of the loan in cash equal to the interest plus $25,000. What would the adjusting entry on December 31, 2025 for interest on this loan be if Ware only makes adjusting entries at the end of the year?

A. Debit Interest Expense $5,833 and Credit Interest Payable $5,833.

B. Debit Interest Expense $17,500 and Credit Interest Payable $17,500.

C. Debit Interest Payable $17,500 and Credit Interest Expense $17,500.

D. Debit Interest Payable $5,833 and Credit Interest Expense $5,833.

The correct answer is A. Interest on the loan would be calculated from Sept 1 to December 31 or 4 months. Interest is calculated by taking 250,000 x 7% x 4/12 = $5,833 which is a debit to the expense and a credit to the liability that increases both. Note that you divide by the number of months in a year and then multiply by the number of months that have gone by (used).

*Question: The Feb 1, 2025, balance sheet for Best Buy Co. Inc. shows several typical current liability accounts such as accounts payable and accrued liabilities. However, a $253 million figure also appears titled "**Unredeemed** **Gift Card Liabilities**." Over the last couple decades, the importance of gift cards has escalated dramatically for many businesses. By purchasing such cards, customers obtain the right to a specified amount of goods or services. From Starbucks to iTunes, these cards are sold to serve as gifts or merely as a convenient method for handling future payments. How does a company such as Best Buy account for the thousands of gift cards that it sells each year?*

Answer: A liability represents a probable future sacrifice of an asset or service. By selling a gift card, a company has accepted an obligation that will be reported on its balance sheet. Companies such as Best Buy or Amazon must be willing to hand over inventory items such as cameras or books at the time the gift card is presented. Or, perhaps, some service can be required by the cardholder such as the repair of a computer or a massage. To the seller, a gift card is a liability but one that is not normally settled with cash. Probably the most common type of gift card is a postal stamp. When bought, the stamp provides a person with the right to receive a particular service, the mailing of a letter or package.

To illustrate, assume that a company sells ten thousand gift cards with a redemption value of $50 each. Revenue cannot be recognized when sold because the earning process is not substantially complete. The asset or service has not yet been conveyed to the customer. Rather, a liability (such as "unearned revenue" or "gift card liability") is reported to indicate that the company has an obligation to the holder of the card.

Figure 5.3 Sale of Ten Thousand $50 Gift Cards for Cash

Cash	500,000	
Unearned Revenue		500,000

Over time, customers will present their gift cards for selected merchandise. Assume that a person uses the first $50 card to buy goods which had originally cost the company only $32. Upon redemption, the liability is satisfied and the revenue can be recognized. The obligation is met and the earning process has been substantially completed. The second entry below presumes a perpetual inventory system is in use.

Figure 5.4 Redemption of Gift Card

Unearned Revenue	50	
Revenue		50
Cost of Goods Sold	32	
Inventory		32

Question: Some gift cards are never redeemed. They might be lost or just forgotten. Does the liability for a gift card remain on a company's balance sheet indefinitely if it is unlikely that redemption will ever occur?

Answer: One reason that gift cards have become so popular with businesses is that some percentage will never be redeemed. They will be misplaced, stolen or the person will move away or die. In such cases, the seller has received money but was never forced to fulfill the obligation. The entire amount of the sale is profit.

A difficult theoretical question arises as to the timing of recognition of the revenue from any such anticipated defaults since the earning process is never substantially completed by redemption. In theory, a company recognizes this revenue when reasonable evidence exists that the card will never be used by the customer. Practically, though, determining this precise point is a matter of speculation.

Companies typically report the revenue from unused gift cards at one of three possible times:

1. When the cards expire if a time limit is imposed.
2. After a specified period of time such as eighteen months or two years.
3. In proportion to the cards that are actually sold. For example, assume historically that 10 percent of gift cards sold are never used by their owners. Assuming $8,000 in gift cards are outstanding at the end of a year. If 10 percent of the gift cards are assumed to not be ever used, the company can reclassify $800 (10 percent of $8,000) from unearned revenue to revenue to reflect the estimated portion of those cards that will never be presented.

Because of this accounting issue, a note to the financial statements produced by Best Buy explains: *Our gift cards do not expire. We recognize revenue from gift cards when the card is redeemed by the customer. We also recognize revenue for the portion of gift card values that is not expected to be redeemed ("breakage"). We estimate breakage based on historical patterns and other factors, such as laws and regulations applicable to each jurisdiction. We recognize breakage revenue using a method that is consistent with customer redemption patterns. Typically, over 90% of gift card redemptions (and therefore recognition of over 90% of gift card breakage revenue) occur within one year of issuance. There is judgment in assessing (1) the level at which we group gift cards for analysis of breakage rates, (2) redemption patterns, and (3) the ultimate value of gift cards which we do not expect to be redeemed*

Check Yourself

During 2025, Troy, Inc. sold gift cards totaling $200,000 and credits unearned revenue. Troy looks at historical trends and sees that 90% of gift cards have typically been redeeemed within 1 year of purchase. At the end of 2025, Troy sees that of the $200,000 of gift cards sold in 2025, there are $8,000 still not redeemed. Troy estimates that 50% of these will never be redeemed. What journal entry is needed to record this adjusting entry?

A. Debit Cash $4,000 and Credit Revenue $4,000.

B. Debit Unearned Revenue $8,000 and Credit Revenue $8,000.

C. Debit Unearned Revenue $4,000 and Credit Revenue $4,000.

D. Debit Cost of Goods Sold $4,000 and Credit Inventory $4,000.

The answer is C. Half of the $8,000 has been determined will not be redeemed so the adjusting entry for $4,000 needs to reduce the unearned revenue and credit revenue.

Key Takeaway

Accounts payable are created by the purchase of inventory or supplies. Accrued liabilities are those debts that grow gradually over time. All such liabilities must be recorded prior to the preparation of financial statements. In today's retail world, many companies

sell gift cards. Because a product or service must be provided to the holder of a gift card, the company has an obligation and a liability is reported. The liability is later reclassified as revenue when the card is redeemed because the earning process is substantially complete. Revenue should also be recorded when it becomes likely that redemption will never occur. This happens when cards are lost, stolen, or the customer has died or left the area. The company must ensure that revenue for such gift cards is not reported until an appropriate point in time.

5.2: Reporting Current Liabilities Such as Gift Cards is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

5.3: Accounting for Contingencies

Learning Objectives

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

1. Define a “commitment” and explain the method by which it is reported.
2. Define a “contingency” and explain the method by which it is reported.
3. Identify the criteria that establish the reporting of a contingent loss.
4. Describe the appropriate accounting for those contingent losses that do not qualify for recognition at the present time.
5. Explain the handling of a loss that ultimately proves to be different from the originally estimated and recorded balance.
6. Provide the proper reporting rules for a contingency.

Question: The February 1, 2025, balance sheet for Best Buy shows total liabilities of approximately $12 billion. Immediately following the liability section, a separate category titled “Commitments and Contingent Liabilities” is included but no monetary figure is presented. Note 12 to the financial statements provides further details. They give some information about litigation, and purchase commitments. In financial reporting, what is meant by the terms “commitments” and “contingencies” (including loss and gain contingencies)?

Answer:

Commitments. Commitments represent unexecuted contracts. For example, assume that a business places an order with a truck company for the purchase of a large truck. The business has made a commitment to pay for this new vehicle but only after it has been delivered. Although cash may be needed in the future, no event (delivery of the truck) has yet created a present obligation. There is not yet a liability to report; no journal entry is appropriate.

The information is still of importance to decision makers because future cash payments will be required. However, events have not reached the point where all the characteristics of a liability are present. Thus, extensive information about commitments is included in the notes to financial statements but no amounts are reported on either the income statement or the balance sheet. With a commitment, a step has been taken that will likely lead to a liability.

Contingencies. A contingency poses a different reporting quandary. A past event has occurred but the amount of the present obligation (if any) cannot yet be determined. With a contingency, the uncertainty is about the outcome of an action that has already taken place. The accountant is not a fortune teller who can predict the future. For example, assume Wysocki Corporation commits an act that is detrimental to the environment so that the federal government files a lawsuit for damages. The original action against the environment is the past event that creates the contingency. However, both the chance of losing the suit and the possible amount of any penalties might not be known definitively for several years. What, if anything, should be recognized in the interim?

Because companies prefer to avoid (or at least minimize) the recognition of losses and liabilities, it is not surprising that structured guidelines are needed for reporting contingencies. Otherwise, few if any contingencies would ever be reported. U.S. GAAP in this area was established in 1975 when FASB issued its Statement Number Five, “Accounting for Contingencies.” This pronouncement requires the recognition of a **loss contingency** if

1. the loss is deemed to be probable, and
2. the amount of loss can be reasonably estimated.

When both of these criteria are met, the expected impact of the loss contingency is recorded. To illustrate, assume that the lawsuit above was filed in Year One. Wysocki officials assess the situation. They believe that a loss is probable and that $800,000 is a reasonable estimation of the amount that will eventually have to be paid as a result of the damage done to the environment. Although this amount is only an estimate and the case has not been finalized, this contingency must be recognized.

Figure 5.5 Year One—Expected Loss from Lawsuit

Loss from Lawsuit—Estimated	800,000	
Estimated Liability from Lawsuit		800,000

FASB identifies a number of examples of loss contingencies that are evaluated and reported in this same manner including:

- Collectability of receivables
- Obligations related to product warranties and product defects
- Risk of loss or damage of enterprise property by fire, explosion, or other hazards
- Threat of expropriation of assets
- Pending or threatened litigation
- Actual or possible claims and assessments
- Guarantees of indebtedness of others

Question: The likelihood of loss in connection with many contingencies is not always going to be probable or subject to a reasonable estimation. What reporting is appropriate for a loss contingency that does not qualify for recording at the present time?

Answer: If the likelihood of loss is only reasonably possible (rather than probable) or if the amount of a probable loss does not lend itself to a reasonable estimation, only disclosure in the notes to the financial statements is necessary rather than actual recognition. A contingency where the chance of loss is viewed as merely remote can be omitted from the financial statements.

Unfortunately, this official standard provides little specific detail about what constitutes a probable, reasonably possible, or remote loss. “Probable” is described in Statement Number Five as likely to occur and “remote” is a situation where the chance of occurrence is slight. “Reasonably possible” is defined in vague terms as existing when “the chance of the future event or events occurring is more than remote but less than likely” (paragraph 3). The professional judgment of the accountants and auditors is left to determine the exact placement of the likelihood of losses within these categories.

Not surprisingly, many companies contend that future adverse effects from all loss contingencies are only reasonably possible so that no actual amounts are reported. Practical application of official accounting standards is not always theoretically pure, especially when the guidelines are nebulous.

Question: Assume that a company recognizes a contingent loss because it is judged to be probable and subject to a reasonable estimation. Eventually, all estimates are likely to prove wrong, at least in some small amount. What happens when a figure is reported in a set of financial statements and the actual total is later found to be different?

For example, Wysocki Corporation recognized an estimated loss of $800,000 in Year One because of a lawsuit involving environmental damage. Assume the case is eventually settled in Year Two for $900,000. How is the additional loss of $100,000 reported? It relates to an action taken in Year One but the actual amount is not finalized until Year Two. The difference is not apparent until the later period.

Answer: In Year One, because both criteria were met, an $800,000 loss was recognized on the income statement along with a corresponding liability. Notes to the financial statement explain the nature of this lawsuit as well as the range of any reasonably possible losses. Decision makers analyzing the Wysocki Corporation should realize that the amount reported is not a precise measure of the eventual loss. The same is true of all contingencies and other estimations. By the time that the exact amount of loss is determined, investors and creditors have already incorporated the original information into their decisions, including the uncertainty of the outcome. Restating the Year One loss to $900,000 does not allow them to undo and change the decisions that were made in the past.

Consequently, no change is made in the $800,000 figure reported for Year One; the additional $100,000 loss is recognized in Year Two. The amount is fixed at the time that a better estimation (or final figure) is available. This same reporting is utilized in correcting any reasonable estimation. Wysocki corrects the balances through the following journal entry that removes the liability and records the remainder of the loss.

Figure 5.6 Year Two—Settlement of Lawsuit

Estimated Liability from Lawsuit	800,000	
Additional Loss on Lawsuit	100,000	
Cash		900,000

One important exception to this handling does exist. If the initial estimation was viewed as fraudulent—an attempt to deceive decision makers—the $800,000 figure reported in Year One is physically restated. It simply cannot continue to appear. All the amounts in a set of financial statements have to be presented in good faith. Any reported balance that fails this essential criterion is not allowed to remain. Furthermore, even if there was no overt attempt to deceive, restatement is still required if officials should have known that a reported figure was materially wrong. Such amounts were not reported in good faith; officials have been grossly negligent in reporting the financial information.

From a journal entry perspective, restatement of a previously reported income statement balance is accomplished by adjusting retained earnings. Revenues and expenses (as well as gains, losses, and any dividend paid figures) are closed into retained earnings at the end of each year. That is where the previous year error now resides.

Check Yourself

According to the FASB, what are the two criteria that a loss contingency must meet before it needs to be reported on the balance sheet?

A. Reasonably possible and estimated.

B. Probable and reasonably estimated.

C. Remote and reasonably estimated.

D. Likely and a certain amount.

The correct answer is B.

Question: The previous discussion has been about loss contingencies. Companies obviously can also have **gain contingencies**. *In a lawsuit, for example, one party might anticipate winning $800,000 but eventually collect $900,000. Are the rules for reporting gain contingencies the same as those applied to loss contingencies?*

Answer: As a result of the conservatism inherent in financial accounting, the timing used in the recognition of gains does not follow the same rules applied to losses. Losses are anticipated when they become probable; that is a fundamental rule of financial accounting. Recognition of gains is delayed until they actually occur (or, at least until they reach the point of being substantially complete). Disclosure in the notes is still important but the decision as to whether the outcome is probable or reasonably possible is irrelevant in reporting a gain. Gains are not anticipated for reporting purposes.

Talking with an Independent Auditor about International Financial Reporting Standards (Continued)

Following is a continuation of our interview with Robert A. Vallejo, partner with the accounting firm PricewaterhouseCoopers.

Question: According to U.S. GAAP, a contingent loss must be recognized when it is probable that it will occur and a reasonable estimation of the amount can be made. That rule has been in place now for over thirty years and is well understood in this country. Are contingent losses handled in the same way by IFRS?

Robert Vallejo: The theory is the same under IFRS but some interesting and subtle differences do exist. If there is a probable future outflow of economic benefits and the company can form a reliable estimate, then that amount must be recognized. However, the term “probable” is defined as “more likely than not” which is much more easily reached than under the requirements of U.S. GAAP. Thus, the reporting of more contingent losses is likely under IFRS than currently under U.S. GAAP.

IAS 37, Provisions, Contingent Liabilities and Contingent Assets, states that the amount recorded should be the best estimate of the expenditure that would be required to settle the present obligation at the balance sheet date. That is the best estimate of the amount that an entity would rationally pay to settle the obligation at the balance sheet date or to transfer it to a third party. Under U.S. GAAP, if there is a range of possible losses but no best estimate exists within that range, the entity records the low end of the range. Under IFRS, the entity records the midpoint of the range. That is a subtle difference in wording, but it is one that could have a significant impact on financial reporting for organizations where expected losses exist within a very wide range.

Key Takeaway

Entities often make commitments that are future obligations that do not yet qualify as liabilities that must be reported. For accounting purposes, they are only described in the notes to financial statements. Contingencies are potential liabilities that might result because of a past event. The likelihood of loss or the actual amount of the loss is still uncertain. Loss contingencies are recognized when their likelihood is probable and this loss is subject to a reasonable estimation. Reasonably possible losses are only described in the notes and remote contingencies can be omitted entirely from financial statements. Estimations of such losses often prove to be incorrect and normally are simply fixed in the period discovered. However, if fraud, either purposely or through gross negligence, has occurred, amounts reported in prior years are restated. Contingent gains are only reported to decision makers through disclosure within the notes to the financial statements.

5.3: Accounting for Contingencies is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

5.4: Accounting for Product Warranties

Learning Objectives

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

1. Explain the difference between a warranty that is a revenue performance obligation (purchased separately or extended) and a contingent guarantee.
2. Account for the liability and expense incurred by a company that provides its customers with an contingent guarantee on a purchased product.
3. Account for the amount received on the sale of an extended warranty and any subsequent cost incurred as a result of this warranty.

Question: A company sells merchandise such as a car or a microwave and agrees to fix certain problems if they arise within a specified period of time. If the car's transmission breaks, for example, the seller promises to replace it. Making the sale with a warranty attached is the past event that creates this contingency. However, the item acquired by the customer must break before the company has an actual loss. That outcome is uncertain.

In accounting for contingencies, several estimates are required:

- *The approximate number of claims*
- *The likelihood that claims will result from the warranty*
- *The eventual cost*

As an example, Stanley Black and Decker reported on its December 31, 2024, balance sheet a liability for product warranties totaling over $113 million. That is certainly not a minor obligation. In the notes to the financial statements, the company explains, "We provide for estimated product warranty expenses when we sell the related products. Because warranty estimates are forecasts that are based on the best available information—mostly historical claims experience—claims costs may differ from amounts provided." How does a company record and report contingencies such as product warranties?

Answer: In accounting for warranties, cash rebates, the collectibility of receivables and other similar contingencies, the likelihood of loss is not an issue. These losses are almost always probable. For the accountant, the challenge is in arriving at a reasonable estimate of that loss. How many microwaves will break and have to be repaired? What percentage of cash rebate coupons will be presented by customers in the allotted time? How often will a transmission need to be replaced?

Many companies utilize such programs on an ongoing basis so that data from previous offers will be available to help determine the amount of the expected loss. However, historical trends cannot be followed blindly. Officials still have to be alert for any changes that could impact previous patterns. For example, in bad economic periods, customers are more likely to take the time to complete the paperwork required to receive a cash rebate. Or the terms may vary from one warranty program to the next. Even small changes in the wording of an offer can alter the expected number of claims.

To illustrate, assume that a retail store sells ten thousand refrigerators during Year One for $400 cash each. The product is covered by a warranty that extends until the end of Year Three. No claims are made in Year One but similar programs in the past have resulted in repairs being made to 3 percent of the refrigerator at an average cost of $90. Thus, this warranty is expected to cost a total of $27,000 (ten thousand units × 3 percent or three hundred claims × $90 each). Immediate recognition is appropriate because the loss is both probable and subject to reasonable estimation.

Although no repairs are made in Year One, the $27,000 is recognized in that period. All requirements for a liability have been met. In addition, the matching principle states that expenses should be recorded in the same period as the revenues they help generate. The revenue from the sale of the refrigerators is recognized in Year One so the warranty expense resulting from those sales of refrigerators should also be included at that time.

Figure 5.7 Year One—Sale of Ten Thousand Refrigerators for $400 Each – note that we omitted cost of goods sold for simplicity

Cash	4,000,000	
Sales of Inventory		4,000,000

Figure 5.7 Year One—Recognize Expected Cost of Warranty Claims

Warranty Expense	27,000	
Warranty Payable		27,000

This warranty is in effect until the end of Year Three. Assume in the year following the sale (Year Two) that repairs costing $13,000 are made for these customers at no charge. Refrigerators break and are fixed as promised. The expense has already been recognized in the year of sale so the payments made by the company serve to reduce the recorded liability. **They have no additional impact on net income.**

Figure 5.8 Year Two—Payment for Repairs Covered by Warranty

Warranty Payable	13,000	
Cash		13,000

At the end of Year Two, the warranty payable T-account in the general ledger holds a balance of $14,000 ($27,000 original estimation less $13,000 payout for repairs to date). Because the warranty has not expired, company officials need to evaluate whether this $14,000 liability is still a reasonable estimation of the remaining costs to be incurred. If so, no further adjustment is made.

However, the original $27,000 was an estimate. More information is now available, some of which might suggest that $14,000 is no longer the best number to be utilized for the final period of the warranty. As an illustration, assume that a design flaw has been found in the refrigerators and that $20,000 (rather than $14,000) is now the estimate of the costs to be incurred in the final year of the warranty. The $14,000 is no longer appropriate. The reported figure must be updated to provide a fair presentation of the information that is now available. Estimations should be changed at the point that new data provide a clearer vision of future events.

Figure 5.9 December 31, Year Two—Adjust Warranty Liability from $14,000 to Expected $20,000

Warranty Expense	6,000	
Warranty Payable		6,000

In this adjusting entry, the change in the expense is not recorded in the period of the sale. As discussed earlier, no retroactive changes are made in previously reported figures unless fraud occurred or an estimate was held to be so unreasonable that it was not made in good faith. While it is shown a situation where the liability is higher it could also be adjusted lower but that would be more unusual and would need more evidence to support the change.

Question: Not all warranties are built into a sales transaction. Many retailers also provide **extended product warranties** *but for an additional fee. Other warranties can be purchased separately from the item even if they are not actually extended warranties. For example, assume a business sells a high-definition television with an automatic one-year warranty. The buyer receives this warranty as part of the purchase price and is not available for purchase separately. The accounting for that first year is the same as just demonstrated; an estimated expense and liability are recognized at the time of sale.*

However, an additional warranty for three more years is also offered at a price of $50. If on January 1, Year One, a customer chooses to acquire this three-year coverage, what recording is made by the seller? Is an extended warranty purchased by a customer reported in the same manner as an automatic warranty embedded within a sales contract?

Answer: Extended warranties, or those which can be purchased separately are separate performance obligations as discussed in our revenue recognition section of Principles of Financial Accounting 1. If the customer buys the coverage, the product is insured against breakage or other harm for the specified period of time. In most cases, the company is making the offer in an attempt to earn extra profit. The seller hopes that the amount received for the extended warranty will outweigh the eventual repair costs. Therefore, the accounting differs here from that demonstrated for an contingent guarantee that was provided to encourage the sale of the product. Because of the matching principle, the anticipated expense was recognized in the same period as the revenue generated by the sale of the product.

By accepting money for an extended or separate, the seller agrees to provide services in the future. The amount may have to be separated from the amount of the actual item purchased. This revenue is not earned until the earning process is substantially complete in the future. Thus, the $50 received for the extended or separate warranty is initially recorded as "unearned revenue." This balance is a liability because the company owes a specified service to the customer. As indicated previously, liabilities do not always represent future cash payments. The amount must be separated out from the amount paid for the item even if the company only receives one cash payment.

Figure 5.10 January 1, Year One—Sale of Extended/Separate Warranty Covering Years 2–4

Cash	50	
Unearned Revenue		50

Note that no expense was estimated and recorded in connection with this warranty. As explained by the matching principle, no expense is recognized until the revenue begins to be reported.

Because of the terms specified, this extended/separate warranty does not become active until January 1, Year Two. The television is then covered for a three-year period. The revenue is recognized, most likely on a straight-line basis, over that time. The $50 will be recognized at the rate of 1/3 per year or $16.66.

Figure 5.11 December 31, Year Two (Three and Four)—Recognition of Revenue from Extended/Separate Warranty

Unearned Revenue	16.66	
Revenue from Extended Warranty		16.66

In any period in which a repair must be made, the expense is recognized as incurred because revenue from this warranty contract is also being reported. To illustrate, assume that on August 8, Year Two, a slight adjustment must be made to the television at a cost of $9. The product is under warranty so there is no charge to the customer for this service. The expense recognized below is matched with the Year Two revenue recognized above.

Figure 5.12 August 8, Year Two—Repair Television under Contract

Warranty Expense	9	
Cash		9

Check Yourself

Harvey sells large complicated sound systems with a warranty for 2 years and each system costs $75,000. Because Harvey offers these warranties to customers separately for $4,000, they determine that the warranty should be accounted for as a separate performance obligation in terms of revenue recognition. When the customer pays $75,000 for the sound system, $4,000 is allocated to the warranty and $71,000 is allocated to the sound system. If Harvey sells a sound system on January 1, 2023 to a customer and only makes adjusting entries at the end of the year, what adjustment would be needed at the end of 2023 with regard to this sound system warranty?

A. Debit Cash $4,000 and Credit Revenue $4,000

B. Debit Cash $2,000 and Credit Revenue $2,000

C. Debit Unearned Revenue $2,000 and Credit Revenue $2,000

D. Debit Revenue $4,000 and Credit Cash $4,000

The correct answer is C. When the sale is made the debit is to cash for 75,000 with a credit to unearned revenue (from warranty) for $4,000 and credit to sales or revenue for $71,000. After one year, half of the $4,000 or $2,000 of the unearned revenue from the warranty has been earned (one year of the two years has been completed). Notice that this is independent of whether any repairs were made in 2023. The obligation is to be willing and available to make repairs for 2 years and one year is over and thus half of the obligation is fulfilled.

Key Takeaway

Many companies incur contingent liabilities as a result of product warranties. If the warranty is given to a customer along with a purchased item, an anticipated expense should be recognized at that time as well as the related liability. If the cost of this type of embedded warranty eventually proves to be incorrect, the correction is made when discovered. Companies also sell extended or separate warranties, primarily as a means of increasing profits. These warranties are recorded initially as liabilities and are reclassified to revenue over the time of the obligation. Subsequent costs are expensed as incurred to align with the matching principle. Expenses are not estimated and recorded in advance.

Talking with a Real Investing Pro (Continued)

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

Question: Analysts often look closely at current liabilities when evaluating the future prospects of a company. Is there anything in particular that you look for when examining a company and its current liabilities?

Kevin Burns: For almost any company, there are a number of things that I look at in connection with current liabilities. I always have several questions where possible answers can concern me. I am interested in the terms of the current liabilities as well as the age of those liabilities. In other words, is the company current with its payments to vendors? Does the company have a significant amount of current liabilities but only a small amount of current assets? Or, stated more directly, can these liabilities be paid on time? Have current liabilities been growing while business has remained flat or grown much more slowly? Are any of the current liabilities to organizations controlled by corporate insiders? That always makes me suspicious so that, at the very least, I want more information. In sum, I like balance sheets where there are no potential conflicts of interest and the company is a reasonably fast payer of its debts.

5.4: Accounting for Product Warranties is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

5.5: Debt Financing

Learning Objectives

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

1. List and explain the advantages of debt financing.
2. List and explain the disadvantages of debt financing.
3. Explain and illustrate the use of financial leverage.
4. Define “notes” and “bonds” as used in debt financing.

Question: Businesses and other organizations need funds to finance their operations and possible expansions. Such amounts can be quite significant. A portion of this money is normally contributed by investors who choose to become owners through the purchase of shares of capital stock. Cash can also be generated internally by means of profitable operations. If net income exceeds the amount of dividends paid each period, a company has an ongoing source of financing.

However, many companies obtain a large part of the funding needed to support themselves and their growth through borrowing. If those debts will not be paid back within the following year, they are listed on the balance sheet as noncurrent liabilities. Target Corporation, for example, disclosed in its financial statements that it owed $22.3 billion in noncurrent liabilities as of February 1, 2025.

Incurring debts of such large amounts must pose some risks to an organization. Creditors expect to be repaid their entire loan balance plus **interest** *at the specified due date. What problems and potential dangers does an entity face when liabilities—especially those of significant size—are owed?*

Answer: Few things in life are free so the obvious problem with financing through debt is that it has a cost. A bank or other creditor will charge interest for the use of its money. As an example, Target Corporation reported interest expense for the year ending February 1, 2025, of approximately $411 million. The rate of interest will vary based on economic conditions and the financial health of the debtor. As should be expected, strong companies are able to borrow at a lower rate than weaker ones.

In addition, a business must be able to generate enough surplus cash to satisfy its creditors as debts come due. As indicated, Target reports noncurrent liabilities of $22.3 billion. Eventually, company officials have to find sufficient money to satisfy these obligations. Those funds might well be generated by profitable operations or contributed by investors. Or Target might simply borrow more money to pay off these debts as they mature. This type of rollover financing is common as long as the debtor remains economically strong. Whatever the approach, the company has to manage its financial resources in such a way that all debts can be settled at their maturity date.

The most serious risk associated with debt is the possibility of bankruptcy. As has unfortunately become quite commonplace during the recent economic crisis, organizations that are not able to pay their liabilities as they come due can be forced into legal bankruptcy[1]. The end result of **bankruptcy** is frequently the liquidation of company assets although corporate reorganization and continued existence is also a possibility. In the beginning of 2020, especially due to the downturn caused by the Covid-19 pandemic, some familiar companies that have filed for bankruptcy include Hertz Rent a Car, JCPenneys, JCrew, and Chuck E Cheese. All of these plan to reorganize and continue to operate going forward under court supervision.

Given the cost and risk associated with large amounts of debt, the desire of decision makers to receive adequate and clear financial information is understandable. Few areas of financial accounting have been more discussed over the decades than the reporting of noncurrent liabilities.

Question: Debt is a costly and possibly risky method of financing a company’s operations and growth. However, advantages must exist or companies would avoid incurring noncurrent liabilities wherever possible. What are the advantages to an organization of using debt to generate funding for operations and other vital activities?

Answer: One advantage of borrowing money is that interest expense is tax deductible. Therefore, a company will essentially recoup a portion of its interest expense from the government. As mentioned above, Target incurred interest expense of $411 million. This interest reduced the company’s taxable income by that amount. If the assumption is made that Target has an effective income tax

rate of 21 percent, the income tax total paid to the government is lowered by $86 million (21 percent of $411 million). Target pays interest of $411 million but reduces its income taxes by $86 million so that the net cost of borrowing for the period was $325 million.

Another advantage associated with debt financing is that it can be eliminated. Liabilities are not permanent. If the economic situation changes, a company can rid itself of all debt simply by making payments as balances come due. In contrast, if money is raised by issuing capital stock, the new shareholders can maintain their ownership indefinitely.

However, the biggest advantage commonly linked to debt is the benefit provided by **financial leverage**. This term refers to an organization's ability to increase reported net income by earning more money on borrowed funds than the associated cost of interest. For example, if a company borrows $1 million on a debt that charges interest of 5 percent per year, annual interest is $50,000. If the $1 million can then be used to generate a profit of $80,000, net income has gone up $30,000 ($80,000 – $50,000) using funds provided solely by creditors. The owners did not have to contribute any additional funds to increase profits by $30,000.

Over the decades, many companies have adopted a strategy of being highly leveraged, meaning that most of their funds came from debt financing. If profitable, the owners can make huge profits with little investment of their own. Unfortunately, companies that take this approach have a much greater risk of falling into bankruptcy because of the high volume of debts that have to be paid.

Check Yourself

Speedy, Inc. is looking at the possibility of borrowing a significant amount of money from the bank to expand its operations. The terms with the bank would require Speedy to pay back the amount borrowed in 10 years. Which of the following would be important for Speedy to consider?

A. This loan would be listed on the balance sheet as a current liability.

B. Borrowing from a bank will decrease Speedy's financial leverage and risk of bankruptcy.

C. Interest on the loan will need to be paid but is tax deductible.

D. Selling stock to owners would be much more advantageous than borrowing from the bank.

The correct answer is C. The loan would be a long term liability since it is due after one year and would increase the financial leverage. There are both advantages and disadvantages to borrowing money but interest is required and is tax deductible.

Question: Long-term financing typically comes from notes or bonds. What are notes and bonds and how do they differ from each other?

Answer: Both notes and bonds are written contracts (often referred to as indentures) that specify the payment of designated amounts of cash on stated dates. The two terms have become somewhat interchangeable over the years and clear distinctions are not likely to be found in practice. In this textbook, for convenience, the term "note" is used when a contract is negotiated directly between two parties. For example, if officials from Jones Company go to City Street Bank and borrow $1.2 million to construct a new warehouse, the contract between the parties that establishes the specifics of this loan agreement will be referred to as a note.

The term "bond" will describe a contract or group of contracts that is created by a debtor and then sold, often to a number of members of the general public. Jones Company could opt to raise the needed $1.2 million for the new warehouse by printing 1,200 $1,000 bonds that it sells to a wide array of creditors around the world.

Typically, the issuance of debt to multiple parties enables a company to raise extremely large amounts of money. As an example, according to the footnotes explaining the Target financial statements "In September 2024, we issued $750 million of 10-year unsecured fixed rate debt at 4.5 percent". The exact information being conveyed by this disclosure will be described in detail later in this chapter.

However, if securities are to be issued to the public in this way, the legal rules and regulations of the U.S. Securities and Exchange Commission must be followed, which adds another layer of costs to the raising of funds.

Key Takeaway

Many companies have a periodic need to raise money for operations and capital improvements. Debt financing is common although it leads to an interest charge and the possibility of bankruptcy. The cost of debt is offset somewhat in that interest expense

is tax deductible. Incurring liabilities also allows a company to use financial leverage to boost reported profits if the proceeds can generate more income than the cost of the related interest. Notes and bonds are debt contracts that provide the specific terms that must be followed. In this textbook, notes will indicate that loans have been negotiated between two parties whereas bonds will refer to debt instruments that are sold, often to the public.

[1]A company can seek protection from its creditors by voluntarily asking the court to allow it to enter bankruptcy. Or three creditors holding a minimum amount of debt can push a company into bankruptcy, an event known as an involuntary bankruptcy filing.

5.5: Debt Financing is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

5.6: The Issuance of Notes and Bonds

Learning Objectives

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

1. Identify the various terms that are found in a note or bond contract such as face value, stated cash interest rate, and any types of security or covenants.
2. Record notes and bonds issued at face value where periodic interest payments are made on dates other than the year-end.
3. Explain the handling of notes and bonds that are sold between interest dates and make the journal entries for both the issuance and the first interest payment.

Question: Notes and bonds are contracts used in the borrowing of money. They are undoubtedly produced with great care by attorneys knowledgeable in contract law. What legal terms are typically included in debt instruments?

Answer: The specific terms written into a contract or indenture vary depending on what a debtor is willing to promise in order to entice a creditor to turn over needed financial resources. Some of the most common are as follows.

Face value or maturity value. The **note** or **bond** will specify the amount to be repaid at the end of the contract time. A $1,000 bond, for example, has a face value of $1,000—that amount is to be paid on a designated maturity date. Thus, based on the information presented previously from Target's financial statements, that company will eventually be required to pay $750 million to the holders of its bonds.

Payment pattern of the face value or maturity value. With some debts, no part of the face value is scheduled for repayment until the conclusion of the contract period. These are often referred to as **term notes or term bonds.** The debtor pays the entire amount (sometimes referred to as a balloon payment) when the contract reaches the end of its term. Based on the information provided, Target will be required to pay the $750 million face value of its bonds during 2034 (10 years from issue).

Other debts, **serial debt**s, require serial payments where a portion of the face value is paid periodically over time. Home mortgages, for example, are commonly structured as serial notes. Part of each scheduled payment reduces the face value of the obligation so that no large amount remains to be paid on the maturity date.

Notes and bonds can also be set up to allow the debtor to choose to repay part or all of the face value prior to the due date. Such debts are often referred to as "callable." This feature is popular because it permits refinancing if interest rates fall. A new loan is obtained at a cheap interest rate with the money used to pay off old notes or bonds that charge high interest rates. Sometimes a penalty payment is required if a debt is paid prematurely.

***Interest rate*.** Creditors require the promise of interest before they are willing to risk loaning money to a debtor. Therefore, within the debt contract, a stated cash interest rate[1] is normally included. A loan that is identified as having a $100,000 face value with a stated annual interest rate of 5 percent lets both parties know that $5,000 in interest ($100,000 × 5 percent) will be conveyed from debtor to creditor each year.

Therefore, to service the bonds issued above, Target will be required to make annual interest payments of $33,750,000 ($750 million face value × the **stated interest rate** of 4.5 percent).

Interest payment dates. The stated amount of interest is paid on the dates identified in the contract. Payments can range from monthly to quarterly to semiannually to annually to the final day of the debt term.

***Security*.** Many companies are not able to borrow money (or cannot borrow money without paying a steep rate of interest) unless some additional security is provided for the creditor. Any reduction of risk makes a note or bond instrument more appealing to potential lenders. For example, some loans (often dealing with the purchase of real estate) are mortgage agreements that provide the creditor with an interest in identified property. Although specific rights can vary based on state law and the wording of the contract, this type of security usually allows the creditor to repossess the property or force its liquidation if the debtor fails to make payments in a timely manner.

A **debenture** is a debt contract that does not contain any security. The debtor is viewed as so financially strong that money can be obtained at a reasonable interest rate without having to add extra security agreements to the contract.

Covenants *and other terms*. Notes and bonds can contain an almost infinite list of other agreements. Many of these are promises made by the debtor to help ensure that money will be available to make required payments. For example, the debtor might agree to limit dividend payments until the liability is paid, keep its current ratio above a minimum standard, or limit the amount of other debts that it will incur.

Debts can also be **convertible** so that the creditor can swap them for something else of value (often the capital stock of the debtor) if that seems a prudent move. The notes to the financial statements for Tesla, Inc. 10 years ago gave the following explanation. In March 2014, we issued $800 million in aggregate principal amount of 0.25% Convertible Senior Notes due in March 2019 and $1.20 billion in aggregate principal amount of 1.25% Convertible Senior Notes due in March 2021 in a public offering. Each $1,000 of principal of these notes is initially convertible into 2.7788 shares of our common stock, which is equivalent to an initial conversion price of $359.87 per share, subject to adjustment upon the occurrence of specified events. Holders of these notes had the option to convert on or after December 1, 2018 for the 2019 Notes and may elect to convert on or after December 1, 2020 for the 2021 Notes.

Question: The financial reporting of a debt contract appears to be fairly straightforward. Assume, for example, that Brisbane Company borrows $400,000 in cash from a local bank on May 1, Year One. The face value of this loan is to be repaid in exactly five years. In the interim, interest payments at an annual rate of 6 percent will be made every six months beginning on November 1, Year One. What journal entries are appropriate to record a debt issued for a cash amount that is equal to the face value of the contract?

Answer: Brisbane receives $400,000 in cash but also accepts a noncurrent liability for the same amount.

Figure 5.13 May 1, Year One—Cash of $400,000 Borrowed on Long-term Note Payable

Cash	400,000	
Note Payable		400,000

The first semiannual interest payment will be made on November 1, Year One. Because the 6 percent interest rate stated in the contract is for a full year, it must be halved to calculate the payment that covers the six-month intervals. Each of these cash disbursements is for $12,000 which is the $400,000 face value × the 6 percent annual stated interest rate × 1/2 year.

Figure 5.14 November 1, Year One—Payment of Interest for Six Months

Interest Expense	12,000	
Cash		12,000

By December 31, Year One, interest for two additional months (November and December) has accrued. This amount ($4,000 or $400,000 × 6 percent × 2/12 year) is recognized so that the financial statements prepared at that time will be presented fairly. No transaction occurs on that date but adjustment is necessary when preparing the Year One statements to report both the expense and the liability for these two months.

Figure 5.15 December 31, Year One—Accrual of Interest for Two Months

Interest Expense	4,000	
Interest Payable		4,000

When the next $12,000 interest payment is made by Brisbane on May 1, Year Two, the recorded $4,000 liability (interest payable) is paid and interest for four additional months (January through April) is recognized. The appropriate expense for this period is $8,000 or $400,000 × 6 percent × 4/12 year. Mechanically, this payment could be recorded in more than one way but the following journal entry is probably the easiest to follow. Interest expense for the first two months was recorded in Year One with interest for the next four months recorded here in Year Two.

Figure 5.16 May 1, Year Two—Payment of Interest for Six Months

Interest Expense	8,000	
Interest Payable	4,000	
Cash		12,000

The interest payments and the recording process will continue in this same way until all five years have passed and the face value is paid.

Except for the initial entry, these events would be recorded in an identical fashion if Brisbane had signed this same note to acquire an asset such as a piece of machinery. No cash is involved in the beginning; the debt is incurred to acquire the property directly. The only reporting difference is that the asset replaces cash in the first journal entry above.

Check Yourself

Giggles, Inc. borrows from the bank $100,000 on November 1, 2025 and signs a note payable. The terms of this note require that interest at a rate of 7% per year be paid over 5 years and the original amount be paid back at the end of that five years. Interest must be paid every quarter/three months (4 times per year). What is the journal entry to record interest on December 31, 2025 if Giggles only makes adjusting entries at the end of the calendar year?

A. Debit Interest Expense 1,167 and Credit Interest Payable 1,167

B. Debit Interest Expense 583 and Credit Interest Payable 583

C. Debit Note Payable 1,167 and Credit Cash 1,167

D. Debit Interest payable 583 and Credit Cash 583

The correct answer is A. To calculate interest from the borrowing date (Nov 1) and December 31, multiply 100,000 x .07 x 2 / 12 = $1,167. The journal entry increases the expense and the liability to show the amount of interest accrued from Nov 1 until the balance sheet date.

Key Takeaway

Please note that interest rates on notes and bonds are almost always stated in **annual** terms (how much interest is to be paid per year) even if payments are made more frequently like monthly or quarterly. This is done so that rates can be compared between different bonds or notes. If everyone uses the annual rate, we do not have to make adjustments because of time to compare where to find the lowest interest rates.

Question: Bonds can be sold to a group of known investors or to the public in general. Often, companies will print bond indentures but not issue them until the money is needed. Thus, many bonds are sold on a day that falls between two interest dates. Payment must still be made to creditors as specified regardless of the length of time that the debt has been outstanding. If an interest payment is required by the contract, the debtor is legally obligated.

For example, assume that the Brisbane Company plans to issue bonds with a face value of $400,000 to a consortium of twenty wealthy individuals. As with the previous note arranged with the bank, these bonds pay a 6 percent annual interest rate with payments every May 1 and November 1. However, this sale is not finalized until October 1, Year One. The first six-month interest

payment is still required on November 1 as stated in the contract. After just one month, the debtor will be forced to pay interest for six months. That is not fair and Brisbane would be foolish to agree to this arrangement. How does a company that issues a bond between interest payment dates ensure that the transaction is fair to both parties?

Answer: The sale of a bond between interest dates is extremely common. Thus, a standard system of aligning the first interest payment with the time that the debt has been outstanding is necessary. Brisbane will have to pay interest for six months on November 1 even though the cash proceeds from the bond have only been held for one month. At that time, the creditor receives interest for an extra five months.

Consequently, such bonds are normally issued for a stated amount plus accrued interest. The accrued interest is measured from the previous payment date and charged to the buyer. Later, when the first interest payment is made, the net effect reflects just the time that the bond has been outstanding. If issued on October 1, Year One, the creditors should pay for the bonds plus five months of accrued interest. Then, when Brisbane makes the first required interest payment on November 1 for six months, the net effect is interest for one month—the period since the date of issuance (six months minus five months).

Assume that the creditors buy these bonds on October 1, Year One, for face value plus accrued interest. Because five months have passed since the previous interest date (May 1), interest accrued on the bond as of the issuance date is $400,000 × 6 percent × 5/12 year or $10,000. The creditors pay $400,000 for the bond and an additional $10,000 for the accrued interest to that date. Once again, the actual recording can be made in more than one way but the following seems easiest.

Figure 5.17 Issued Bond on October 1 at Face Value plus Accrued Interest Recognized for Five Months

Cash	410,000	
Bonds Payable		400,000
Interest Payable		10,000

After one more month passes, Brisbane makes the first interest payment of $12,000. However, interest expense of only $2,000 is actually recognized in the entry below. That is the appropriate amount of interest for one month ($400,000 × 6 percent × 1/12 year) to reflect the period that the bond has been outstanding. Interest of $10,000 for five months was collected initially; interest of $12,000 was paid for the entire six months (because that is what the bond contract says to do); interest expense of $2,000 is the net result for that one month.

Figure 14.6 November 1, Year One—Payment of First Interest Payment

Interest Payable	10,000	
Interest Expense	2,000	
Cash		12,000

After this entry, the recording continues on following the same manner as the previous example for the note payable.

Key Takeaway

Bond and note contracts include numerous terms to define the specific rights of both debtor and creditor. The face value and the payment patterns should be identified in these indentures as well as cash interest amounts and dates. Security agreements and other covenants are also commonly included. For debts that are issued at face value, interest is recorded as it is paid and also at the end of

the year to reflect any accrued amount. Bonds are frequently issued between interest dates so an adjustment in the cash price must be made as well as in the recording of the first interest payment.

[1]The rate for interest on a debt can be identified by any of several terms. Cash rate, stated rate, contract rate, and coupon rate are all examples of the same information: the rate of interest to be paid by the debtor at specified times.

5.6: The Issuance of Notes and Bonds is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

5.7: Pricing and Reporting Term Bonds

Learning Objectives

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

1. Understand the difference between a stated interest rate in a debt contract and an effective interest rate negotiated by the debtor and creditor.
2. Compute the price of a term bond when the stated cash interest rate is different from the effective interest rate.
3. Determine the amount of interest to be compounded each period when the stated cash interest rate is different from effective interest rate.
4. Prepare all journal entries for a term bond when the stated cash interest rate is different from the effective interest rate.

Question: If the buyer and the seller negotiate an effective rate of interest that is the same as this stated rate, an amount equal to face value is paid for the bond. If the stated interest to be paid is 7 percent each year and a negotiated annual rate of 7 percent is accepted by the parties, the bond is issued for face value. No discount or premium results; the debtor and creditor are satisfied with the interest being paid. The effective rate method is not needed because the cash interest and the effective interest are the same—7 percent is paid and recognized as interest.

However, the negotiated rate often differs from the cash rate stated in a bond contract. Market interest rate conditions change quickly. The interest that creditors demand will often shift between the printing of the indenture and the actual issuance day. Or the financial reputation of the company might vary during this time. Information travels so quickly in this technology age that news about companies—both good and bad—spreads rapidly throughout the business community.

To illustrate, assume that Smith Corporation decides to issue $1 million in bonds to the public on January 1, Year One. These bonds come due in four years. In the interim, interest at a stated cash rate of 5 percent will be paid each year starting on December 31, Year One. These are term bonds because interest is conveyed periodically by the debtor but the entire face value is not due until the end of the term.

No investors can be found who want to purchase Smith Corporation bonds with only a 5 percent annual return. Therefore, in setting an issuance price, annual interest of 6 percent is negotiated. Possibly, interest offered by other similar companies is 6 percent so that Smith had to match this rate to entice investors to buy its bonds. Or some event has taken place recently that makes Smith seem slightly more risky causing potential creditors to demand a higher rate of return. A list of market conditions that can impact the price of a bond would be almost unlimited. How is the price of a bond calculated when the stated cash rate is different from the effective rate that is negotiated by the two parties involved?

Answer: The pricing of a bond always begins by identifying the cash flows established by the contract. These amounts are set and not affected by the eventual sales price. The debtor is legally obligated to make these payments regardless of whether the bond is sold for $1 or $10 million.

Here, Smith Corporation must pay $50,000 per year in interest ($1 million × 5 percent) for four years and then the $1 million face value:

Cash Flows in Bond Contract
$50,000 annually for four years
$1,000,000 at the end of four years

After the cash flows are identified, the present value of each is calculated at the negotiated rate. These present values are then summed to get the price to be paid for the bond. The $50,000 interest payments form an annuity since equal amounts are paid at equal time intervals. Because this interest is paid at the end of each period starting on December 31, Year One, these payments constitute an ordinary annuity[1]. As determined by table, formula, or Excel spreadsheet, the present value of an ordinary annuity of $1 at an effective annual interest rate of 6 percent over four years is $3.46511[2]. Thus, the present value of the four interest

payments is $50,000 times $3.46511 or $173,256 (rounded). Note that the present value computation requires the multiplication of one annuity payment ($50,000) rather than the total of the interest payments ($200,000).

Present Value of an Ordinary Annuity of $1

Periods	PRESENT VALUE OF ORDINARY ANNUITY (annuity in arrears -- end of period payments)																
	RATE PER PERIOD																
	0.25%	0.50%	0.75%	1.00%	1.50%	2.00%	2.50%	3.00%	4.00%	5.00%	6.00%	7.00%	8.00%	9.00%	10.00%	11.00%	12.00%
1	0.99751	0.99502	0.99256	0.99010	0.98522	0.98039	0.97561	0.97087	0.96154	0.95238	0.94340	0.93458	0.92593	0.91743	0.90909	0.90090	0.89286
2	1.99252	1.98510	1.97772	1.97040	1.95588	1.94156	1.92742	1.91347	1.88609	1.85941	1.83339	1.80802	1.78326	1.75911	1.73554	1.71252	1.69005
3	2.98506	2.97025	2.95556	2.94099	2.91220	2.88388	2.85602	2.82861	2.77509	2.72325	2.67301	2.62432	2.57710	2.53129	2.48685	2.44371	2.40183
4	3.97512	3.95050	3.92611	3.90197	3.85438	3.80773	3.76197	3.71710	3.62990	3.54595	3.46511	3.38721	3.31213	3.23972	3.16987	3.10245	3.03735
5	4.96272	4.92587	4.88944	4.85343	4.78264	4.71346	4.64583	4.57971	4.45182	4.32948	4.21236	4.10020	3.99271	3.88965	3.79079	3.69590	3.60478
6	5.94785	5.89638	5.84560	5.79548	5.69719	5.60143	5.50813	5.41719	5.24214	5.07569	4.91732	4.76654	4.62288	4.48592	4.35526	4.23054	4.11141
7	6.93052	6.86207	6.79464	6.72819	6.59821	6.47199	6.34939	6.23028	6.00205	5.78637	5.58238	5.38929	5.20637	5.03295	4.86842	4.71220	4.56376
8	7.91074	7.82296	7.73661	7.65168	7.48593	7.32548	7.17014	7.01969	6.73274	6.46321	6.20979	5.97130	5.74664	5.53482	5.33493	5.14612	4.96764
9	8.88852	8.77906	8.67158	8.56602	8.36052	8.16224	7.97087	7.78611	7.43533	7.10782	6.80169	6.51523	6.24689	5.99525	5.75902	5.53705	5.32825
10	9.86386	9.73041	9.59958	9.47130	9.22218	8.98259	8.75206	8.53020	8.11090	7.72173	7.36009	7.02358	6.71008	6.41766	6.14457	5.88923	5.65022
11	10.83677	10.67703	10.52067	10.36763	10.07112	9.78685	9.51421	9.25262	8.76048	8.30641	7.88687	7.49867	7.13896	6.80519	6.49506	6.20652	5.93770
12	11.80725	11.61893	11.43491	11.25508	10.90751	10.57534	10.25776	9.95400	9.38507	8.86325	8.38384	7.94269	7.53608	7.16073	6.81369	6.49236	6.19437
13	12.77532	12.55615	12.34235	12.13374	11.73153	11.34837	10.98318	10.63496	9.98565	9.39357	8.85268	8.35765	7.90378	7.48690	7.10336	6.74987	6.42355
14	13.74096	13.48871	13.24302	13.00370	12.54338	12.10625	11.69091	11.29607	10.56312	9.89864	9.29498	8.74547	8.24424	7.78615	7.36669	6.98187	6.62817
15	14.70420	14.41662	14.13699	13.86505	13.34323	12.84926	12.38138	11.93794	11.11839	10.37966	9.71225	9.10791	8.55948	8.06069	7.60608	7.19087	6.81086
16	15.66504	15.33993	15.02431	14.71787	14.13126	13.57771	13.05500	12.56110	11.65230	10.83777	10.10590	9.44665	8.85137	8.31256	7.82371	7.37916	6.97399
17	16.62348	16.25863	15.90502	15.56225	14.90765	14.29187	13.71220	13.16612	12.16567	11.27407	10.47726	9.76322	9.12164	8.54363	8.02155	7.54879	7.11963
18	17.57953	17.17277	16.77918	16.39827	15.67256	14.99203	14.35336	13.75351	12.65930	11.68959	10.82760	10.05909	9.37189	8.75563	8.20141	7.70162	7.24967
19	18.53320	18.08236	17.64683	17.22601	16.42617	15.67846	14.97889	14.32380	13.13394	12.08532	11.15812	10.33560	9.60360	8.95011	8.36492	7.83929	7.36578
20	19.48449	18.98742	18.50802	18.04555	17.16864	16.35143	15.58916	14.87747	13.59033	12.46221	11.46992	10.59401	9.81815	9.12855	8.51356	7.96333	7.46944
21	20.43340	19.88798	19.36280	18.85698	17.90014	17.01121	16.18455	15.41502	14.02916	12.82115	11.76408	10.83553	10.01680	9.29224	8.64869	8.07507	7.56200
22	21.37995	20.78406	20.21121	19.66038	18.62082	17.65805	16.76541	15.93692	14.45112	13.16300	12.04158	11.06124	10.20074	9.44243	8.77154	8.17574	7.64465
23	22.32414	21.67568	21.05331	20.45582	19.33086	18.29220	17.33211	16.44361	14.85684	13.48857	12.30338	11.27219	10.37106	9.58021	8.88322	8.26643	7.71843
24	23.26598	22.56287	21.88915	21.24339	20.03041	18.91393	17.88499	16.93554	15.24696	13.79864	12.55036	11.46933	10.52876	9.70661	8.98474	8.34814	7.78432
25	24.20547	23.44564	22.71876	22.02316	20.71961	19.52346	18.42438	17.41315	15.62208	14.09394	12.78336	11.65358	10.67478	9.82258	9.07704	8.42174	7.84314
30	28.86787	27.79405	26.77508	25.80771	24.01584	22.39646	20.93029	19.60044	17.29203	15.37245	13.76483	12.40904	11.25778	10.27365	9.42691	8.69379	8.05518
35	33.47243	32.03537	30.68266	29.40858	27.07559	24.99862	23.14516	21.48722	18.66461	16.37419	14.49825	12.94767	11.65457	10.56682	9.64416	8.85524	8.17550
40	38.01986	36.17223	34.44694	32.83469	29.91585	27.35548	25.10278	23.11477	19.79277	17.15909	15.04630	13.33171	11.92461	10.75736	9.77905	8.95105	8.24378
50	46.94617	44.14279	41.56645	39.19612	34.99969	31.42361	28.36231	25.72976	21.48218	18.25593	15.76186	13.80075	12.23348	10.96168	9.91481	9.04165	8.30450

The second part of the cash flows promised by this bond is a single payment of $1 million in four years. The present value of $1 in four years at a 6 percent annual rate is $0.79209 so the present value of the entire $1 million is $792,090.

Present Value of $1

Periods	PRESENT VALUE OF $1																
	RATE PER PERIOD																
	0.25%	0.50%	0.75%	1.00%	1.50%	2.00%	2.50%	3.00%	4.00%	5.00%	6.00%	7.00%	8.00%	9.00%	10.00%	11.00%	12.00%
1	0.99751	0.99502	0.99256	0.99010	0.98522	0.98039	0.97561	0.97087	0.96154	0.95238	0.94340	0.93458	0.92593	0.91743	0.90909	0.90090	0.89286
2	0.99502	0.99007	0.98517	0.98030	0.97066	0.96117	0.95181	0.94260	0.92456	0.90703	0.89000	0.87344	0.85734	0.84168	0.82645	0.81162	0.79719
3	0.99254	0.98515	0.97783	0.97059	0.95632	0.94232	0.92860	0.91514	0.88900	0.86384	0.83962	0.81630	0.79383	0.77218	0.75131	0.73119	0.71178
4	0.99006	0.98025	0.97055	0.96098	0.94218	0.92385	0.90595	0.88849	0.85480	0.82270	0.79209	0.76290	0.73503	0.70843	0.68301	0.65873	0.63552
5	0.98759	0.97537	0.96333	0.95147	0.92826	0.90573	0.88385	0.86261	0.82193	0.78353	0.74726	0.71299	0.68058	0.64993	0.62092	0.59345	0.56743
6	0.98513	0.97052	0.95616	0.94205	0.91454	0.88797	0.86230	0.83748	0.79031	0.74622	0.70496	0.66634	0.63017	0.59627	0.56447	0.53464	0.50663
7	0.98267	0.96569	0.94904	0.93272	0.90103	0.87056	0.84127	0.81309	0.75992	0.71068	0.66506	0.62275	0.58349	0.54703	0.51316	0.48166	0.45235
8	0.98022	0.96089	0.94198	0.92348	0.88771	0.85349	0.82075	0.78941	0.73069	0.67684	0.62741	0.58201	0.54027	0.50187	0.46651	0.43393	0.40388
9	0.97778	0.95610	0.93496	0.91434	0.87459	0.83676	0.80073	0.76642	0.70259	0.64461	0.59190	0.54393	0.50025	0.46043	0.42410	0.39092	0.36061
10	0.97534	0.95135	0.92800	0.90529	0.86167	0.82035	0.78120	0.74409	0.67556	0.61391	0.55839	0.50835	0.46319	0.42241	0.38554	0.35218	0.32197
11	0.97291	0.94661	0.92109	0.89632	0.84893	0.80426	0.76214	0.72242	0.64958	0.58468	0.52679	0.47509	0.42888	0.38753	0.35049	0.31728	0.28748
12	0.97048	0.94191	0.91424	0.88745	0.83639	0.78849	0.74356	0.70138	0.62460	0.55684	0.49697	0.44401	0.39711	0.35553	0.31863	0.28584	0.25668
13	0.96806	0.93722	0.90743	0.87866	0.82403	0.77303	0.72542	0.68095	0.60057	0.53032	0.46884	0.41496	0.36770	0.32618	0.28966	0.25751	0.22917
14	0.96565	0.93256	0.90068	0.86996	0.81185	0.75788	0.70773	0.66112	0.57748	0.50507	0.44230	0.38782	0.34046	0.29925	0.26333	0.23199	0.20462
15	0.96324	0.92792	0.89397	0.86135	0.79985	0.74301	0.69047	0.64186	0.55526	0.48102	0.41727	0.36245	0.31524	0.27454	0.23939	0.20900	0.18270
16	0.96084	0.92330	0.88732	0.85282	0.78803	0.72845	0.67362	0.62317	0.53391	0.45811	0.39365	0.33873	0.29189	0.25187	0.21763	0.18829	0.16312
17	0.95844	0.91871	0.88071	0.84438	0.77639	0.71416	0.65720	0.60502	0.51337	0.43630	0.37136	0.31657	0.27027	0.23107	0.19784	0.16963	0.14564
18	0.95605	0.91414	0.87416	0.83602	0.76491	0.70016	0.64117	0.58739	0.49363	0.41552	0.35034	0.29586	0.25025	0.21199	0.17986	0.15282	0.13004
19	0.95367	0.90959	0.86765	0.82774	0.75361	0.68643	0.62553	0.57029	0.47464	0.39573	0.33051	0.27651	0.23171	0.19449	0.16351	0.13768	0.11611
20	0.95129	0.90506	0.86119	0.81954	0.74247	0.67297	0.61027	0.55368	0.45639	0.37689	0.31180	0.25842	0.21455	0.17843	0.14864	0.12403	0.10367
21	0.94892	0.90056	0.85478	0.81143	0.73150	0.65978	0.59539	0.53755	0.43883	0.35894	0.29416	0.24151	0.19866	0.16370	0.13513	0.11174	0.09256
22	0.94655	0.89608	0.84842	0.80340	0.72069	0.64684	0.58086	0.52189	0.42196	0.34185	0.27751	0.22571	0.18394	0.15018	0.12285	0.10067	0.08264
23	0.94419	0.89162	0.84210	0.79544	0.71004	0.63416	0.56670	0.50669	0.40573	0.32557	0.26180	0.21095	0.17032	0.13778	0.11168	0.09069	0.07379
24	0.94184	0.88719	0.83583	0.78757	0.69954	0.62172	0.55288	0.49193	0.39012	0.31007	0.24698	0.19715	0.15770	0.12640	0.10153	0.08170	0.06588
25	0.93949	0.88277	0.82961	0.77977	0.68921	0.60953	0.53939	0.47761	0.37512	0.29530	0.23300	0.18425	0.14602	0.11597	0.09230	0.07361	0.05882
30	0.92783	0.86103	0.79919	0.74192	0.63976	0.55207	0.47674	0.41199	0.30832	0.23138	0.17411	0.13137	0.09938	0.07537	0.05731	0.04368	0.03338
35	0.91632	0.83982	0.76988	0.70591	0.59387	0.50003	0.42137	0.35538	0.25342	0.18129	0.13011	0.09366	0.06763	0.04899	0.03558	0.02592	0.01894
40	0.90495	0.81914	0.74165	0.67165	0.55126	0.45289	0.37243	0.30656	0.20829	0.14205	0.09722	0.06678	0.04603	0.03184	0.02209	0.01538	0.01075
50	0.88263	0.77929	0.68825	0.60804	0.47500	0.37153	0.29094	0.22811	0.14071	0.08720	0.05429	0.03395	0.02132	0.01345	0.00852	0.00542	0.00346

The total present value of the cash flows promised by this bond at an annual 6 percent rate for four years is $173,256 (cash interest) plus $792,090 (face value) or $965,346. Smith will receive this amount on January 1, Year One and pays interest $50,000 per year for four years followed by a single payment of $1 million (paid back). Mathematically, that is equivalent to earning a 6 percent rate of interest each year for four years.

Figure 14.12 January 1, Year One—Term Bonds Issued at an Effective Rate of 6 Percent

Cash	965,346	
Bonds Payable		965,346

An alternative is to debit cash for $965,346 and credit Bonds Payable for the face value of $1,000,000 and debiting discount on bonds for 34,654. The bonds would still be shown on the balance sheet at 1,000,000 less 34,654 (a contra liability account) to equal 965,346.

Check Yourself

Harboe, Inc. prepared an indenture that would allow it to borrow $500,000 using term bonds. The indenture requires annual payments of 4.0% interest for 10 years and then repayment of the face value of $500,000 at the maturity date. After the indenture was prepared but before Harboe was actually able to set up the deal, interest rates fell in the market place and Harboe was able to negotiate with a group of investors to sell them the term bonds at an effective rate of 3% per year. How much would Harboe borrow with this effective interest rate?

A. $500,000

B. $700,000

C. $372,045

D. $542,649

The correct answer is D. First calculate the cash payment for interest required – 500,000 x .04 = 20,000. This is an ordinary annuity so we multiply it by the factor from the first table above for 10 years at the effective rate (3%). 20,000 x 8.5302 = 170,604. Then take the maturity value of 500,000 and multiply by the 10 year 3% factor from the second table (.74409) = 372,645. Add these two together and get $542,649 (record using a debit to cash and credit to bond payable).

Question: Recording the payments on the bonds must consider two things. First, the recorded principal of this term bond must be raised gradually from $965,346 to the $1 million face value over these four years. Second, the cash interest of 5 percent paid each year has to be adjusted to the annual 6 percent effective rate negotiated by the two parties. How does a debtor report a bond payable over its life if the stated interest rate and the effective rate differ?

Answer: At the end of Year One, Smith Corporation pays $50,000 cash interest to the bondholders ($1 million face value × the 5 percent stated rate) as specified in the contract. However, reported interest on this debt must be recognized at the agreed upon rate of 6 percent that led to the initial principal payment of $965,346. The $34,654 discount below face value ($1 million less $965,346) was accepted by Smith (the debtor) as a means of increasing the actual annual rate of return from 5 percent to 6 percent.

The effective rate is reflected in the financial statements by recognizing interest in Year One of $57,921 (rounded), which is the $965,346 principal times 6 percent. The $7,921 difference between the effective interest expense of $57,921 and the cash interest payment of $50,000 will eventually be paid but not until the end of the four-year term when $1 million rather than $965,346 is conveyed to the bondholders. Therefore, at the end of Year One, this extra $7,921 is compounded. Only the portion of this interest that is not being paid is added to the principal.

Figure 5.17 December 31, Year One—Payment of Cash Interest at 5 Percent Rate

Interest Expense	50,000	
Cash		50,000

Figure 5.18 Compounding Adjustment to Bring Interest to Effective Annual Rate of 6 Percent[3]

Interest Expense	7,921	
Bond Payable		7,921

If you are using a discount then the credit would be to reduce the discount on bonds instead of bonds payable.

Interest expense reported on the income statement for Year One of $57,921 ($50,000 + $7,921) equals the 6 percent effective rate times the principal of the debt for that period. The liability reported for the bond payable at the end of Year One has begun to move closer to the $1 million face value. It is now $973,267 ($965,346 + $7,921) as a result of the compounding.

Reported figures for the remaining three years of this bond contract can be computed to verify that the ending balance does grow to $1 million by the time of payment.

Figure 5.19 Reported Bond Figures for the Remaining Three Years until Maturity[4]

	Year Two	Year Three	Year Four
Beginning Bond Principal	$973,267	$981,663	$990,563
Effective Rate	6%	6%	6%
Interest Expense (rounded)	58,396	58,900	59,437
Stated Cash Interest	50,000	50,000	50,000
Interest Compounded (added to principal)	8,396	8,900	9,437
Ending Bond Principal	981,663	990,563	1,000,000

Through the use of the effective rate method, interest expense of 6 percent is recognized each period and the principal balance of the liability gradually grows to equal the face value of the bond.

Check Yourself

For the bonds issued above by Harboe, Inc. for $542,649 in cash, how much interest expense should be recorded for the year after Harboe borrowed the money?

A. $15,000

B. $200,000

C. $16,279

D. $21,706

The correct answer is C. The interest expense recorded is always the carrying amount of the bonds $542,649 x effective interest rate 3% = $16,279. The difference between the 20,000 paid and the interest expense recorded (20,000 – 16,279=3,721) will reduce the carrying amount of the bonds to ($542,649 – $3,721 = 538,928) to be used to calculate effective interest for the second year.

Key Takeaway

In the issuance of a term bond, the stated cash interest rate is often different from the effective interest rate negotiated by the creditor and the debtor. To compute the amount to be exchanged for this bond, the cash flows must be determined based on the specifics of the contract and their present value calculated. The resulting total is the amount paid so that the agreed upon rate of interest is earned over the life of the bond. The bond is initially recorded at present value to reflect its principal at that time. Cash interest payments are recorded thereafter and then adjusted based on the effective interest rate. The interest rate stated in the contract times the face value provides the amount of the cash payments. The principal times the effective rate gives the interest to be recognized for the period. The difference in the effective interest and the cash payment is compounded (added to the principal of the debt).

[1] An annuity with payments made at the beginning of each period is known as an annuity due. If the interest here had been paid starting on January 1, Year One, the payments would form an annuity due rather than an ordinary annuity. The cash flow pattern for notes and bonds is more likely to be in the form of an ordinary annuity since interest is not typically paid in advance.

[2]The mathematical formula to determine the present value of an ordinary annuity of $1 is $(1 - 1/[1 + i]^n)/i$, where i is the appropriate interest rate (6 percent in this illustration) and n is the number of payment periods (four). If using an Excel spreadsheet, the present value of a $1 per period ordinary annuity for four periods at an annual rate of interest of 6 percent can be found by typing the following data into a cell: =PV(.06,4,1,,0).

[3]These two entries are often combined. Students should use one entry or two depending on which is easiest to understand.

[4]Interest expense for the final year has been increased by $3 so that the final bond payable balance is exactly equal to the $1 million that must be paid. Slight adjustments of this type are common to compensate for numbers having been rounded.

5.7: Pricing and Reporting Term Bonds is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

5.8: Accounting for Leases and Installment Notes

Learning Objectives

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

1. Recognize that a business can borrow to purchase assets using an installment loan.
2. Calculate the payment and account for that payment on an installment loan.
3. Understand the similarities between finance leases and installment loans.
4. Identify the criteria that determines whether a lease is accounted for using the finance lease or operating lease approach.

Question: Notes and bonds payable serve as the predominant source of reported noncurrent liabilities in the United States for large companies. Virtually all companies of any size raise significant sums of money by incurring debts of this type. However, smaller companies are more likely to borrow using installment loans. What is an installment loan or note and how is it accounted for?

Installment loans are most likely the form of borrowing that readers of this text are most familiar with. Home mortgages, student loans and car loans are common forms of installment loans used by individuals. Small and medium businesses acquire assets like buildings and equipment using installment loans or maybe leases. Both of these forms of borrowing, are referred to as installments because they require equal payments by the borrower – usually monthly but they could be on any other time schedule. Because they are annuities – equal payments and equal time periods in between – we can use the same tools (tables) given in the earlier section to develop the accounting. Each equal payment must be split into principal payment (amount to reduce the loan payable) and interest. The rule is that we always calculate the interest first.

Let's see how this might work with a typical situation. Say Abilene, Inc. wants to purchase an airplane for use in its charter tour business. The airplane will cost $220,000 and Abilene will pay $20,000 in cash and borrow the remaining amount using an installment loan. The terms worked out with the bank are monthly payments for 5 years with an annual rate of interest of 10%. The journal entry for this purchase would look like this:

	Debit	Credit
Airplane	$220,000	
Cash		$20,000
Note Payable		$200,000

That does not seem too much different than our earlier discussion about recording liabilities. However, how do know the amount of the payment each month and how to account for that payment?

Knowing the interest rate and the number of equal payments on this loan, we can calculate the payment using the present value of an annuity table as given in the previous section. It is much easier to find the payments using an Excel spreadsheet. Using any version of Excel, you can find the PMT function and fill in the interest rate, number of payments and the amount borrowed to calculate the equal monthly payment.

Link to youtube video explaining how to use PMT function in Excel

Once the payment has been determined ($4,249) , the payment must be split into the interest and principal. Following the rule that interest is first we calculate interest for one month. The $200,000 balance multiplied by 10% = 20,000 then divide by 12 to convert the annual interest for just one month. $20,000 / 12 = 1,667 – this is the interest expense. The rest of the payment ($4,249 –

$1,667) = $2,583 which is the amount of the principal paid on the loan. Thus the journal entry for the payment would look like this.

	Debit	Credit
Interest Expense	1,667	
Note Payable	2,582	
Cash		4,249

Interest expense goes on the income statement and increases expenses and reduces net income. Note payable debit reduces the balance in note payable from $200,000 to 197,418 (200,000 – 2,582). For the second month this is the new balance that will be used to calculate interest. Each payment will have less interest expense and more note payable even though the credit to cash will be the same each time (equal installments).

Check Yourself

Using the example of Abilene and their airplane given in the text above, what would be the debit to interest expense for the **THIRD** monthly payment on the installment loan?

A. $1,623

B. $1,645

C. $2,604

D. $1,667

The correct answer is A. For the second payment on the loan, the interest would be 197,418 x 10% / 12 = 1,645. That is subtracted from the payment of $4,249 to get the amount of principal paid – 2,604. The new balance on the loan is 197,418 – 2,604 = 194,814. This is used to calculate the interest for the third payment. 194,814 x .10 / 12 = 1,623.

Question: On Target's balance sheet, besides notes payable, Target reports $3.6 billion in lease liabilities as of February 1, 2025. What is the differences between these liabilities and notes/loans payable?

Companies large and small use leasing arrangements to help them obtain control of assets such as buildings and equipment similar to what they would do with installment loans. Thus in some ways the accounting for them will be similar. After years of discussion and meetings, the FASB changed the accounting rules for leases such that almost all lease arrangements (both the liability and the related asset) are listed on the balance sheet. This is true even though from a legal standpoint, a lease does not transfer ownership to the lessee (renter). So an arrangement where Target leases space (lessee) in a mall and the lease is for 5 years, the amount of the control over that asset for 5 years is recorded as an asset while the payments (present value of them) is recorded as a liability. The mall retains legal ownership of the space even while it is in the control of Target. This focuses on control of the asset rather than ownership transfer.

The FASB did distinguish between two kinds of leases:

- ***Finance lease*.** Lessee gains substantially all the benefits and risks of ownership. The transaction is reported as a purchase with installment loan although the legal form is still that of a lease arrangement.
- ***Operating lease***. Lessee does not obtain substantially all the benefits and risks of ownership. Lessee reports a right to use asset for the time they control the asset being leased.

In establishing reporting guidelines in this area, FASB created four specific criteria to serve as the line between the two types of leases. Such rules set a standard that all companies must follow. If any one of these criteria is met, the lease is automatically recorded by the lessee as a finance lease. Both the asset and liability are reported as if an actual purchase took place.

Note in each of these criteria the rationale for classifying the transaction as a finance lease.

1. The lease contract specifies that title to the property will be conveyed to the lessee by the end of the lease term. If legal ownership is to be transferred from **lessor** to **lessee**, the entire series of payments is simply a method devised to purchase the asset. In substance, the agreement was never intended to be a rental. From the beginning, the property was being acquired.
2. The lease contract allows the lessee to buy the property at a specified time at an amount sufficiently below its expected fair value so that purchase is reasonably assured. The availability of this bargain purchase option indicates, once again, that the true intention of the contract is the conveyance of ownership. The transaction is the equivalent of a purchase if the option price is so low that purchase by the lessee can be anticipated.
3. The lease contract is for a term that is equal to most of the estimated life of the property. This criterion is different from the first two where the transaction was just a disguised purchased. Here, the lessee will never gain legal ownership. However, the lease is for such an extensive portion of the asset's life that the lessee obtains a vast majority of its utility.
4. The fourth criterion is too complicated to cover in an introductory textbook. The general idea is that the lessee is paying approximately the same amount as would have been charged just to buy the asset. Paying the equivalent of the purchase price (or close to it) indicates that no real difference exists between the nature of the lease transaction and an acquisition.

If none of the criteria are satisfied then the lease is an operating lease. For both the finance lease and operating lease, an asset and liability are recorded on the balance sheet. For both the amount of the asset and liability is the present value of all future payments. For a finance lease it is treated as a purchase and whatever the asset that is acquired is recorded as the debit and in subsequent periods the asset is depreciated using what we learned in chapter 4. For operating leases the asset is referred to as the right to use the asset for a specified time and is not depreciated. More in depth accounting for leases will be covered in intermediate accounting.

Check Yourself

Which of the following is true with regard to the new FASB rules having to do with leases?

A. Finance leases use the present value to calculate the amount to be recorded but operating leases do not.

B. Companies that acquire control of assets using a finance lease will calculate depreciation on those assets.

C. Leases that transfer ownership automatically at the end of the lease are always accounted for as operating leases.

D. Control of assets is not as important as legal ownership transfer in accounting for leases.

The correct answer is B. The assets acquired with a lease that qualifies as a finance lease is treated just like any acquisition including depreciation. Both finance and operating leases use the present value to calculate the amount to be recorded. Those leases that automatically transfer ownership are finance leases and control of assets is more important than legal ownership.

Key Takeaway

Companies use installment loans to purchase buildings and equipment. The payment for any installment loan can be calculated using the PMT formula in an excel spreadsheet. Once the payment is calculated, each payment must be split into interest and principal. Unlike the amount of the payment, the interest does not need to be calculated using a formula or table. Finance leases are accounted for almost exactly like installment loans.

5.8: Accounting for Leases and Installment Notes is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

5.9: End-of-Chapter Exercises

Questions

1. What is the difference between a current liability and a noncurrent liability?
2. Give an example of a current liability and a noncurrent liability.
3. Why is it important that a company be able to pay its liabilities as they come due?
4. Why are financial statement users particularly concerned about the amount of current liabilities a company has?
5. What are the three characteristics of liabilities according to FASB?
6. What are “accrued liabilities”?
7. How do companies account for gift cards it has sold?
8. What two criteria must be met for a company to record a contingency?
9. Give three examples of possible contingencies that a company would report.
10. How would a company report a contingency that is “reasonably possible”?
11. How would a company report a contingency where the chance of loss is “remote”?
12. How should a company go about estimating liabilities like product warranties?
13. What is a term bond?
14. What is an indenture?
15. How is the contract rate used to calculate the interest paid on a term bond?
16. How do you calculate the payment on an installment loan?
17. How does an installment loan work?
18. What are some of the risks for a company of holding debt?
19. What is bankruptcy?
20. Name three advantages of financing with debt.
21. Define “face value” of a note or bond.
22. What are some of the ways a note or bond repayment can be structured?
23. Define “debenture.”
24. Why are covenants included in loan agreements?
25. Define “effective interest rate.”

True or False

1. ____ Contingent gains should only be recorded if they are probable and can be reasonably estimated.
2. ____ A current ratio of less than one means that a company has more current assets than current liabilities.
3. ____ A long-term note payable is an example of a current liability.
4. ____ Restatement of financial statements should occur if a company attempts to mislead investors by understating its liabilities.
5. ____ Embedded and extended warranties should be accounted for in the same way.
6. ____ When estimating its warranty liability, a company should consider things like the state of the economy.
7. ____ Contingent liabilities should be reported on the balance sheet if they are both probable and can be reasonably estimated.
8. ____ Unearned revenue and accounts receivable are examples of current liabilities.
9. ____ Liabilities for gift cards and similar items must be kept on the balance sheet until they are redeemed, regardless of how long that takes.
10. ____ One advantage of debt financing is that interest is tax deductible.
11. ____ A company’s creditors can force it into bankruptcy if it can’t pay its debts.
12. ____ Banks typically charge stronger companies higher interest rates than weaker ones because the strong companies can better afford it.
13. ____ Financial leverage refers to a company’s ability to pay its debts off early, avoiding interest payments.
14. ____ Debt covenants exist to product the creditor.
15. ____ When a company issues a bond between interest dates, the first interest payment will be lower.

16. ____ A debenture is a debt that is not secured.
17. ____ The maturity value of a bond is amount that the company will need to repay at the end of the bond term.
18. ____ Accounting for a finance lease and an installment loan is not similar at all.
19. ____ Each payment on an installment loan must be separated into interest expense and principal.

Multiple Choice

1. Which of the following is **not** normally a current liability?
    1. Accounts payable
    2. Bonds payable
    3. Interest payable
    4. Income taxes payable
2. Sierra Inc. manufacturers environmentally friendly appliances. It offers a two-year warranty standard. In Year 1, Sierra sold 450,000 toasters. Past experience has told Sierra that approximately 4 percent of the toasters require repair at an average cost of $10 each. During Year 1, Sierra actually spends $38,000 and during Year 2, Sierra actually spends $105,000. What is the balance in the warranty liability account at the end of year 2?
    1. $180,000
    2. $143,000
    3. $38,000
    4. $37,000
3. Reporting contingent losses but not contingent gains is an example of which accounting principle?
    1. Matching
    2. Conservatism
    3. Going concern
    4. Cost/benefit
4. Which of the following is **not** a criterion that must be met for an item to be classified as a liability?
    1. It is a certain future sacrifice
    2. The sacrifice is from the entity’s assets or services
    3. It is a probable future sacrifice
    4. It arises from a present obligation that results from a past transaction
5. Kitten Inc. issued $105,000 in bonds on September 1. The annual interest rate is 6 percent and interest is paid on the bonds every June 30 and December 31. When the bonds are issued on September 1, how much cash will the company collect?
    1. $105,000
    2. $1,050
    3. $106,050
    4. $103,950
6. Which of the following is an agreement which debtors sign as part of getting a loan that serves to protect a creditor?
    1. Security
    2. Term bond
    3. Leverage
    4. Covenant
7. Which of the following is **not** a reason companies borrow money?
    1. To raise needed funds
    2. Interest is tax deductible
    3. Creditors have no control over the company
    4. Creditors do not become owners in the company

8. Which of the following refers to an asset a creditor could take from a debtor if the debtor fails to pay back a loan?
    1. Interest
    2. Security
    3. Covenant
    4. Maturity
9. Krystal Corporation issued $100,000 with a 4 percent stated rate of interest on January 1. The effective rate of interest on that date was 6 percent and interest is paid semiannually on June 30 and December 31. The bonds mature ten years from now. What amount would bondholders be willing to pay Krystal on January 1 for the bonds?
    1. $100,000
    2. $85,123
    3. $85,280
    4. $140,000

Problems

1. Knockoff Corporation makes a videogame unit known as the Gii. During the month of June, the following transactions occurred. Record any necessary journal entries for a–e.
    1. Knockoff purchased $340,000 of raw materials inventory on account.
    2. The company incurs salary expense of $42,000, which will not be paid until the beginning of July.
    3. Knockoff owes the IRS and other government entities $98,000 in taxes due in September.
    4. OK Buy places an advance order for Giis and pays Knockoff $28,000. The Giis will be shipped in July.
    5. Knockoff owes a local bank $3,450 in interest.
2. OK Buy sells gift cards in various denominations. The company likes to sell these because it receives the cash immediately, but knows that a certain percentage will never be redeemed for merchandise. On December 1, OK Buy had a balance in unearned revenue from sales of gift cards of $488,000.
    1. During December, OK Buy sold an additional $354,000 in gift cards. Prepare this journal entry.
    2. During December, $316,000 worth of gift cards were redeemed to purchase inventory that had originally cost OK Buy $182,000. Prepare these journal entries.
    3. On December 31, OK Buy's accountant determines that 4 percent of the outstanding gift cards will never be redeemed for various reasons. She used past history to help determine this figure. Prepare a journal entry if necessary.
    4. What is the balance in OK Buy's unearned revenue from sale of gift cards account on December 31 after all of the above transactions have been recorded?
3. Ingalls Company is a fine jeweler located in a mall in a midsize city. During December 2025, an unfortunate accident happens. Mrs. Rita Yeargin trips over a giant, singing Rudolph set up by the mall management company and went sprawling into Ingalls' store where she cracked her head on a display case. She spent several days in the hospital with a sprained ankle, bruised elbow and a concussion. Prior to the end of the year, Mrs. Yeargin's lawyer files papers to sue both the mall management company and Ingalls for $1,000,000. Ingalls' insurance company tells it that its policy does not cover accidents involving giant, singing Rudolphs. Ingalls's attorney tells it that it is difficult to guess what a jury might do in this case. He estimates that Ingalls will probably be liable for only 20 percent of the $1,000,000 since the Rudolph actually belongs to the mall.
    1. Determine if Ingalls needs to record a journal entry on December 31, 2025, and if so, record it.
4. Sadler Corporation produces lawnmowers. The lawnmowers come with a two-year warranty that is not sold separately. During 2025, Sadler sold 21,400 lawnmowers that cost $5,240,000 to manufacture for $10,475,000 cash. Sadler's accountant estimates that 6 percent will need to be repaired at some point over the next two years at an average cost of $60 per lawnmower.
    1. Make the journal entry to record the sale of the lawnmowers in 2025.
    2. Record warranty expense for 2025 using a journal entry.
    3. During 2026, Sadler spends $29,300 to repair the lawnmowers. Record this.

4. At the end of 2026, Sadler's accountant reevaluates the warranty estimates. The accountant believes that the actual warranty liability may be higher than her original estimates. She now believes that an additional $18,000 should be added. Make the necessary journal entry.
5. During 2027, Sadler spends $58,000 to repair the lawnmowers. Record this.

5. The Eyes Have It sells custom eyewear with a one-year embedded warranty. Customers may purchase an extended one-year warranty beyond that. During 2025, the company sold 52,000 pairs of eyeglasses for $1,000,000. Customers who purchased 75 percent of those pairs also purchased the one-year extended warranty. This brought in $200,000 cash.
   1. Record the sale of the extended warranties in 2025.
   2. Assume that during 2026, the company spent $34,000 to repair glasses under the extended warranty. Record this entry.
   3. Record the entry Eyes will make when the extended warranties expire.
6. Joni Corporation borrows $400,000 from Friendly Bank on February 1, 2025. The principal will not be repaid until the end of six years, but interest payments are due every February 1. The interest rate is 7 percent annually. Record the journal entry necessary for each of the following:
   1. The signing of the loan
   2. The interest accrual on December 31, 2025
   3. The payment of interest on February 1, 2026
7. Colson Corporation issues bonds to finance an expansion of its hot swimwear line. The $50,000 in bonds is issued on April 1, 2024 and pay interest in the amount of 5 percent annually. The effective rate of interest is the same as the stated rate. Interest payments are made every April 1. Record the journal entry necessary for each of the following:
   1. The issuance of the bonds
   2. The interest accrual on December 31, 2024
   3. The payment of interest on April 1, 2025
8. Jaguar Corporation issues term bonds with a face value of $500,000 on January 1, 2025. The bonds have a stated rate of interest of 7 percent and a life of four years. They pay interest annually on December 31. The market rate or effective rate on the date of issuance was 6 percent. Record all necessary journal entries on the following dates.
   1. How much would investors be willing to pay for the bonds on January 1, 2025? (calculate the cash flows and then use the tables to calculate the present value)
   2. Determine the amount of each annual cash interest payment.
   3. What would be the journal entries to record payment of interest on December 31, 2025 and December 31, 2026

Comprehensive Problem

This problem will carry through several chapters, building in difficulty. It allows students to continuously practice skills and knowledge learned in previous chapters.

In earlier chapters you prepared Webworks statements for several months during their first year in business. We now move to the second year. The financial statements for December of the first year are included here as a starting point for January.

Webworks
Income Statement
As of December 31

Revenue	$16,950
Cost of Goods Sold	(8,657)
Gross Profit	8,293
Deprec. and Amort. Expense	(363)
Other Expenses and Losses	(3,790)
Investment Income	100
Earnings before Tax	4,240
Tax Expense	(1,272)
Net Income	$ 2,968

Webworks
Stmt. of Retained Earnings
As of December 31

Retained Earnings, December 1	$9,322
Net Income	2,968
Retained Earnings, December 31	$12,290

Webworks
Balance Sheet
December 31

Assets		**Liabilities**	
Current		**Current**	
Cash	$ 3,215	Accounts Payable	$ 1,925
Accounts Receivable	2,250	Salaries Payable	200
Less Allowance for Doubtful Accounts	(225)		
Net Accounts Receivable	2,025		
Trading Securities, Net	360		
Merchandise Inventory	1,682		
Supplies Inventory	60		
Total Current Assets	$ 7,342	Total Current Liabilities	$ 2,125
Property, Plant, and Equipment			
Equipment	$ 7,000		
Less Accumulated Depreciation	(876)		
Furniture	1,000		
Less Accumulated Depreciation	(51)		
Total P, P, and E	$ 7,073		
Other Noncurrent Assets			
Licensing Agreement, Net	$ 2,000		
		Owners' Equity	
		Capital Stock	$2,000
		Retained Earnings	12,290
		Total Owners' Equity	$14,290
		Total Liabilities & Owners' Equity	
Total Assets	$16,415		$16,415

The following events occur during January:

a. Webworks starts and completes seven more Web sites and bills clients for $4,900.

b. Webworks purchases supplies worth $300 on account.

c. At the beginning of January, Webworks had fourteen keyboards costing $113 each and twenty flash drives which had been written down to $5 each in December due to *obsolescence*. Webworks uses perpetual LIFO to cost its inventory.

d. On account, Webworks purchases sixty-five keyboards for $125 each and ninety of the new flash drives for $22 each.

e. Webworks pays Nancy $775 for her work during the first three weeks of January.

f. Webworks writes off an account receivable from October in the amount of $250 because collection appears unlikely.

g. Webworks receives $750 in advance to design a Web site for a local salon. Work won't begin on the Web site until February.

h. Webworks sells **seventy** keyboards for $9,900, all twenty of the old flash drives for $100 (for all the old flash drives) and eighty of the new flash drives for $2,600 cash (for all new flash drives).

i. During January, Webworks receives notice that one of its former clients is not happy with the work performed. When Webworks refuses to refund the client's money, the client decides to sue for what he paid plus damages for his "pain and suffering," which comes to $5,000. An attorney friend of Leon's mom believes that the suit is without merit and that Webworks probably will not have to pay anything.

j. Webworks collects $5,200 in accounts receivable.

k. Webworks pays $300 for advertising that will run over the next two months.

m. Webworks pays off its salaries payable from December.

n. Webworks pays off $9,000 of its accounts payable.

p. Webworks pays Leon a salary of $1,800.

q. Webworks prepays $900 for rent for the months of January, February, and March.

r. Webworks receives a dividend from QRS of $35 in cash.

s. Webworks pays taxes of $900 in cash.

Required:

A. Prepare journal entries for the above events.

B. Post the journal entries to T-accounts.

C. Prepare an unadjusted trial balance for Webworks for January.

D. Prepare adjusting entries for the following and post them to your T-accounts.

t. Webworks owes Nancy $200 for her work during the last week of January.

u. Leon's parents let him know that Webworks owes $340 toward the electricity bill. Webworks will pay them in February.

v. Webworks determines that it has $68 worth of supplies remaining at the end of January.

w. Prepaid rent should be adjusted for January's portion.

x. Prepaid advertising should be adjusted for January's portion.

y. Webworks is continuing to accrue bad debts at 10 percent of accounts receivable.

z. Webworks continues to depreciate its equipment over four years and its furniture over five years, using the straight-line method.

i. The license agreement should be amortized over its one-year life (10 months remaining).

E. Prepare an adjusted trial balance.

F. **Prepare financial statements for January.**

5.9: End-of-Chapter Exercises is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

CHAPTER OVERVIEW

6: In a Set of Financial Statements, What Information Is Conveyed about Shareholders' Equity?

6.1: The Issuance of Common Stock

6.2: Issuing and Accounting for Preferred Stock and Treasury Stock

6.3: The Issuance of Cash and Stock Dividends

6.4: The Computation of Earnings per Share

6.5: End-of-Chapter Exercises

6: In a Set of Financial Statements, What Information Is Conveyed about Shareholders' Equity? is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

6.1: The Issuance of Common Stock

Learning Objectives

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

1. Identify the rights normally held by the owners of common stock.
2. Describe the responsibilities of a corporation's board of directors.
3. Define and explain the terms "authorized," "outstanding," "issued," and "par value" in relationship to common stock.
4. Record the issuance of common stock for cash.
5. Record the issuance of common stock for a service or for an asset other than cash.

The idea of investors providing cash or other assets to a business in return for capital stock or common stock was introduced way back in Principles of Financial Accounting 1. These investors become stockholders or shareholders in the corporation because they own stock or shares of the company. When this form of ownership first evolved, this ownership was evidenced by actual physical certificates authenticating ownership. For small corporations with only a few shareholders that do not change much, these physical stock certificates may still be useful but for corporations that are recognized and are publicly traded all ownership and changes in that ownership are carefully tracked electronically. In the last chapter, the advantages and disadvantages of borrowing money to obtain assets were presented. The alternative since Assets = Liabilities + Equity is that instead of using liabilities to obtain more assets, we instead increase the equity of the company. That means the sale of stock or some other change to the equity part of the equation. The advantage of selling stock over borrowing is the lack of an obligation to pay interest or to pay the money back. On the other hand, selling stock is giving someone else a say in the company who may be a permanent part of the business. These shares of stock and their effect on managing the business will be the focus of our discussion for the rest of this chapter.

Question: Several accounts frequently appear in the shareholders' equity section of a balance sheet reported by a corporation. Each has its own particular meaning. For example, as of December 31, 2024, W. K. Kellogg Company reported the following information (all numbers in millions).

Figure 6.1 Shareholders' Equity—W.K. Kellogg Company as of December 31, 2024

Equity		
Common stock, $0.0001 par value, 1,000,000,000 shares authorized Issued: 86,101,154 shares in 2024		**0**
Capital in excess of par value		**343**
Retained earnings		**16**
Accumulated other comprehensive income (loss)		**(42)**
Total Kellogg Company equity		**317**

Some of these terms have been examined previously, others have not. For example, "retained earnings" was described in an earlier accounting class as the increase in net assets generated by net income over the life of a company less any amounts distributed as dividends during that same period.

Common stock *has also been mentioned in connection with the capital contributed to a company by its owners. However, Kellogg communicates additional information about its common stock such as the number of authorized and issued shares as well as its par value. What is common stock? That seems the logical first step in analyzing the information provided by a company about its capital shares.*

Answer: Common stock represents the basic ownership of a corporation. Obtaining ownership of a company's common stock provides several distinct rights. However, the specific rights are set by the laws of the state of incorporation and do vary a bit from state to state[1].

Typical Corporate Ownership Structure

- Based on state laws and the corporation's own rules, the owners of common stock are allowed to vote on a few specified issues. By far the most prevalent is the election of the board of directors. As mentioned in Principles of Financial Accounting 1, these individuals represent the ownership of the corporation in overseeing the management. The **board of directors** meets periodically (annually, quarterly, or as necessary) to review operating results and the future plans created by management. The board provides guidance and changes where necessary. A list of the individuals (often 7 to 15) who serve in this capacity is usually included in a corporation's annual report, often just after its financial statements.
- The responsibilities of the board of directors can vary rather significantly from company to company. Some boards do little whereas others are heavily involved in strategy and policy making. For example, a note to the financial statements of Starbucks Corporation explained that the "Company may repurchase shares of its common stock under a program authorized by its Board of Directors." Apparently, approval of that particular program fell within the designated responsibilities of the Starbucks board.
- One of the most important decisions for any board of directors is the declaration of dividends. Management typically cannot pay dividends to shareholders without specific approval by the board. Dividends cause the company (and specifically its cash balances) to get smaller so careful consideration of the impact must be made before declaration is approved. Stockholders like to receive dividends but do not want the company's future to be imperiled as the size shrinks through the payment of too much in dividends.
- If dividends are paid on common stock, all the owners share proportionally. Although dividends are never guaranteed, the owners must be treated fairly if dividends are distributed. An owner who holds 12 percent of the outstanding common stock is entitled to 12 percent of any dividends paid on common stock. The board of directors cannot reward some of the common shareholders while ignoring others.
- Should the company ever be liquidated, the common stock shareholders are entitled to share proportionally in any assets that remain after all liabilities and other claims are settled. Unfortunately, most liquidations result from a severe financial crisis so that holding any assets at the end of the process is rare.

Question: "Authorized," "issued," and "par value" are terms mentioned by the Kellogg Company in describing its ownership shares. What terms are associated with capital stock and what do they mean?

Answer:

Authorized. In applying to the state government as part of the initial incorporation process, company officials indicate the maximum number of capital shares they want to be able to issue. This approved limit is the authorized total. Corporations often set this figure so high that they never have to worry about reaching it. However, states do allow the authorization to be raised if necessary.

Issued. The number of issued shares is simply the quantity that has been sold or otherwise conveyed to owners. Kellogg reports that one billion shares of common stock were authorized by the state of Delaware but only about 86 million have actually been issued to stockholders as of the balance sheet date. The remaining unissued shares are still available if the company needs to raise money by selling additional capital stock.

Outstanding. The total amount of stock currently in the hands of the public is referred to as the shares "outstanding." Shares are sometimes bought back from stockholders and recorded as treasury stock. Thus, originally issued shares are not always still outstanding. According to the information provided, Kellogg has no treasury shares. That means that Outstanding shares = Issued Shares (86 million) - 0 Treasury shares. The Outstanding and Issued are the same in this example. This number is important because it serves as the basis for dividend payments as well as any votes taken of the stockholders.

Par value. The most mysterious term on a set of financial statements might well be "par value." The requirement for a par value to be set was created decades ago in connection with the issuance of stock. It is printed on the face of an old fashioned stock certificate and indicates (again depending on state law) the minimum amount of money that owners must legally leave in the business. By requiring a par value to be specified on the stock certificate, state lawmakers hoped to prevent a corporation from borrowing money that was then distributed to a few owners before bankruptcy was declared.

Traditionally, companies have gotten around this limitation by setting the par value at an extremely low number[2]. For example, Kellogg discloses a par value of $0.0001 for its common stock. This is so low that even though there are 86 million shares issued

86 million x .0001 = only $8,600 which because the financial statements are rounded to the nearest million indicates a zero in the amount of common stock. Many companies report par values below a penny.

Check Yourself

Pickle, Inc. has authorized 1,000,000 shares of common stock and has issued 200,000 of them to shareholders. Pickle repurchased 60,000 shares from the shareholders during the year and that was the only transaction affecting common stock. How many shares outstanding does Pickle show on its balance sheet at the end of the year.

A. 800,000

B. 60,000

C. 940,000

D. 140,000

The answer is D. The shares outstanding are calculated by taking the shares issued (200,000) and subtracting the shares repurchased as treasury stock (60,000). 200,000 – 60,000 = 140,000. Note that we are only considering the number of shares and not dollar amounts at this point.

Question: Over the years, one residual effect from the requirement to include a par value on stock certificates has remained. This figure is still used in reporting the issuance of capital stock. Thus, if W.K. Kellogg sells one share for cash of $17.00 (the approximate value on the New York Stock Exchange during the summer of 2025), the common stock account is increased but only by the $0.0001 par value. Kellogg receives $17.00 but the par value is only $0.0001. How can this journal entry balance? How does a company report the issuance of a share of common stock for more than par value?

Answer: A potential stockholder contributes assets to a company in order to obtain an ownership interest. In accounting, this conveyance is not viewed as an exchange. It is fundamentally different from selling inventory or a piece of land to an outside party. Instead, the contribution of monetary capital is an expansion of both the company and its ownership. As a result, no gain, loss, or other income effect is ever reported by an organization as a result of transactions occurring in its own stock. An investor is merely transferring assets to a corporation to be allowed to join its ownership.

Consequently, a second shareholders' equity balance is created to report the amount received above par value. Kellogg uses the title "capital in excess of par value" but a number of other terms are frequently encountered such as "additional paid-in capital."

Kellogg records the issuance of a share of $0.0001 par value common stock for $17 in cash as follows[3].

Figure 6.2 Issuance of a Share of Common Stock for Cash

	Debit	Credit
Cash	$17	
Common Stock		$.0001
Additional Paid in Capital or In Excess of Par		$16.9999

On the balance sheet, within the stockholders' equity section, the amount that owners put into a corporation when they originally bought stock is the summation of the common stock and capital in excess of par value accounts. This total reflects the assets conveyed to the business in exchange for capital stock. For Kellogg, that figure is $343 million, the amount received from its owners since operations first began.

Figure 6.3 W.K. Kellogg Common Stock and Capital in Excess of Par Value[4]

Common Stock	0
Paid In Capital In Excess of Par	343
Total Capital Stock (Amount invested by shareholders)	343

Check Yourself

The amount in the account common stock should always be which of the following calculations?

A. Number of shares sold x the market value of shares sold.

B. Number of shares sold x the amount the shares were sold for.

C. Number of shares issued x the par value per share.

D. Number of shares issued x treasury stock cost per share.

The correct answer is C. Notice that it works for Kelloggs. 86 million shares sold x $.0001 (par value) = $8,600. (rounded to zero)

Question: Common stock is sometimes issued in exchange for property or personal services rather than for cash. Such contributions are especially prevalent when a small corporation is first getting started. Potential owners may hold land, buildings, or other assets needed by the business. Or, an accountant, attorney, or the like might be willing to provide expert services and take payment in stock. This arrangement can be especially helpful if the business is attempting to conserve cash. What recording is made if capital stock is issued for a service or an asset other than cash?

Answer: The issuance of stock for an asset or service is not technically a trade[5] but the accounting rules are the same. The asset or the service received by the corporation is recorded at the fair value of the capital stock surrendered. That is the equivalent of historical cost. It is a measure of the sacrifice made by the business to get the asset or service. However, if the fair value of the shares of stock is not available (which is often the case for new and smaller corporations), the fair value of the property or services received becomes the basis for reporting.

To illustrate, assume that a potential investor is willing to convey land with a fair value of $125,000 to the Maine Company in exchange for an ownership interest. During negotiations, officials for Maine offer to issue ten thousand shares of $1 par value common stock for this property. The shares are currently selling on a stock exchange for $12 each. The investor decides to accept this proposal rather than go to the trouble of trying to sell the land.

The "sacrifice" made by the Maine Company to acquire this land is $120,000 ($12 per share × 10,000 shares). Those shares could have been sold on the stock exchange to raise that much money. Instead, Maine issues them directly in exchange for the land and records the transaction as follows.

Figure 6.4 Issue Ten Thousand Shares of Common Stock Worth $12 per Share for Land

Land	120,000	
Common Stock ($1 par value × 10,000 shares)		10,000
Capital in Excess of Par Value ($120,000 less $10,000)		110,000

If this stock was not selling on a stock exchange, fair value might not be apparent. In that situation, the Maine Company should recognize the land at its own fair value of $125,000 with an accompanying $5,000 increase in the capital in excess of par value account.

Key Takeaway

Common stock forms the basic ownership units of most corporations. The rights of the holders of common stock shares are normally set by state law but include voting for a board of directors to oversee current operations and future plans. Financial statements often indicate the number of authorized shares (the maximum allowed), issued shares (the number that have been sold), and outstanding shares (those currently in the hands of owners). Common stock usually has a par value although the meaning of this number has faded in importance over the decades and can be so small as to be effectively zero. Upon issuance, common stock is recorded at par value with any amount received above that figure reported in an account such as capital in excess of par value. If issued for an asset or service instead of cash, the recording is based on the fair value of the shares given up. However, if that value is not available, the fair value of the asset or service is used.

[1]Although the Kellogg Company has its headquarters in Battle Creek, Michigan, the company is incorporated in the state of Delaware. Thus, the laws of Delaware set the rights of the common stock shares for this company.

[2]Many other laws have been passed over the years that have been much more effective at protecting both creditors and stockholders.

[3]A few states allow companies to issue stock without a par value. In that situation, the entire amount received is entered in the common stock account.

[4]As mentioned in a previous class, the sales of capital stock that occur on the New York Stock Exchange or other stock markets are between investors and have no direct effect on the company. Those transactions simply create a change in ownership.

[5]As mentioned earlier, the issuance of capital stock is not viewed as a trade by the corporation because it merely increases the number of capital shares outstanding. It is an expansion of both the company and its ownership. That is different from, for example, giving up an asset such as a truck in exchange for a computer or some other type of property.

.

6.1: The Issuance of Common Stock is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

6.2: Issuing and Accounting for Preferred Stock and Treasury Stock

Learning Objectives

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

1. Explain the difference between preferred stock and common stock.
2. Discuss the distribution of dividends to preferred stockholders.
3. Record the issuance of preferred stock.
4. Define “treasury stock” and provide reasons for a corporation to spend its money to acquire treasury stock.
5. Account for the purchase and resale of treasury stock, with both gains and losses occurring.

Question: Some corporations also issue a second type of capital stock referred to as preferred stock. Probably about 10–15 percent of companies in the United States have preferred stock outstanding but the practice is more prevalent in some industries. How is preferred stock different from common stock?

Answer: Preferred stock is another version of capital stock where the rights of those owners are set by the contractual terms of the stock certificate rather than state law. In effect, common stockholders are voluntarily surrendering one or more of their rights in hopes of enticing additional investors to contribute money to the corporation. For common stockholders, preferred stock is often another possible method of achieving financial leverage in the same manner as using money raised from bonds and notes.

The term “preferred stock” comes from the preference that is conveyed to these owners. They are being allowed to step in front of common stockholders when the specified rights are applied. A wide variety of benefits can be assigned to the holders of preferred shares, including additional voting rights, assured representation on the board of directors, and the right to residual assets if the company ever liquidates.

By far the most typical preference is to cash dividends. As mentioned earlier in this chapter, all common stockholders are entitled to share proportionally in any dividend distributions. However, if a corporation issues preferred stock with a stipulated dividend, that amount must be paid before any money is conveyed to the owners of common stock. No dividend is ever guaranteed, not even one on preferred shares. A dividend is only legally required if declared by the board of directors. But, if declared, the preferred stock dividend comes before any common stock dividend.

Common stock is often referred to as a residual ownership because these shareholders are entitled to all that remains after other claims have been settled including those of preferred stock.

The issuance of preferred stock is accounted for in the same way as common stock. Par value, though, often serves as the basis for specified dividend payments. Thus, the par value listed for a preferred share frequently approximates fair value. To illustrate, assume that a corporation issues ten thousand shares of preferred stock. A $100 per share par value is printed on each stock certificate. If the annual dividend is listed as 4 percent, $4 per year ($100 par value × 4 percent) must be paid on preferred stock before any distribution is made on the common stock.

If ten thousand shares of this preferred stock are each issued for $101 in cash ($1,010,000 in total), the company records the following journal entry.

Figure 6.5 Issue Ten Thousand Shares of $100 Par Value Preferred Stock for $101 per Share

Cash	1,010,000	
Preferred Stock (Par Value)		1,000,000
Capital in Excess of Par Value		10,000

Companies often establish two separate “capital in excess of par value” accounts—one for common stock and one for preferred stock. They are then frequently combined in reporting the balances within stockholders’ equity.

Check Yourself

Which of the following is NOT a preference given to preferred stock holders over common stockholders?

A. Dividends paid first.

B. Discount on sales price of stock.

C. Paid out in the event of liquidation first.

D. Assured representation on the board of directors.

The correct answer is B. The others are possible preferences offered to preferred stockholders to entice them to invest with the preference in dividends being the most common and important.

Question: An account called **treasury stock** *is often found near the bottom of the shareholders’ equity section of the balance sheet. Treasury stock represents issued shares of a corporation’s own stock that have been reacquired. For example, the December 31, 2024, balance sheet for Home Depot reports a negative balance of almost $96 billion identified as treasury stock.*

Why does a company voluntarily give billions of dollars back to stockholders in order to repurchase its own stock? That is a huge amount of money leaving the company. Why not invest these funds in inventory, buildings, investments, research and development, and the like?

Answer: Numerous possible reasons exist to justify spending money to reacquire an entity’s own stock. Several of these strategies are rather complicated and a more appropriate topic for an upper-level finance course. However, an overview of a few of these should be helpful in understanding the rationale for such transactions.

- As a reward for service, businesses often give shares of their stock to key employees or sell them shares at a relatively low price. In some states, using unissued shares for such purposes can be restricted legally. The same rules do not apply to shares that have been reacquired. Thus, a corporation might acquire treasury shares to have available as needed for compensation purposes.
- Acquisition of treasury stock can be used as a tactic to push up the market price of a company’s stock in order to please the remaining stockholders. Usually, a large scale repurchase indicates that management believes the stock is undervalued at its current market price. Buying treasury stock reduces the supply of shares in the market and, according to economic theory, forces the price to rise. In addition, because of the announcement of the repurchase, outside investors often rush in to buy the stock ahead of the expected price increase. The supply of shares is decreased while demand for shares is increased. Stock price should go up. Not surprisingly, current stockholders often applaud the decision to buy treasury shares as they anticipate a jump in their investment values.
- Corporations can also repurchase shares of stock to reduce the risk of a hostile takeover. If another company threatens to buy enough shares to gain control, the board of directors of the target company must decide if acquisition is in the best interest of the stockholders[1]. If not, the target might attempt to buy up shares of its own treasury stock in hopes of reducing the number of owners in the market who are willing to sell their shares. It is a defensive strategy designed to make the takeover more difficult to accomplish. Plus, as mentioned above, buying back treasury stock should drive the price up, making purchase more costly for the predator.

Question: To illustrate the financial reporting of treasury stock, assume that the Chauncey Company has issued ten million shares of its $1 par value common stock at an average price of $3.50 per share. The company now reacquires three hundred thousand of these shares for $4 each. How is the acquisition of treasury stock reported?

Answer: Under U.S. GAAP, several methods are allowed for reporting the purchase of treasury stock. Most companies appear to use the cost method because of its simplicity. The acquisition of these shares by Chauncey is recorded at the $1.2 million (three

hundred thousand shares at $4 each) that was paid.

Figure 6.6 Purchase of Three Hundred Thousand Shares of Treasury Stock at a Cost of $4 Each

Treasury Stock	1,200,000	
Cash		1,200,000

Because the cost of treasury stock represents assets that have left the business, this account balance is shown within stockholders' equity (contra equity) as a negative amount, reflecting a decrease in net assets (equity) instead of an increase.

Except for possible legal distinctions, treasury stock is the equivalent of unissued stock. It does not receive **dividends** and has no voting privileges.

Question: Treasury shares can be held forever or eventually sold at prices that might vary greatly from original cost. If sold for more, is a gain recognized? If sold for less, is a loss reported? What is the impact on a corporation's financial statements if treasury stock is reissued? To illustrate, assume that Chauncey Company subsequently sells one hundred thousand shares of its treasury stock for $5.00 each. That is $1.00 more than these shares cost to reacquire. Is this excess reported as a gain within net income?

Answer: As discussed previously, transactions in a corporation's own stock are considered expansions and contractions of the ownership and never impact reported net income. The buying and selling of capital stock are viewed as fundamentally different from the buying and selling of assets. Therefore, this reissuance is recorded by Chauncey through the following journal entry.

Figure 6.7 Sale of One Hundred Thousand Shares of Treasury Stock Costing $4 Each for $5 per Share

Cash	500,000	
Treasury Stock (Cost)		400,000
Capital in Excess of Cost—Treasury Stock		100,000

The "capital in excess of cost-treasury stock" is the same type of account as the "capital in excess of par value" that was recorded in connection with the issuance of both common and preferred stocks. Within stockholders' equity, these accounts can be grouped or reported separately.

Question: Assume that Chauncey later sells another one hundred thousand of the treasury shares, but this time for only $2.60 each. The proceeds in this transaction are below the acquisition cost of $4 per share. What recording is made if treasury stock is sold at the equivalent of a loss?

Answer: Interestingly, the selling of treasury stock below cost is a transaction not well covered in U.S. GAAP. Authoritative rules fail to provide a definitive rule for reporting this reduction except that stockholders' equity should be decreased with no direct

impact recorded in net income.

The most common approach seems to be to first remove any capital in excess of cost recorded by the sale of earlier shares of treasury stock at above cost. If that balance is not large enough to absorb the entire reduction, a decrease is made in retained earnings as shown below. The $100,000 balance in capital in excess of cost-treasury stock was created in the previous journal entry.

Figure 6.8 Sale of One Hundred Thousand Shares of Treasury Stock Costing $4 Each for $2.60 per Share

Cash	260,000	
Capital in Excess of Cost—Treasury Stock	100,000	
Retained Earnings	40,000	
Treasury Stock (Cost)		400,000

One outcome of this handling should be noted. In earlier accounting classes, “retained earnings” was defined as all income reported over the life of a business less all dividend distributions to the owners. Apparently, this definition is not absolutely correct in all possible cases. In the above journal entry, retained earnings are also reduced as a result of a stock transaction where a loss occurred that could not otherwise be reported.

Check Yourself

With the purchase of treasury stock that is recorded at cost, which of the following changes occur to the financial statements?

A. Current Assets increase

B. Stockholders Equity decreases

C. Stockholders Equity increases

D. Net income increases

The correct answer is B. Because Treasury Stock is a contra equity account, the debit (increase) to treasury stock results in a decrease to the stockholders equity section. Current assets also decrease and the FASB specifically has stated that no transactions in a company’s own stock should impact net income.

Key Takeaway

A corporation can issue preferred stock as well as common stock. Preferred shares are given specific rights that come before those of common stockholders. Usually, these rights involve the distribution of dividends. A set payment amount is often required before common stockholders receive any dividend. Subsequently, capital stock shares can be bought back from investors for a number of reasons. If so, they are known as treasury stock. In acquiring these shares, money flows out of the company so the account is reported as a negative balance within stockholders’ equity. If resold, the treasury stock account is reduced and capital in excess of cost is recognized if an amount above cost is received. However, if resold at a loss, any previous capital in excess of cost balance is removed followed by a possible reduction in retained earnings.

[1]If the board of directors does agree to the purchase of the corporation by an outside party, the two sides then negotiate a price for the shares as well as any other terms of the acquisition.

6.2: Issuing and Accounting for Preferred Stock and Treasury Stock is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

6.3: The Issuance of Cash and Stock Dividends

Learning Objectives

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

1. Identify the various dates associated with a dividend distribution.
2. Prepare all journal entries to report a cash dividend payment.
3. Define the characteristics of a cumulative dividend.
4. Explain the rationale for a stock dividend or stock split.
5. Record the issuance of a stock dividend.

Question: As stated in Principles of Financial Accounting 1, a vast majority of investors purchase capital stock for only two reasons: price appreciation and dividends. Dividends and long-term capital gains (gains on the sale of certain investments that have been held for over a year) are especially appealing to individual investors because they are taxed at a lower rate than most other types of income.

Dividends are usually paid in cash and represent the profits of a business being passed along to the owners. Because the corporation is effectively giving away its assets, dividends require formal approval by the board of directors—known as a dividend declaration. The board considers current cash balances as well as the projected needs of the business before deciding on the amount, if any, of a dividend payment. How does a corporation report the declaration and distribution of a cash dividend?

Answer: Dividends provide a meaningful signal to investors about the financial health of a business. Some corporations even boast about having paid a constant or rising annual dividend for many years. Unfortunately, one result of recent economic times has been that a number of businesses have been forced to reduce or even eliminate dividend distributions. Such decisions typically lead to a drop in the market price of a corporation's stock because of the negative implications.

Other businesses stress rapid growth and rarely, if ever, pay a cash dividend. The board of directors prefers that all profits remain in the business to stimulate future growth. For example, Netflix Inc. reported net income for 2024 of over $8.7 billion but paid no dividend.

Chronologically, accounting for dividends involves several dates with approximately two to five weeks passing between each:

- **The date of declaration**
- **The date of record (and the related ex-dividend date)**
- **The date of payment (also known as the date of distribution)**

To illustrate, assume that the Hurley Corporation has one million shares of authorized common stock. To date, three hundred thousand of these shares have been issued but twenty thousand shares were recently bought back as treasury stock. Thus, 280,000 shares are presently outstanding, in the hands of investors. Hurley earned a reported net income of $780,000 in the current year. After some deliberations, the board of directors has decided to distribute a $1.00 cash dividend on each share of common stock.

The day on which the Hurley board of directors formally decides on the payment of this dividend is known as the date of declaration. Legally, this action creates a liability for the company that must be reported in the financial statements. Only the owners of the 280,000 shares that are outstanding will receive this distribution.

Figure 6.9 $1.00 per Share Dividend Declared by Board of Directors

Retained Earnings	280,000	
Dividends Payable		280,000

As discussed previously, dividend distributions reduce the amount reported as retained earnings but have no impact on reported net income.

When the dividend is declared by the board, the date of record is also set. All shareholders who own the stock on that day qualify for receipt of the dividend. The **ex-dividend** date is the first day on which an investor is **not** entitled to the dividend. Because receipt of the dividend has been lost, the market price of the stock typically drops by approximately the amount of the dividend on the ex-dividend date although myriad other market factors always influence the movement of stock prices.

No journal entry is recorded by the corporation on either the date of record or the ex-dividend date because they do not relate to any event or transaction. Those dates simply allow Hurley to identify the owners to whom the dividend will be paid.

On the date of payment, the corporation direct deposits cash to the appropriate recipients, an event recorded as follows.

Figure 6.10 Payment of $1.00 per Share Cash Dividend

Dividends Payable	280,000	
Cash		280,000

Question: Assume that Wington Company issues a share of $100 par value preferred stock to an investor on January 1, Year One. The preferred stock certificate discloses an annual dividend rate of 8 percent. Thus, dividend payment is $8 each year ($100 × 8 percent). At the end of Year One, Wington faces a cash shortage and is unable to pay this dividend. Have the owners of the preferred shares lost the right to the Year One dividend? Must a corporation report a liability if a preferred stock dividend is not paid at the appointed time?

Answer: Preferred stock dividends are often identified on the stock certificate as "**cumulative**." This term means that the obligation for all unpaid dividends on these shares must be met before dividends can be distributed on common stock. Cumulative dividends are referred to as "in arrears" when past due.

If the dividend on the preferred shares of Wington is cumulative, the $8 is in arrears at the end of Year One. In the future, this (and any other) missed dividend must be paid before any distribution on common stock can be considered. Conversely, if a preferred stock is noncumulative, a missed dividend is simply lost to the owners. It has no impact on the future allocation of dividends between preferred and common shares.

The existence of a cumulative preferred stock dividend in arrears is information that must be disclosed in financial statements. However, the balance is not reported as a liability. Only dividends that have been formally declared by the board of directors are recorded as liabilities. If cumulative, a note to the financial statements should explain Wington's obligation for any preferred stock dividends in arrears.

Check Yourself

When the board of directors declares a dividend on common stock and it is recorded, the journal entry will have which of the following effects on the financial statements of the company?

A. Current liabilities will increase.

B. Current liabilities will decrease.

C. Stockholders equity will increase.

D. Expenses will increase.

The correct answer is A. The credit to dividends payable will increase current liabilities while the debit to retained earnings will decrease stockholders equity. Dividends are not expenses and thus expenses are not affected.

Question: Speculation that Tesla will split its stock in 2020 gets lots of press and attention from investors.

In stories about this possibility by Tesla it becomes clear that a corporation can issue additional shares of stock to shareholders instead of distributing only cash dividends. These shares can be issued as a **stock dividend** *or in a slightly different manner as a stock split*[1]*. No assets are distributed in either of these scenarios—just more shares of the company's own stock. Are shareholders better off when they receive additional shares in a stock dividend?*

Answer: When a stock dividend is issued, the number of shares held by every investor increases but their percentage ownership stays the same. Their ownership interest in the corporation remains proportionally unchanged.

To illustrate, assume that the Red Company reports net assets of $5 million. Janis Samples owns one thousand of the outstanding ten thousand shares of this company's common stock. She holds a 10 percent ownership interest (1,000/10,000) in a business that holds net assets of $5 million.

The board of directors then declares and distributes a 4 percent stock dividend. For each one hundred shares that a stockholder possesses, Red Company issues an additional 4 shares (4 percent of one hundred). Thus, four hundred new shares are conveyed to the ownership as a whole (4 percent of ten thousand) which raises the total number of outstanding shares to 10,400. However, a stock dividend has no actual impact on the corporation. There are simply more shares outstanding. Nothing else has changed.

Janis Samples receives forty of these newly issued shares (4 percent of one thousand) so that her holdings have grown to 1,040 shares. After this stock dividend, she still owns 10 percent (1,040/10,400) of the outstanding stock of Red Company and it still reports net assets of $5 million. The investor's financial position has not improved; she has gained nothing as a result of this stock dividend.

Not surprisingly, the investor makes no journal entry in accounting for the receipt of a stock dividend. No change has taken place except for the number of shares being held.

However, the corporation does make a journal entry to record the issuance of a stock dividend although it creates no impact on either assets or liabilities. The retained earnings balance is decreased by the fair value of the shares issued while contributed capital (common stock and **capital in excess of par value**) are increased by the same amount.

According to U.S. GAAP, if a stock dividend is especially large (in excess of 20–25 percent of the outstanding shares), the change in retained earnings and contributed capital is recorded at par value rather than fair value [1.]

Check Yourself

Argyle, Inc. has 500,000 outstanding shares of common stock on December 1, 2025. The par value of this stock is $1. On that day, the board of Argyle declares and distributes a 50% stock dividend to shareholders. The fair value of the stock is $10 per share. The journal entry to record this transaction will include which of the following?

A. Debit to retained earnings $2,500,000.

B. Credit to retained earnings $2,500,000.

C. Debit to retained earnings $250,000.

D. Credit to retained earnings $250,000

The correct answer is C. When a dividend is distributed it reduces or debits retained earnings. The amount used is calculated using the par value when a large stock dividend is completed like this one. So 50% x 500,000 x $1 equals the amount of the stock dividend in dollars.

Question: *If no changes occur in the makeup of a corporation as the result of a stock dividend, why does a board of directors choose to issue one?*

Answer: The primary purpose served by a stock dividend (or a stock split) is a reduction in the market price of the corporation's capital stock. When the price of a share of stock rises to a high level, fewer investors are willing to make purchases. At some point, market interest wanes. The resulting reduction in demand will likely have a negative impact on the stock price. A growing company might find that a previously escalating trend in its market value has hit a plateau when the price of each share rises too high

By issuing a large quantity of new shares (sometimes two to five times as many shares as were outstanding), the price falls, often precipitously. For example, an owner who held one hundred shares at a market price of $120 per share (total value of $12,000) might now have two hundred shares selling at $60 per share or three hundred shares selling at $40 per share (but with the same total market value of $12,000). The stockholder's investment remains unchanged but, hopefully, the stock is now more attractive to investors at the lower price so that the level of active trading increases.

Stock dividends also provide owners with the possibility of other benefits. For example, cash dividend payments usually drop after a stock dividend but not always in proportion to the change in the number of outstanding shares. An owner might hold one hundred shares of common stock in a corporation that has paid $1 per share as an annual cash dividend over the past few years (a total of $100 per year). After a 2-for-1 stock split, this person now owns two hundred shares. The board of directors might then choose to reduce the annual cash dividend to only $0.60 per share so that future payments go up to $120 per year (two hundred shares × $0.60 each). Such a benefit, though, is not guaranteed. The investors can merely hope that additional cash dividends will be received.

Key Takeaway

Many corporations distribute cash dividends after a formal declaration is passed by the board of directors. Journal entries are required on both the date of declaration and the date of payment. The date of record and the ex-dividend date are important in identifying the owners entitled to receive the dividend but no transaction occurs. Hence, no recording is made on those dates. Preferred stock dividends are often cumulative so that any dividends in arrears must be paid before a common stock distribution can be made. Dividends in arrears are not recorded as liabilities until declared. Stock dividends and stock splits are issued to reduce the market price of capital stock and keep potential investors interested in the possibility of acquiring ownership. A stock dividend is recorded as a reduction in retained earnings and an increase in contributed capital. However, stock dividends have no immediate impact on the financial condition of either the company or its stockholders.

[1]A stock dividend of between 20 and 25 percent can be recorded at either fair value or par value.

6.3: The Issuance of Cash and Stock Dividends is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

6.4: The Computation of Earnings per Share

Learning Objectives

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

1. Compute and explain return on equity.
2. Discuss the reasons that earnings per share (EPS) figures are so closely watched by investors.
3. Calculate basic EPS with or without the existence of preferred stock.

Question: In the earlier text Principles of Financial Accounting 1, various ratios were presented. They include ratios, numbers, percentages, and the like that are commonly studied by investors as an indication of current financial health and future prosperity. One common measure is **return on equity (ROE)**. *How does an interested party calculate the return on equity reported by a business?*

Answer: Return on equity reflects the profitability of a company based on the size of the owners' claim to net assets as shown primarily through contributed capital and retained earnings. It is simply the reported net income divided by average shareholders' equity for the period.

return on equity = net income or operating income/average shareholders' equity

For example, NetFlix began 2024 with total shareholders' equity of $20.6 billion and ended that year with a balance of $24.7 billion. For the year ended December 31, 2024, NetFlix reported income before taxes of $8.7 billion for a return on equity of 38 percent.

average shareholders' equity: ($20.6 billion + $24.7 billion)/2 = $22.7 billion
return on equity: $8.7 billion/$22.7 billion = 38%

Netflix could be said to have earned a 38% return on the shareholders' investment in the form of money invested or earnings left in the corporation rather than being paid as dividends.

Question: No single ratio that is computed to help investors analyze a business and its financial health is more obsessively watched than earnings per share (EPS). Corporations even call press conferences to announce their latest EPS figures. According to U.S. GAAP, public companies are required to present EPS for each period that net income is reported. As just one example, NetFlix, Inc. disclosed EPS of $20.28 on its income statement for the year ended December 31, 2024. Why is the EPS reported by a corporation so closely monitored by the investment community?

Answer: The simple reason for the public fascination with EPS is that this number is generally considered to be linked to the market price of a company's capital stock. Therefore, constant and wide-scale speculation takes place about future EPS figures. If analysts merely predict an increase in EPS, that forecast alone can lead to a surge in stock price.

A **price-earnings ratio (P/E ratio)** is even computed to help quantify this relationship. The P/E ratio is the current price of the stock divided by the latest EPS figure. It enables investors to anticipate movements in the price of a stock based on their projections of earnings per share. If a company's P/E ratio is twenty and is expected to remain constant, then an increase in EPS of $1 should lead to a $20 rise in stock price.

The ongoing debate as to whether EPS and the P/E ratio are over emphasized as investing tools is a controversy better left to upper-level finance courses. The fascination is certainly real regardless of whether the perceived benefits are as great as many believe.

Question: *How is EPS calculated?*

Answer: EPS is a common stock computation designed to measure operating results after all other claims have been satisfied. In simplest form, EPS (often referred to as **basic EPS)** is the net income for the period divided by the weighted average number of outstanding shares of common stock. The company's income is allocated equally to each of these shares.

To illustrate, assume a business organization reports net income of $700,000. If an average of 200,000 shares of common stock is outstanding for this period of time, EPS is $700,000/200,000 or $3.50 per share. If the market price of this stock is $35, then the P/E ratio is 35/3.50, or ten.

Because EPS only relates to common stock, this computation is altered slightly if **preferred stock** shares are also outstanding. Preferred stock is normally entitled to its dividend before common stock has any claim. Therefore, in determining basic EPS, any preferred stock dividend must be removed to arrive at the portion of income that is attributed to the ownership of common stock.

Basic EPS

(net income – preferred stock dividends)/average number of common shares outstanding

Check Yourself

If a company decides to repurchase its common stock and thus reduce the number of average shares outstanding, what could be expected with regard to the calculation of earnings per share?

A. Earnings per share would decrease.

B. Earnings per share would increase.

C. Earnings per share would not be affected.

D. Preferred dividends would be increased.

The correct answer is B. Because the formula for EPS is (Net Income – Preferred dividends) / Average shares outstanding and the purchase of shares would reduce the number outstanding the EPS calculation would increase because the denominator is reduced.

Question: For the year ended December 31, 2024, NetFlix reported basic EPS of $20.38 per share. However, the company also reported a second figure, diluted EPS, that was only $19.83 per share. What is the meaning of diluted EPS? Why is diluted EPS also reported by some businesses along with basic EPS?

Answer: All publicly traded companies must disclose basic EPS. Income reported for the period (after removal of any preferred stock dividends) is allocated evenly over the weighted average number of shares of outstanding common stock. Basic EPS is mechanically derived based on historically reported income and share figures.

Many corporations also have other contractual obligations outstanding that could become common stock and, therefore, potentially affect this computation. Stock options, convertible bonds, and convertible preferred stock can each be exchanged in some manner for common stock shares. That decision is usually up to the holder and out of the control of the company. If these conversions were to transpire, the additional shares could cause EPS to drop—possibly by a significant amount. This potential reduction should be considered by investors in making any assessment of EPS.

Diluted EPS serves as a warning to decision makers of the possible impact that the existence of these convertibles can have on ownership. It is a hypothetical computation that gives weight to the chance that such conversions will take place. The actual mechanical steps in this process are better left to an intermediate accounting course. However, an understanding of the purpose of reporting diluted EPS is worthwhile.

Stock options, convertible bonds, convertible preferred stocks, and the like could become common stock and reduce a company's earnings per share. Thus, U.S. GAAP requires that this possible impact is calculated and shown by the reporting of a lower diluted EPS. For Netflix, if all other transactions stayed the same except that its convertible items were exchanged for common stock, basic EPS would drop from $20.38 to $19.83 because of the additional stockholders getting their share. That is the possible dilution that could be caused by the presence of items convertible into common stock. For an investor or potential investor, that is information of interest. Including this figure alerts them to the possibility of such conversions and helps them quantify the potential impact.

Question: When the number of shares outstanding changes during the year, how is the average or weighted average shares outstanding calculated?

So a review - issuance of new shares makes the number of shares outstanding go up as does the resale of treasury shares. The purchase of treasury stock makes the number of shares outstanding go down. So if ArcSoft, Inc. starts the year with 150,000 shares outstanding and then issues or sells 20,000 new shares on May 1 and purchases treasury stock of 5,000 shares on November 1, they will end the year with 165,000 shares outstanding (150,000 + 20,000 - 5,000). But is that the average shares outstanding? No, we

still need to make a calculation. So Arc had 150,000 shares outstanding from Jan 1 to May 1 or 4 months, then they had 170,000 shares outstanding for May 1 to Nov 1 or 6 months. Finally they had 165,000 shares outstanding for Nov 1 to Dec 31 or two months.

One way to calculate the weighted average:

150,000 x 4 months / 12 months or 150,000 * 4 / 12 = 50,000

170,000 x 6 months / 12 months or 170,000 * 6 / 12 = 85,000 **Each number of shares outstanding is multiplied by the portion of the year they are outstanding**

165,000 x 2 months / 12 months or 165,000 * 2 / 12 = 27,500

50,000 + 85,000 +27,500 = 162,500 weighted average shares outstanding used to calculate EPS.

Second way to calculate the weighted average (number of shares outstanding for all 12 months listed - change only with the change in outstanding shares - then add up)

January	150,000/ 12 =	12,500
February	150,000/12 =	12,500
March	150,000/12 =	12,500
April	150,000/12 =	12,500
May	170,000/12 =	14,167
June	170,000/12 =	14,167
July	170,000/12 =	14,167
August	170,000/12 =	14,167
September	170,000/12 =	14,167
October	170,000/12 =	14,167
November	165,000/12 =	13,750
December	165,000/12 =	13,750
Total =		162,502 different because of rounding

Of course when there are no changes during the year in the number of shares outstanding - this mathematical calculation is not needed and the average is the same as the number of shares outstanding at the beginning and end of the year.

Key Takeaway

Return on equity (ROE) is one percentage often computed by market analysts to help evaluate the profitability of a business. However, the reporting of earnings per share (EPS) draws a much greater circle of interest. Basic EPS must be reported by every publicly traded company for each year in which net income is reported. Basic EPS is the net income for the period divided by the weighted average number of shares of common stock outstanding. Because EPS is only determined for common stock, any preferred stock dividends must be removed from net income as a preliminary step in carrying out this computation. The resulting figure is viewed as having a major impact on the movement of the company's stock price. The price-earnings (P/E) ratio even quantifies that effect. If a corporation also has items such as stock options or convertible bonds that can be turned into common stock, conversion could potentially have an adverse impact on EPS. Thus, where such contractual obligations are outstanding, diluted EPS must also be reported to help investors understand the possible impact of future conversions.

Talking with a Real Investing Pro (Continued)

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

Question: Investors in the United States seem to have an obsession about the reporting of earnings per share. Even slight movements in projected EPS figures can create significant swings in the market price of a company's stock. Do you think there is

an overemphasis on EPS in the public's investing decisions? How closely do you pay attention to EPS figures that are reported by the businesses that you are following?

Kevin Burns: This is a very good question. By now students must realize that accounting is really all about estimates. Although investors would like accounting to be objectively exact, reporting such estimates really requires an awful lot of subjectivity. For example, for many years, General Electric would almost always report EPS a penny or two above market expectations. This was quarter after quarter like clockwork. It got to the point where if the company didn't "beat" the estimates on the street by a penny or two, the market was disappointed. It is absurd to believe that this is meaningful. This is especially true when earnings can also be managed simply by delaying or speeding up a major transaction from one time period to another. So, yes, I believe that EPS, although important, is not the ultimate piece of information that some investors seem to think. I am much more concerned about asset values, growth prospects, and what a company does with the cash it is able to generate.

6.4: The Computation of Earnings per Share is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

6.5: End-of-Chapter Exercises

Questions

1. Define “common stock.”
2. List three rights normally held by common stockholders.
3. Define “authorized” number of shares of common stock.
4. Define “issued” number of shares of common stock.
5. Define “outstanding” shares of common stock.
6. Explain the meaning of “par value” of a share of stock.
7. Why is preferred stock called “preferred”?
8. What is treasury stock?
9. Give three reasons a corporation might want to buy back its own stock.
10. What is a dividend?
11. What is a cumulative dividend?
12. What is a stock dividend?
13. What is the difference in accounting between a small stock dividend and a large stock dividend?
14. Why do corporations issue stock dividends?
15. How is return on equity calculated?
16. How is a company’s price-earnings ratio calculated?
17. How is basic earnings per share determined?
18. Why would a company be required to report diluted earnings per share?

True or False

1. ____ Common stockholders are usually permitted to vote for a corporation’s board of directors, but preferred stockholders are not.
2. ____ Earnings per share is one of the most watched metrics of a corporation.
3. ____ Preferred dividends must be paid annually.
4. ____ A corporation with stock options had to report diluted earnings per share.
5. ____ A small stock dividend will typically result in a smaller debit to retained earnings than a large stock dividend.
6. ____ It is not possible for a corporation to have more outstanding shares of stock than authorized shares of stock.
7. ____ Most companies choose a relatively large par value for their stock.
8. ____ Preferred stockholder dividends are paid before common stockholder dividends.
9. ____ One reason a company might repurchase its own stock is to protect against a hostile takeover.
10. ____ Anyone not a stockholder on the date of declaration of a dividend will not be eligible to participate in that dividend.
11. ____ When referring to dividends, the term “in arrears” refers to the fact that the date of declaration and the date of payment are not the same.
12. ____ A company’s price-earnings ratio can help predict changes in its stock price based on movement in its EPS.

Multiple Choice

1. Yancey Corporation issues 50,000 shares of common stock for $30 per share. The stock has a par value of $2 per share. By what amount would Yancey credit capital in excess of par?
    1. $1,500,000
    2. $1,400,000
    3. $100,000
    4. $50,000
2. Landon Corporation sold 16,000 shares of $0.50 par value common stock for $17 per share. Which of the following is the journal entry Landon should make?
    1. Debit Cash $272,000 Credit Common Stock $8,000 and Credit Capital in Excess of Par Value $264,000.

2. Debit Cash $272,000 Credit Common Stock $272,000.

3. Debit Capital in Excess of Par Value $264,000 Credit Common Stock $264,000

4. Debit Cash $8,000 and Credit Common Stock $8,000

3. Jackson Company is authorized to issue 20,000 shares of $0.50 par value stock. On February 1, it issues 4,000 shares. On April 20, an additional 6,000 shares are issued. On September 23, Jackson repurchases 2,000 shares. On November 3, it reissues half of the shares it repurchased in September. How many outstanding shares does Jackson have on December 31?
   1. 20,000
   2. 10,000
   3. 9,000
   4. 8,000
4. Paul Mitchell purchased a licensing agreement for $40,000 prior to going to work for Traylor Corporation. Traylor agreed to issue 2,000 shares of common stock to Mitchell in exchange for his licensing agreement, which now has a value of $30,000. At the time of the stock exchange, Traylor's $2 par value stock was selling for $14 per share. For what amount should Traylor debit the licensing agreement?
   1. $40,000
   2. $30,000
   3. $28,000
   4. $4,000
5. Kramer Company is authorized to issue 45,000 shares of its 7 percent, $100 par value preferred stock. On March 15, Kramer issues 5,000 shares for $200 per share. On November 1, Kramer declares the dividend and pays it on December 1. What amount of cash was paid to the preferred shareholders?
   1. $70,000
   2. $315,000
   3. $630,000
   4. $35,000
6. Portor Corporation is authorized to sell 150,000 shares of its $0.25 par value common stock. It currently has 90,000 shares issued and outstanding. Portor would like to declare a stock dividend and is curious about the effect this will have on retained earnings. Portor's stock has a current market value per share of $26. Portor is trying to decide between a 5 percent stock dividend and a 40 percent stock dividend. Which of the following accurately shows the effect of each on retained earnings?

	5% Stock Dividend	40% Stock Dividend
a.	$117,000	$936,000
b.	$117,000	$9,000
c.	$1,125	$9,000
d.	$1,125	$936,000

7. Falls Church Corporation ended the year with revenues of $45,000 and expenses of $33,000. Its stockholders' equity accounts total $490,000. Which of the following is Falls Church's return on equity for the year?

1. 9.18%
2. 6.73%
3. 73.33%
4. 2.45%

8. Fleming Corporation began and ended the year with 50,000 outstanding shares of common stock net income for the year totaled $480,000. Preferred dividends amounted to $30,000. Which of the following would be Fleming's basic earnings per share?

   1. $9.60 per share
   2. $16.00 per share
   3. $6.00 per share
   4. $9.00 per share

9. Which of the following would not force a company to compute diluted earnings per share in addition to basic earnings per share?

   1. Convertible preferred stock
   2. Stock warrants
   3. Nonconvertible preferred stock
   4. Stock options

10. Friar Inc. had a net income for 20X5 of $1,870,000. It had 600,000 shares of common stock outstanding on 1/1/X5 and repurchased 150,000 of those shares on 8/31/X5. It has no preferred stock. On 12/31/X5, Friar's stock was selling for $26 per share. Which of the following is Friar's price-earnings ratio on 12/31/X5?

    1. 7.65
    2. 8.33
    3. 6.25
    4. 7.00

Problems

1. Cutlass Corporation is authorized to issue 40,000 shares of $.25 par value common stock. On March 15, it issues 1,000 shares for $7 per share. Record this transaction showing the journal entries for Cutlass.

2. McNair Corporation is authorized to issue 100,000 shares of 5 percent, $100 par value preferred stock. On May 22, McNair issues 35,000 shares of preferred stock for $110 per share. McNair declares the preferred dividend on September 1 and pays it on October 1.

   1. Record the issuance of the preferred stock showing journal entries.
   2. Record the declaration of the dividend on September 1.
   3. Record the payment of the preferred dividend on October 1.

3. Douglas Company's board of directors approves a plan to buy back shares of its common stock. Prepare journal entries for each of the following transactions. Assume that the transactions occur in the order given. At the beginning of 2025, Douglas has 800,000 shares issued and outstanding. All the transactions happen during 2025.

   1. Douglas buys back 40,000 shares of its $1 common stock for $32 per share.
   2. Douglas resells 15,000 shares for $35.
   3. Douglas resells 5,000 shares for $32.
   4. Douglas resells 6,000 shares for $28.
   5. How many shares does Douglas have issued and outstanding at the end of 2025?

4. Grayson Corporation is authorized to sell 2,000,000 shares of its $1 par value common stock to the public. Before 2024, it had issued 60,000 shares with a market value of $15 per share. During 2024, Grishom issued another 14,000 shares when the market value per share was $20.

   On 1/1/24, Grishom had retained earnings of $1,950,000. During 2024, Grishom earned net income of $80,000 and paid dividends to common stockholders of $19,000. Also during 2024, Grishom repurchased 11,000 shares of its own stock when the

market price was $18.

1. Record the issuance of the common stock during 2024.
2. Determine retained earnings on 12/31/24.
3. Record the purchase of the treasury stock.
4. Prepare the stockholders' equity section of the balance sheet on 12/31/24.

5. In late 2025, the Pickins Corporation was formed. The articles of incorporation authorize 5,000,000 shares of common stock carrying a $1 par value, and 1,000,000 shares of $100 par value preferred stock. On January 1, 2026, 2,000,000 shares of common stock are issued for $20 per share. Also on January 1, 50,000 shares of preferred stock are issued at $100 per share.

   1. Prepare journal entries to record these transactions on January 1.

      During March 2026, the Pickins Corporation repurchased 200,000 common shares for the treasury at a price of $18 per share. During August 2026, 100,000 treasury shares are reissued at $19 per share.

   2. Prepare journal entries to record these transactions.

      During November 2026, Pickins issues a 50 percent stock dividend on all outstanding shares when its stock was selling for $30 per share. On December 1, 2026, Pickens declares a $0.75 per share cash dividend on common stock and a $2.00 per share cash dividend on preferred stock. Payment is scheduled for December 20, 2026, to shareholders of record on December 10, 2026.

   3. Prepare journal entries to record the declaration and payment of these stock and cash dividends.

6. On March 1, St. George Company declares a stock dividend on its $1 par value stock. It had 1,000 shares outstanding and the market value was $13 per share.

   1. What would be the debit to retained earnings for a 10 percent stock dividend?
   2. What would be the debit to retained earnings for a 30 percent stock dividend?

7. Rawlings Company has the following equity accounts at the beginning and end of 2025:

	1/1/2025	12/31/2025
Common Stock, $1 Par Value	$160,000	$200,000
Capital in Excess of Par, Common	$12,000,000	$16,500,000
Retained Earnings	$1,100,000	$1,882,400

   The additional 30,000 shares of common stock were issued on May 1, 2025 and 10,000 more on December 1, 2025. Net income for the year was $1,082,400.

   Determine Rawlings' basic EPS for the year ending December 31, 2025.

6.5: End-of-Chapter Exercises is shared under a not declared license and was authored, remixed, and/or curated by LibreTexts.

Index

Index

Glossary

Sample Word 1 | Sample Definition 1

Detailed Licensing

Overview

Title: ACCT 151: Principles of Financial Accounting II

Webpages: 64

All licenses found:

- Undeclared: 100% (64 pages)

By Page

- ACCT 151: Principles of Financial Accounting II - *Undeclared*
  - Front Matter - *Undeclared*
    - TitlePage - *Undeclared*
    - InfoPage - *Undeclared*
    - Table of Contents - *Undeclared*
    - Licensing - *Undeclared*
  - 1: How Does an Organization Accumulate and Organize the Information Necessary to Prepare Financial Statements? - *Undeclared*
    - 1.1: A Review of the Essential Role of Transaction Analysis - *Undeclared*
    - 1.2: An Introduction to Double-Entry Bookkeeping - *Undeclared*
    - 1.3: Preparing Journal Entries - *Undeclared*
    - 1.4: The Connection of the Journal and the Ledger - *Undeclared*
    - 1.5: The Need for Adjusting Entries - *Undeclared*
    - 1.6: Preparing Various Adjusting Entries - *Undeclared*
    - 1.7: Preparing Financial Statements Based on Adjusted Balances - *Undeclared*
    - 1.8: Chapter 1 Appendix – Financial Statement Preparation - *Undeclared*
    - 1.9: End-of-Chapter Exercises - *Undeclared*
  - 2: In a Set of Financial Statements, What Information Is Conveyed about Receivables? - *Undeclared*
    - 2.1: Accounts Receivable and Net Realizable Value - *Undeclared*
    - 2.2: Accounting for Uncollectible Accounts - *Undeclared*
    - 2.3: The Problem with Estimations - *Undeclared*
    - 2.4: Estimating the Amount of Uncollectible Accounts - *Undeclared*
    - 2.5: End-of-Chapter Exercises - *Undeclared*
  - 3: How Does a Company Gather Information about Its Inventory? - *Undeclared*
    - 3.1: Determining and Reporting the Cost of Inventory - *Undeclared*
    - 3.2: Perpetual and Periodic Inventory Systems - *Undeclared*
    - 3.3: The Calculation of Cost of Goods Sold - *Undeclared*
    - 3.4: Determining Inventory on Hand - *Undeclared*
    - 3.5: The Necessity of Adopting a Cost Flow Assumption - *Undeclared*
    - 3.6: The Selection of a Cost Flow Assumption for Reporting Purposes - *Undeclared*
    - 3.7: Applying Cost Flow Assumptions to Determine Reported Inventory Balances - *Undeclared*
    - 3.8: Reporting Inventory at the Lower-of-Cost-or-Market - *Undeclared*
    - 3.9: End-of-Chapter Exercises - *Undeclared*
  - 4: In a Set of Financial Statements, What Information Is Conveyed about Long Term Assets? - *Undeclared*
    - 4.1: The Reporting of Property and Equipment - *Undeclared*
    - 4.2: Determining Historical Cost and Depreciation Expense - *Undeclared*
    - 4.3: Alternative Patterns for Calculating Depreciation - *Undeclared*
    - 4.4: Recording Depreciation Expense for a Partial Year - *Undeclared*
    - 4.5: Recording Expenditures That Affect Older Assets - *Undeclared*
    - 4.6: Identifying and Accounting for Intangible Assets - *Undeclared*
    - 4.7: The Balance Sheet Reporting of Intangible Assets - *Undeclared*
    - 4.8: Recognizing Intangible Assets Owned by a Subsidiary - *Undeclared*
    - 4.9: Accounting for Research and Development - *Undeclared*
    - 4.10: End-of-Chapter Exercises - *Undeclared*

- 5: In a Set of Financial Statements, What Information Is Conveyed about Liabilities? - *Undeclared*
  - 5.1: Basic Reporting of Liabilities - *Undeclared*
  - 5.2: Reporting Current Liabilities Such as Gift Cards - *Undeclared*
  - 5.3: Accounting for Contingencies - *Undeclared*
  - 5.4: Accounting for Product Warranties - *Undeclared*
  - 5.5: Debt Financing - *Undeclared*
  - 5.6: The Issuance of Notes and Bonds - *Undeclared*
  - 5.7: Pricing and Reporting Term Bonds - *Undeclared*
  - 5.8: Accounting for Leases and Installment Notes - *Undeclared*
  - 5.9: End-of-Chapter Exercises - *Undeclared*
- 6: In a Set of Financial Statements, What Information Is Conveyed about Shareholders' Equity? - *Undeclared*
  - 6.1: The Issuance of Common Stock - *Undeclared*
  - 6.2: Issuing and Accounting for Preferred Stock and Treasury Stock - *Undeclared*
  - 6.3: The Issuance of Cash and Stock Dividends - *Undeclared*
  - 6.4: The Computation of Earnings per Share - *Undeclared*
  - 6.5: End-of-Chapter Exercises - *Undeclared*
- Back Matter - *Undeclared*
  - Index - *Undeclared*
  - Index - *Undeclared*
  - Glossary - *Undeclared*
  - Detailed Licensing - *Undeclared*