chapter 4

# Maintain and Analyze Financial Records

4.1 ACCOUNTING PRINCIPLES AND PRACTICES

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# Case STUDY

## Accenture: Making the Right Move

Accenture is the world's largest management and technology consulting firm. In 2005 it had revenues of more than $17 billion and net income of $940.5 million. Its clients include 87 of the Fortune Global 100, more than two-thirds of the Fortune Global 500, and government agencies in 24 countries. Accenture focuses on helping its clients identify and enter new markets, increase revenues in existing markets, improve operational performance, and deliver products and services more efficiently. The firm is organized around 18 industry specialties ranging from utilities, insurance, and technology to e-government, human resources, and learning.

The success of Accenture is remarkable considering its short history as an independent company and the problems it faced in its development. Accenture started as a consulting division of Arthur Andersen, the international accounting firm that failed as a result of its work with Enron. Arthur Andersen was one of the first accounting firms to recognize the need to offer financial consulting services to its clients. Its first major consulting client was General Electric in 1953. It worked with GE to determine the feasibility of an automated manufacturing and financial management system at a time when computers were first being used in business.

Due to concerns about administrative and financial relationships and ethical issues about the relationships between consulting and auditing responsibilities for clients, Andersen Consulting separated from Arthur Andersen in the early 1990s. Financial ties remained and led to infighting and negative relations between the two companies. The problems were resolved in 2000 with a total split and a new name for the consulting firm. Accenture was suggested by an employee in a naming contest and was a word developed from the phrase "accent on the future." It was selected both to reflect the company's commitment to be a global leader in business innovation and also as a word that would not be offensive anywhere in its worldwide market.

Accenture became a publicly traded company in 2001 when its stock IPO (Initial Public Offering) raised $1.7 billion in its first day. Accenture's world headquarters is in New York City but it is officially incorporated in Bermuda. Accenture has been criticized for that decision since Bermuda is known as a "tax haven country" where businesses incorporate to avoid U.S. taxes.

### Think Critically

1. How might Accenture have fared if it had remained a consulting division of Arthur Andersen during the Enron scandal?
2. Why do you believe Accenture broadened its consulting focus from financial issues to a broad range of business processes? What positive and negative effects could that have on a business?

# 4.1 Accounting Principles and Practices

**Goals**

- Identify important accounting activities and procedures.
- Recognize assumptions, principles, and professional practices that guide accountants' work.

**Terms**

- accounting
- equities
- fundamental accounting equation
- accounts
- accounting transaction
- accounting cycle
- accrual accounting
- due care

## Finance and Accounting

The study of finance provides information to individuals, businesses, and organizations on how to raise, allocate, and use monetary resources. Financial planning takes into account the current financial position of the organization, its immediate and long-term financial needs, and the risks in any alternatives being considered.

Both accounting and finance are involved in helping individuals and organizations make effective financial decisions. Some people think accounting and finance are essentially the same. There are major differences, even though both are important in effective financial management. **Accounting** is responsible for organizing a system of financial records, recording financial data, and preparing, analyzing, and interpreting financial statements. The financial records and financial statements must be timely, and they must be free of errors and bias. Generally Accepted Accounting Principles (GAAP) guide the work of the accounting profession. In the U.S., Generally Accepted Accounting Principles are developed and enforced by the Financial Accounting Standards Board (FASB). Accountants must also follow the accounting rules and regulations of each country in which a business operates, as well as the International Accounting Standards (IAS), when applicable.

*Finance* refers to saving, investing, and using money by individuals, businesses, and governments. Finance is broader than accounting and consists of three interrelated areas.

- *Money and capital markets,* which deals with determining monetary needs and obtaining adequate capital and cash
- *Investments,* which focuses on analyzing and choosing among investment alternatives while considering returns and risks
- *Financial management,* which applies management principles to financial decision-making for organizations

One way to look at the difference between accounting and finance is that accounting focuses on history and finance focuses on the future. Accountants analyze the financial performance of individuals, businesses, and organizations to determine what happened. Finance, on the other hand, uses historic and current financial information to predict and plan for the future. Both are essential to effective financial management. Decision-makers must understand the financial past to plan for the financial future.

STOCKBYTE

*Equipment is a tangible asset of a business.*

## PRINCIPLES OF ACCOUNTING

For hundreds of years, businesses have tracked their financial progress as an important measure of success. The primary goal of accounting is to determine the value of the resources of a business and the financial claims on those resources. The financial claims on a company's resources are known as **equities.** Those claims come from both creditors and owners. Accounting organizes the classification and analysis of resources using the fundamental accounting equation.

**The Accounting Equation** The **fundamental accounting equation** is

**Assets = Liabilities + Owner's Equity**

*Assets* are the resources used by a business in its operations. They include tangible resources such as land, buildings, equipment, inventory, employees, and cash and intangibles such as patents, copyrights, trademarks, and even the image and goodwill of the business. *Liabilities* are claims against the business resources by those to whom the business has financial obligations. Those claims includes loans, accounts payable, taxes payable, and other obligations. *Owner's equity* is the financial interest in the business held by all owners. Ownership is determined by the legal form of the organization—sole proprietorship, partnership, corporation, cooperative, or other legal form. Owner's equity is made up of both the investments of all owners and any undistributed earnings of the business. The financial records for each of the specific assets, liabilities, and categories of owner's equity are known as the business' **accounts.**

**f.y.i.**

The value of all inventory held by U.S. retailers at the end of 2004 was $461.2 billion. Nearly two-thirds of that inventory was held by automobile dealers and auto parts suppliers.

**Accounting Transactions** The resources of the organization and the claims on those resources must remain balanced. Any changes in the resources of an organization must be reflected on both sides of the accounting equation by additions to or reductions from the company's assets and corresponding additions to or reductions from liabilities or owner's equity. Any time revenue moves into or out of the business or any time the value of an account changes, it must be reflected in the accounts of the business so that the accounting equation remains balanced.

An **accounting transaction** is the act of recording a financial activity that results in a change in value of an organization's resource. The transaction will result in financial *entries* in the accounts of the business in a way that maintains their balance with each other. For example, if a company pays a bill to a creditor, the amount of that liability account (accounts payable) is reduced. At the same time, the amount of the company's cash (an asset account) is also reduced since cash was used to pay the creditor. The two reductions maintain the balance among the accounts. In the same way, if the company makes a sale to a customer for cash, the value of inventory is reduced and the value of the cash account is increased. Other accounts may be affected depending on whether the sale resulted in a profit or loss but the overall accounting equation remains in balance after the transaction is recorded.

**Recording Transactions** The basic requirement for maintaining complete financial records for a business is that all financial transactions must be recorded. Recording financial transactions and maintaining records of those transactions is the primary responsibility of accountants. Each transaction should be identified through a source document. In accounting, a *source document* is the original record of a transaction. Common examples of source documents are sales receipts, invoices, checks, and computer records such as printouts of cash register transactions. Using source documents, transactions are recorded in business records called *journals*. The *journal entry* identifies the key information for the transaction, including date, amount, purpose, and the accounts affected. The financial effect on each account is noted so that the accounting equation stays in balance after the transaction is recorded.

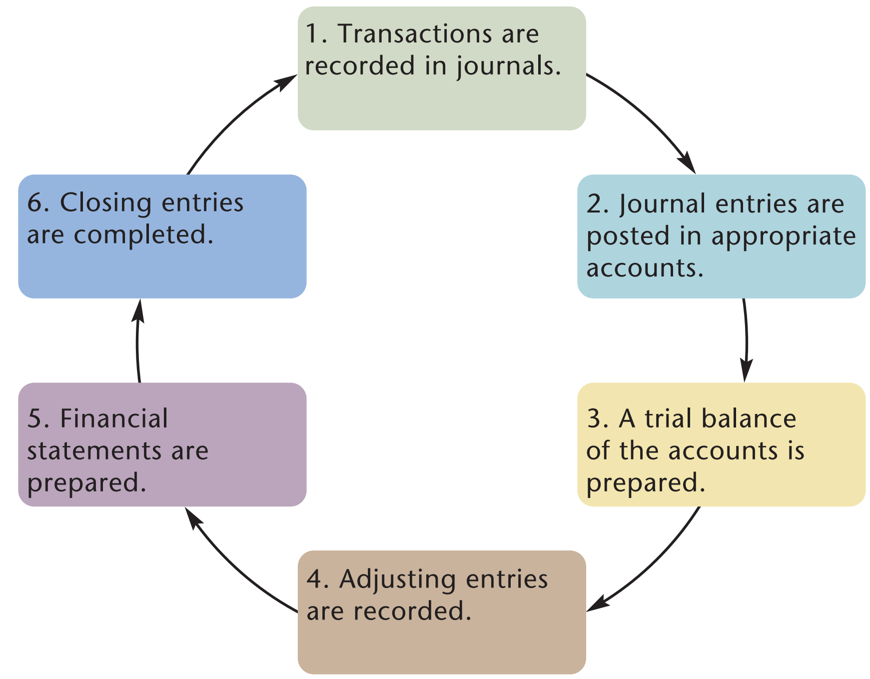
**Financial Statements** A business uses financial statements to understand and analyze the financial performance and health of the business. *Financial statements* are specific reports prepared according to accepted accounting standards that provide financial information about an enterprise. The three primary financial statements—the *balance sheet,* the *income statement*, and the *cash flow statement*—are summary reports prepared at regular times using the company's financial records.

## THE ACCOUNTING CYCLE

Financial information must be available for decision-makers in an understandable form and a timely manner. It would be impossible for everyone needing financial information to review all of the financial transactions of the business every time a decision needs to be made. Accountants regularly summarize financial data and prepare financial reports following the accounting cycle. The **accounting cycle** is a series of steps performed to ensure the completeness and accuracy of accounting records and to prepare summary financial statements. Completing those steps is called "closing the books" for the company and provides a summary of the business' finances as of a particular date. Normally the accounting cycle is completed monthly, quarterly (every three months), and at the end of the company's fiscal (financial) year. The steps in the accounting cycle are summarized in Figure 4-1.

Steps 3, 4, and 6 are unique accounting activities designed to ensure the accuracy and integrity of the company's financial records. In Step 3, a trial balance of accounts is prepared. The trial balance is a worksheet constructed in the format of the accounting equation. It lists the values of all accounts and determines whether the total of accounts is balanced. If the totals do not balance, accounts and journal entries must be reviewed to identify and correct errors.

**FIGURE 4-1** **The Steps in the Accounting Cycle**




In Step 4, adjustments to account balances are made. It is important that all financial statements reflect the accurate financial position of a business as of a specific date. Some accounts reflect earnings or payments for multiple accounting periods. For example, employees may have earned wages for the ending days of the accounting period but paychecks have not yet been issued. The account recording employee wages must be adjusted to reflect the actual wage expenses of the company for the actual period the work was performed. In the same way, the company may have made a six-month insurance payment but some of the cost of that insurance applies to months following the date financial statements are prepared. In this case an adjustment to the insurance expense account will reflect the actual cost of insurance for the time covered by the statements.

Finally, in Step 6 closing entries are made after financial statements are completed. Closing entries prepare all accounts for the next accounting cycle. In completing the financial analysis and financial statements, accountants create temporary accounts to identify income, expenses, and earnings related to the specific accounting period. The balances of the temporary accounts are returned to their original locations and the temporary accounts are closed through a series of closing entries.

## checkpoint ✓

What is the purpose of the accounting cycle?

teamwork

Assign each team member one of the steps in the accounting cycle. Have each student, in order, explain the purpose of the step and how it contributes to accurate and understandable financial records.

# Accounting Professional Practices

Accounting is a highly complex and technical profession. Accounting professionals have a high level of responsibility for the financial success of the companies for which they work. Inaccurate, incomplete, or improperly prepared accounting records and statements misrepresent the financial condition of the business and mislead those who rely on the accountants' work.

## ASSUMPTIONS

In order for financial information to be useful and reliable, accounting procedures are based on the following assumptions and principles.

**Single Economic Entity** The financial reporting is for an identifiable, independent business. The revenues and expenses are kept separate from those of the owners or from other businesses and reflect the total and unique revenues and expenses of the business.

**Going Concern** The financial data is for an ongoing business that will continue to operate beyond the reporting period. This assumption is necessary to reflect decisions made about the value of assets and the allocations of revenues and expenses across financial reporting time periods.

**Monetary Unit** The financial records reflect the use of one stable currency even if financial transactions may have been completed using multiple currencies. U.S. companies following the Generally Accepted Accounting Principles accept the U.S. dollar as the monetary unit. There is no adjustment for inflation in reporting monetary values.

**Periodic Reporting** The financial basis of business operations can be recorded and analyzed in specific and regular time periods, usually monthly, quarterly, and annually. The use of common and consistent reporting periods is necessary to compare past, current, and future financial performance.

## ACCOUNTING PRINCIPLES

Certain accepted accounting principles are used to value and record financial data.

**Historic Costs** Companies record and report the value of resources based on their acquisition costs rather than their current market value. The values are more stable and comparable and there is less opportunity to misstate values of resources by applying a subjective, current value assessment.

**Revenue Recognition** Companies are expected to record revenues when they are actually earned, not when payment is received. In the same way, expenses are recorded when they are actually applied to the operation of the business, not when payment is made. The accounting procedure that recognizes revenues and expenses when they are incurred rather than when cash is received or spent is known as **accrual accounting.**

**Expense and Revenue Matching** Financial reports are expected to match expenses with related revenue. Expenses are costs of products and services needed for business operations and for increasing the revenue of the business. The matching principle is used to show how much it costs to earn specific revenue. Only when there is no reasonable connection between an expense and any revenue generation can an expense be charged at the time it is incurred.

**Full Disclosure** A company's financial statements and supporting information should contain all relevant facts and explanations needed to accurately reflect the company's financial position and make it understandable. Information that does not contribute to understanding and that is costly to obtain and prepare should not be included.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*Accounting financial data must be for an ongoing, operating business.*

**Standard Practice and Conservatism** Accounting procedures used to record, analyze, and report financial information should follow industry practices. When choosing between two interpretations or solutions, the one that will be least likely to overstate assets and income should be chosen.

## PROFESSIONAL PRACTICES

As with most professions, accounting is defined by a number of professional practices. Those practices specify requirements and expectations for people who are employed in the profession and provide assurances to the businesses employing professional accountants of the quality and standards they can expect.

**Professional Competence** Accountants are expected to have sufficient competence to perform required tasks. Accounting competence includes knowledge of accounting rules and standards and the judgment to apply the rules and standards appropriately. The primary rules of accounting are the Statements of Accounting Standards, Generally Accepted Accounting Principles, and applicable laws and regulations of government agencies.

Many accounting responsibilities require a great deal of technical knowledge to understand the business and its operations or to complete complex data analysis and financial calculations. If a person does not have adequate technical knowledge to complete the financial analysis, he or she is required to complete the necessary research, consult with experts, or recommend that another person who has the needed technical expertise be assigned to the task.


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*Accountants must exercise due care in completing their tasks.*

**Due Care and Sufficient Data** Accountants are expected to exercise due care in performing their duties. **Due care** is a commitment to completing all tasks thoroughly and with the highest level of quality. Often the details of financial transactions are not easy to obtain or understand. By exercising due care, accountants use their knowledge and abilities to obtain complete and accurate information when preparing financial records. They need to serve the best interests of the company, its employees, and others who rely on the financial information by being ethical and objective. They must make sure that everyone they work with and supervise completes assigned tasks correctly and completely.

**Independence and Integrity** Accountants must remain objective and not knowingly misrepresent information or allow others, either subordinates or superiors, to do so. There may be pressure in an organization to present the most positive financial picture. That is particularly true if the company is trying to obtain financing or attract investors. There are several recent examples of top-level corporate executives who attempted to misrepresent the financial condition of their organizations in order to hide management and operating problems. The accountants and accounting firms working for those companies faced immense pressure to comply with the executives' demands and several failed to meet their professional obligations to maintain their independence and follow accepted accounting practices.

Every accountant has the responsibility to report all relevant information, report it honestly, and correct any inaccurate or misleading information in financial records and reports. If there are concerns about the quality or accuracy of the work, it is the obligation of the accountant to make those concerns known to management, provide relevant documents and applicable rules and regulations, and, if necessary, ask other experts to review the information.

**checkpoint**

Provide an example of each of the professional practices expected of accountants.

# 4.1 Lesson Assessment

## UNDERSTAND CONCEPTS

Determine the best answer for each of the following questions.

1. Recording an activity that results in a change in value of an organization's resource is done through
   a. financial statements
   b. financial transactions
   c. the accounting cycle
   d. the accounting equation
2. **True or False?** Accounting deals with the financial future of a business while finance deals with its past.
3. Which of the following is *not* a purpose of completing the accounting cycle?
   a. to ensure the completeness and accuracy of accounting records
   b. to prepare summary financial statements
   c. to close the books of a company in order to report on its financial condition as of a specific date
   d. all of the above are purposes
4. **True or False?** A business should use common and consistent financial reporting periods in order to compare past, current, and future financial performance.
5. The accounting principle of ____?____ states that a company's financial statements and supporting information should contain all relevant facts and explanations.
   a. revenue recognition
   b. historic costs
   c. full disclosure
   d. conservatism

## MAKE ACADEMIC CONNECTIONS

6. **Government** Identify one federal department or agency that regulates accounting practice or financial reporting. Prepare a short written explanation of the type of regulation and how it affects the work of accountants.
7. **Visual Art** Use an accounting textbook or the Internet to gather information on the accounting cycle. Identify one type of accounting form that is used for each step in the cycle. Create a poster modeled after Figure 4-1 that includes an illustration of the accounting form for each of the steps.
8. **International Studies** Identify three countries that are major trading partners with U.S. businesses. Gather information on each country's accounting standards. Compare similarities and differences with the U.S. approach.

# 4.2 Maintain and Use Financial Records

**Goals**

- Describe the importance of accurate, complete, and secure financial records for a business.
- Discuss important uses and users of a business' financial records.

**Terms**

- information system
- information integrity
- annual report

## Develop and Maintain a Business Records System

All business information is important. Companies devote significant financial and human resources to plan, build, maintain, and secure a complex and comprehensive information system. An **information system** is a structured set of processes, people, and equipment for converting data into information. An effective business information system is under direct management control and is designed to be usable throughout the organization. The system is designed to integrate hardware, software, information, data, applications, communications, and the people who generate, record, and use the information. The components of an effective information system are users, data collection devices, data sharing devices, analysis/interpretation of information, organizational structures, and processes.

### TYPES OF FINANCIAL INFORMATION

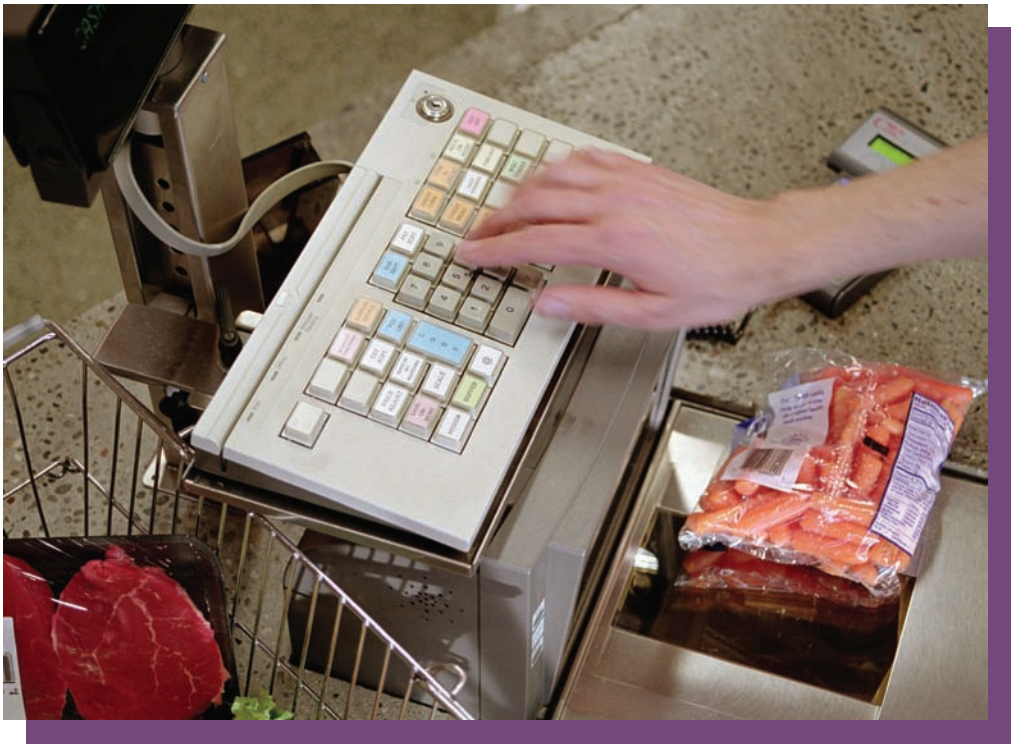
Among the types of information maintained in an information system, financial information is one of the most important. The information system of an organization must collect, record, store, and securely maintain all financial data, records, and reports. Financial information occurs in many forms. The common types of business financial information include

- **Data** raw facts related to financial transactions of the company
- **Records** a collection of related data organized in a form that can be retrieved and viewed
- **Reports** the organized presentation of financial data, often with notes, providing specific information on the financial condition or position of the organization

### INFORMATION INTEGRITY

The people in charge of an information system as well as each person with access to the system have a responsibility to maintain the integrity of the information. **Information integrity** means that information remains unchanged from its source and has not been accidentally or maliciously modified, altered, or destroyed. Problems with the integrity of information systems are commonly seen.

- A supermarket scanner is not programmed to record the accurate price of a product.
- Personal credit reports are incorrect due to lack of care by employees responsible for reporting and recording information.
- People working with personal data in an organization's database download it to a laptop where it is essentially unsecured.
- Companies hit by natural disasters such as hurricanes and floods lose essential records.



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*An example of a problem with information integrity is that a store scanner may not record the accurate price of a product.*

Each time a situation occurs where data is lost, destroyed, recorded inaccurately, or misused, people's confidence in the organization as well as its information systems and the information itself is shaken. It is particularly important that people maintain their belief in the quality and integrity of a company's financial information. They must feel that they can rely on that information when making decisions about investments and other financial dealings with the company. A lack of confidence and trust will cause people to be reluctant to engage in financial dealings with the business.

## MAINTAINING FINANCIAL RECORDS

Developing and maintaining a financial records system that has integrity and the confidence of those who use and rely on the information requires decisions in several areas. Those areas and specific procedures are described in Figure 4-2 on the next page.

**checkpoint ✓**

Provide examples that show the differences among financial data, records, and reports.

**teamwork**

Discuss with team members why each of the components of an information system is necessary in a business. Develop a list of criteria a business might use to determine if their information system is effective and secure.

**FIGURE 4-2**

### Effective and Secure Information Systems

#### Record Selection

What types of records are needed to

- conduct your type of business and make effective management decisions
- meet stockholder information expectations
- determine your financial progress and health
- meet government reporting and tax requirements
- protect ownership, contractual, and intellectual property rights

#### Information Maintenance

What hardware, software, and other system components are needed to

- maintain the amount and types of information used in your business
- allow access to critical information
- accurately track the financial progress and health of the company
- make information easily accessible, usable, and understandable by all with legitimate information needs

#### Information and System Security

What special measures have been taken to

- secure information and important documents away from the business site in case of disaster
- meet the storage requirements of original and legal documents
- provide ready access to critical documents and information in times of crisis or disaster
- provide necessary security for access, reasonable use, and modification of information

#### Legal Integrity

What are the legal considerations regarding the need to

- authenticate original records and documents
- meet legal requirements for electronic versus hard copy records
- meet government requirements for documentation, review, and retention

#### System Maintenance and Improvement

What procedures and authority are in place to

- regularly review the quality of the information system and procedures
- meet industry standards and government record-keeping requirements
- remove nonessential records when they are no longer needed
- securely destroy records that are no longer being maintained
- remove roadblocks to efficient information access, use, and exchange
- provide funds to maintain and update information system components

# Using Financial Records

Financial information is important to the business and to everyone interested in or affected by the company's financial performance. Information must be organized to be meaningful and usable. Accounting is responsible for collecting, recording, and organizing financial data into records and reports. Those financial reports and other information are then used by others to draw conclusions and make decisions that affect the financial future of the company.

## USERS AND USES

The primary users of financial reports and information are company managers and decision-makers, investors, creditors, and government regulators. Each has a particular need and use for the information.

The primary responsibility of managers and company decision-makers is to operate a profitable business and maximize shareholder value. They make decisions about capital expenditures to make sure business assets are as productive as possible. They review the operations and results of each part of the business to increase productivity and profitability and control expenses. Managers must maintain sufficient working capital to continue operations and invest funds not currently being used.

Investors are concerned about the financial performance of a company to achieve their investment objectives. The major objective of investing is to maximize the value of the investment. That can be achieved through the

**technology topics**

### Using New Technology Wisely

Many companies adopt new technologies thinking they will receive a good return on their investment through reduced personnel costs and productivity gains. However, experience in many companies shows that getting a good return depends on the type of technology purchased and its use. If a company just purchases equipment and provides training to employees without changing how work is done, the result is usually a loss on the investment. If the company analyzes specific jobs to see how each job can become more efficient and then purchases the needed technology, the return is modest—10 to 20 percent. However, if an entire business process is reorganized and supported with technology, companies see returns of up to 300 percent. Just providing data entry workers with new computers and software gets little return. Automating the entire data entry and recordkeeping system will give the company a small return. A comprehensive process integrating financial management with planning, operations, and customer service using technology will be expensive initially, but will give the greatest return on investment in the long run.

**Think Critically**

1. Why does providing individual employees with the latest technology and training often cost more than it returns to the company?
2. Why might a business spend money on technology when it is not likely the investment will save the company any money?


*Business financial information is important to owners, investors, creditors, and the government.*

increasing value of the investment itself and the regular earnings from the investment. For example, with stock ownership, value increases as stock prices increase and earnings are achieved through the payment of dividends.

Creditors are concerned that the company has adequate assets to secure the amount of money they loan to the business. More important from the creditor's viewpoint is whether the business is generating adequate cash to meet the payment schedule. Creditors want to make sure that the financial condition of the business is strong enough to make it a good credit risk for the length of the loan.

The interest of the government in a business' financial records is twofold. Businesses are required to pay taxes and other fees based on their legal and financial status. In addition, a variety of government regulations require financial disclosures from businesses. Those disclosures include specific financial data as well as information on financial recordkeeping and financial decision-making procedures.

## PRIVATE AND PUBLIC RECORDS AND REPORTS

Requirements differ on the types of financial information companies must disclose. Much of the financial data and records of businesses are private, including records of all financial transactions. The records can be controlled and information shared based upon the decisions of management as long as all legal requirements are met. In general, privately owned companies are not required to publicly disclose financial information.

Corporations whose stock is publicly traded do have a public reporting requirement. Those companies must provide an annual report to all stockholders. An **annual report** is a statement of a company's operating and financial performance issued at the end of its fiscal year. Annual statements often include a letter from the chief executive, a narrative discussion of the year's operations, and plans for the future. In addition, the Securities and Exchange Commission requires public corporations to file a *Form 10-K* each year. It is similar to an annual report but may be even more detailed. The 10-K includes information about the company history, organizational structure, equity, holdings, earnings per share, subsidiaries, and audited financial statements.

**checkpoint** ✓

What requirements for public reporting of financial information must publicly owned corporations meet?

## a question of ethics

### What Led to the Sarbanes-Oxley Act?

As the country started into the new century, public confidence in big business and accounting practices was shattered with several major back-to-back scandals. The most famous was Enron, a Houston-based energy company that had been the darling of investment bankers and the business press. *Fortune* magazine named Enron "America's Most Innovative Company" for six consecutive years. In late 2001, it all came crashing down when Enron filed for bankruptcy, becoming the largest bankruptcy in U.S. history. It cost thousands of employees their jobs and, even worse, the retirement savings they had invested in the company as the stock price plummeted from over $90 to under $1 per share. The blame for the company's failure was placed on several company executives for illegal financial transactions in moving assets and expenses among company entities as well as approving fraudulent accounting to hide the transactions. The company's auditing firm, Arthur Andersen, was convicted of obstruction of justice and disbanded.

The Enron bankruptcy was followed quickly by several other scandals that exposed serious problems with accounting practices and the oversight provided by auditing firms. WorldCom's founder, Bernard Ebbers, and several other executives manipulated stock prices, misused the Board of Directors to approve illegal compensation plans, and illegally inflated the value of the company's assets by over $11 billion. Tyco experienced a similar problem with overvalued stocks, illegal executive pay, and misleading financial statements. Two top executives were accused of the theft of $600 million from the company. Based on the scandals, several leading public accounting firms—Deloitte & Touche, Ernst & Young, KPMG, and PricewaterhouseCoopers—were charged with negligence as auditors of their clients' financial information and reports.

The federal government responded quickly to restore the public's confidence in corporate finance and accounting practices. The Sarbanes-Oxley Act was passed in July, 2002 by overwhelming majorities in Congress. It established new or more stringent standards for all U.S. public company boards, management, and public accounting firms. It has been called the most important piece of legislation affecting corporate governance, financial disclosure, and public accounting since the securities laws of the 1930s. Executives and corporate directors are held responsible for understanding and approving financial statements, auditing committees and firms must have independence from conflicts of interest or executive pressure, and new enforcement provisions and stiff criminal penalties are established. Rules regulating executive compensation are also imposed.

### Think Critically

1. What circumstances likely led to large public auditing companies getting caught up in the major corporate scandals?
2. Use the Internet to review business and public reactions to Sarbanes-Oxley. What are the views in support of and opposition to the law?

# 4.2 Lesson Assessment

## UNDERSTAND CONCEPTS

Determine the best answer for each of the following questions.

1. All of the following are components of an information system except
   a. users
   b. data collection devices
   c. data sharing devices
   d. all of the above are components
2. **True or False?** Three common types of business financial information are data, records, and reports.
3. Information ____?____ means that information remains unchanged from its source and has not been accidentally or maliciously modified, altered, or destroyed.
   a. control
   b. management
   c. integrity
   d. integration
4. **True or False?** The primary responsibility of managers and company decision-makers is to increase sales and satisfy customers.
5. The Securities and Exchange Commission requires publicly traded corporations to
   a. pay a dividend
   b. restrict compensation for top executives
   c. pay a minimum tax each year
   d. provide an annual report to all shareholders

## MAKE ACADEMIC CONNECTIONS

6. **Visual Art** Use textbooks or the Internet to locate and study examples of a computerized information system. Use a computer graphics program or poster board and colored markers to prepare a visual depiction of the components of the system. Label each component and be prepared to describe how the system operates.
7. **Research** Use newspapers, magazines, and the Internet to research the problems business face with information integrity. Prepare a three-column table that identifies (1) the problem, (2) the damage resulting from the problem, (3) what the business did to correct the problem.
8. **Debate** Form two teams and prepare for a debate on this topic: "The legal requirement that public corporations must publish detailed financial information interferes with competition and a business' right to privacy." Your teacher will explain the debate rules and assign the position each team will take.

# 4.3 Financial Management Analysis Tools

**Goals**

- Identify the primary purpose and activities of financial management.
- Describe important tools used in financial management.

**Terms**

- chief executive officer (CEO)
- chief operating officer (COO)
- chief financial officer (CFO)
- equity financing
- debt financing
- retained earnings
- solvency

## Financial Management Activities

The overall objective of financial management is to maximize the wealth of the owners. Considering the nature of the business and the risk assumed by investors, owner's equity should increase at a rate equal to or better than other investments. Financial managers determine the best mix of assets for a business, how to acquire them, and how to use them to get the best possible financial return from their use.

### THE STRUCTURE OF FINANCIAL MANAGEMENT

A corporation is guided by a board of directors. The board of directors represents the shareholders in oversight of the business. It is their responsibility to set direction for the business and establish corporate policy, hire and determine the compensation of the key executives, and review major business decisions.

The employed management of a corporation is headed by the chief executive officer. The **chief executive officer (CEO)** is charged with carrying out the strategy and policy of the board of directors. The CEO provides leadership for management and employees, sets long-term operational direction, and is accountable to the board for all company activities and results.

Typically, the two positions reporting to the CEO and having primary responsibility for managing the business are the chief operating officer and the chief financial officer. The **chief operating officer (COO)** directs the actual operations of the business while the **chief financial officer (CFO)** is responsible for planning and managing its financial resources.

Under the CFO are a number of managers. The top-level financial managers in many companies are the *treasurer* and *controller.* Both of these positions are supported by a number of financial specialists. The treasurer has responsibility for the management of a company's cash, investments, and other financial resources as well as relationships with investors and creditors. The controller is in charge of accounting and the financial records of the organization and provides support for executives and other managers in understanding and using financial data and reports. The efforts of the entire

DIGITAL VISION

*Businesses plan for investment in assets like equipment and materials.*

financial management team are directed at accomplishing the overall goal of the business—to maximize ownership wealth.

## FINANCIAL MANAGEMENT DECISIONS

Financial management is focused on investment decisions. Three major types of investment decisions define the work of financial management in businesses. Those decisions are (1) what investments need to be made, (2) how the investments should be financed, and (3) how the business' investments can be efficiently managed.

**Asset Planning** Investments are made to acquire the assets needed for business operations. The assets needed are determined by the activities of the business and its size. Financial managers work with operations management as well as other managers in the organization to determine what investments in land, buildings, equipment, materials, and other major assets are needed at the current time and in the future. In some cases assets must be added, and in other instances assets can be reduced. One of the most interesting and challenging investment decisions is the area of mergers and acquisitions. Deciding to purchase an existing company or merge the resources of two or more companies is a major financial decision of a company, as is the decision to sell a major part of the business to reduce the company's size and focus its efforts.

**Asset Financing** Once decisions are made on the best mix of assets for a business, financial managers determine how to finance the acquisition of those assets. The two major ways to finance asset acquisition are equity financing and debt financing. **Equity financing** offers an ownership interest in the company to investors. Corporate equity financing is done through the sale of stock. **Debt financing** is the use of borrowed money to obtain needed assets. Individuals or institutions providing the debt financing become creditors who receive payment in the form of principal and interest. Creditors also have a claim on company assets if repayment is not made. Long-term debt financing is usually done by issuing bonds or signing promissory notes and mortgages. Common methods of short-term financing are obtaining *trade credit* (buying on credit from vendors and suppliers), *operating loans* from financial institutions, and *commercial paper* (short-term

**teamwork**

Discuss the advantages and disadvantages of equity and debt financing from the viewpoint of the company and from the viewpoint of the investor.

money market securities). Investment decisions are made by comparing alternatives based on both financial and nonfinancial advantages, disadvantages, payoffs, and risks to the business.

**Asset Management** The third role of financial management in business is to ensure that assets are managed as efficiently as possible. Once again, the primary goal of this activity is to maximize the return on the company's assets. Fixed assets such as buildings and equipment are maintained by operations management. Financial management is concerned with maximizing the financial life of those assets, depreciation costs, and replacement.

Managing the liquid assets of a business is an important focus of financial managers. Liquid assets are cash, accounts receivable, inventory, owned stock, and a variety of short-term investments (such as money market funds, certificates of deposit, and securities). As with the management of fixed assets, financial managers are concerned with obtaining the maximum use and value of the company's liquid assets.

**checkpoint**

What are the three major types of investment decisions that define the work of financial managers in business?

# Financial Analysis Tools

Corporate finance is responsible for recommending the financial decisions a business should make and for the data and analyses used to make the decisions. Long-term financing decisions determine the types of capital assets needed by the company, how the assets contribute to the company's financial position, and how they will be financed. Short-term financial planning involves decisions about working capital and maintaining an appropriate balance between current assets and current liabilities. Both long- and short-term financial planning is done using the financial data, records, and reports of the business.

## USING FINANCIAL RECORDS AND REPORTS

To make effective financial decisions, managers study the value of assets, liabilities, and owner's equity, the revenues and expenses generated by the business, the company's stock position, and its use of earnings. They are concerned about the changes in the financial condition and position of the business over time, its current status, and projections for the future. The primary sources of information for those decisions are

- Financial statements—balance sheet, income statement, statement of cash flow, and other supporting statements
- Records of the business for specific assets, liabilities, and owner's equity, as well as revenue and expense records
- Budgets prepared to plan capital acquisition, working capital, cash flow, and earnings

Each of the records and reports is studied for three purposes.

1. Determine current values of each of the business' important financial elements, changes that have occurred compared to prior periods, and values projected for future periods
2. Identify the relationships among the current values, the amount and nature of changes from prior periods, and how relationships will be affected based on future plans
3. Compare, when possible, these values, their relationships, and proposed changes with those of comparable businesses

## BALANCE SHEET

The balance sheet is a picture of the financial condition of the business as of a specific date. The important information contained in the balance sheet is the firm's total assets and their division between long-term and current assets, the total liabilities and their division between long-term debt and current liabilities, and the owner's equity and how it is divided among types of equity as well as the value of retained earnings. **Retained earnings** are profits earned by a company that are not paid to shareholders as dividends.

The balance sheet can provide a view of the current financial position of the company. Is it financially strong or not? The strength of a company can be seen by its overall financial value. Essentially that means how much money the owners would have if the assets and liabilities were converted to cash. This question is only theoretical, because if a business attempted to convert its assets immediately, the assets would not be able to be sold at their actual value. The question also cannot be directly answered from the balance sheet because long-term assets are not carried at their actual value. Age, condition, depreciation methods, and other factors can affect their actual value. In general, the balance sheet shows whether the value of assets is much greater than the value of liabilities or not. If the value of assets is significantly higher it can be assumed that there is greater stockholder value than if liabilities are close to assets in value.

A more important measure of the current financial position is its working capital. Working capital is determined by subtracting current liabilities from current assets. A healthy working capital balance gives companies flexibility in operations. They can invest for growth, add needed assets, and respond to competitive pressures. Excess working capital can be invested for additional earnings. A company with positive working capital is attractive to investors and lenders.

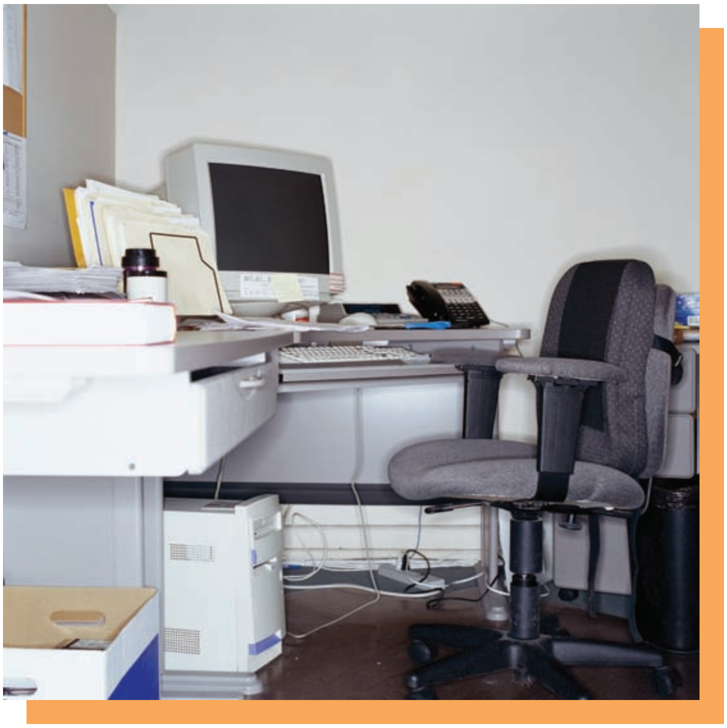
A final component of the balance sheet is the owner's or shareholders' equity. It is normally made up of the value of all classes of stock and retained earnings. Retained earnings are available for financing growth, reducing debt, or investment to generate additional earnings. Of course, stockholders are interested in the earnings they receive on their investment. Earnings that have been retained have not been paid out to stockholders as dividends. A high value in retained earnings may be positive for company executives, but not for stockholders or prospective investors.

In addition to studying and comparing the current values on the balance sheet, changes in value from prior time periods is also important. Categories of assets, liabilities, and owner's equity can be compared with the same categories in previous time periods. Changes in relationships

**f.y.i.**

Until recently, there were no easy ways for financial information to be moved automatically between different software applications. XBRL (Extensible Business Reporting Language) is an electronic format designed to solve the problem. It is being cooperatively developed by over 200 corporations, accounting firms, and regulators. It will allow the automatic exchange of financial information among software applications anywhere in the world via the Internet.

between assets and liabilities should be analyzed as well. Are assets, liabilities, and owner's equity changing? If so, is the change positive or negative for the financial health of the business? Is working capital improving or not? Have profits been distributed to shareholders, held in retained earnings, or used to finance needed assets or reduce debt?





*The age and condition of office equipment affects its value.*

## INCOME STATEMENT

The income statement provides a summary and detail about the financial performance or profitability of business operations over an identified period of time. Sales and the costs to generate those sales, other sources of revenue, and all operating, administrative, and other business expenses are detailed in the income statement culminating in net earnings for the period.

Focusing on the income statement for one time period provides a limited amount of information. It shows the values and relationships among the major activities of the business that generate revenue and earnings. The cost of sales compared to net sales, the types and values of various expenses, net income before and after taxes, and the relationship of net income to revenues are important information from the income statement. This information describes the efficiency of various parts of the business' operations as well as the effectiveness of the company in converting resources into revenues and profits.

Greater understanding of the business' financial performance comes from comparisons of income statements over several time periods—monthly, quarterly, and annually. How are revenues and the sources of revenues changing? Are various costs increasing as a direct measure and as a proportion of other values? Is the business improving in profitability and in efficiency and effectiveness of generating revenues and profits? Comparing the actual amounts from the income statement with budgeted amounts helps to improve financial planning for future periods.

Comparisons with the income statements of other companies should be approached cautiously since many factors unique to the business influence the actual values of income and expense items. Comparison of the relationships of cost of sales and net income to revenue may be helpful in analyzing the competitive performance of the business.

### NET Bookmark

The American Institute of Certified Public Accountants has a web site that provides information on the accounting field. Access thomsonedu.com/school/busfinance and click on the link for Chapter 4. Find information on the site specifically for students. What information is available on accounting as a career?

**www.thomsonedu.com/school/busfinance**

## CASH FLOW STATEMENT

Cash flow is the movement of cash into and out of a business. It demonstrates the solvency of a business. **Solvency** is the ability of an organization to meet its financial obligations as they become due. Cash flow is a very important short-term measure of a business' financial health. A business may generate a large amount of cash in a full year of operations and end with a healthy cash position. If that company has several months in which cash inflows do not meet cash payment requirements it will need to obtain short-term financing. Statements of cash flow are prepared and analyzed frequently, at least monthly.

The analysis of cash flow should be approached carefully. Cash is certainly not the equivalent of profit. A company can have a large cash balance yet be struggling with profitability. In the same way, a profitable company may have difficulty generating cash for immediate needs. As a general conclusion, a company with an increasing positive cash flow is a healthy company.

Cash is generated in one of three ways and each provides important information about company operations. *Cash from operating activities* describes the revenues from the primary work of the business such as the sale of products and services. A company needs to be able to generate a positive cash flow consistently from its operations. Some operations will not generate a positive cash balance. The cash flow can vary significantly from month to month and quarter to quarter in some businesses such as those with seasonal sales. *Cash from investing activities* describes revenues earned from purchasing or selling assets. Examples include stock ownership in other companies, securities, real estate, and the purchase and sale of long-term assets. The third category of cash is *cash from financing activities*. Those activities include cash from the sale of stock and from taking on long- or short-term debt (loans and notes). Each of the categories reports cash reductions as well as cash revenues. For example, when a retailer uses cash to purchase inventory, it reduces the cash balance for operating activities.

There is not a particular cash balance that is an indication of financial health. It is more important to look for major changes in cash flow, areas where cash balances are small or negative, and the types of activities that are generating or consuming cash. Comparing a company's cash position to the cash flow of its major competitors is meaningful since a company that is not maintaining an equivalent amount of cash may find itself in a difficult position.

### checkpoint ✓

What are the primary sources of information for making financial decisions in a business?

# 4.3 Lesson Assessment

## UNDERSTAND CONCEPTS

Determine the best answer for each of the following questions.

1. **True or False?** To maximize ownership wealth, owner's equity should increase at a rate equivalent to or better than other investments considering the nature of the business and the risk assumed by investors.
2. The ____?____ is the executive who is accountable to the board of directors for all company activities and results.
   a. CEO
   b. COO
   c. CFO
   d. CDE
3. ____?____ financing offers an ownership interest in the company, while ____?____ financing uses borrowed money to obtain capital.
4. Which of the following is *not* one of the primary sources of information for financial decisions in a business?
   a. financial statements
   b. specific financial records
   c. financial transaction data
   d. financial budgets
5. **True or False?** Retained earnings refers to the amount of cash that the business has reserved to pay accounts receivable and loans.

## MAKE ACADEMIC CONNECTIONS

6. **Critical Thinking** Some people believe that corporations should have other priorities than maximizing ownership wealth. Write a two-page critical analysis paper in which you discuss the positive and negative effects that priority can have on a company.
7. **Math** In the first half of the year, a company's balance sheet showed current assets of $845,281 and current liabilities of $582,936. At the end of the year, current assets were valued at $728,910 and current liabilities totaled $523,992. Calculate the amount of working capital at the end of each accounting period and the percentage change in current assets, current liabilities, and working capital.
8. **Careers** Gather information on the differences in the job responsibilities of a corporate treasurer and controller. Create an illustration of the main differences in the daily work of the two financial managers.
9. **Technology** Use the Internet to locate a copy of a business' balance sheet, income statement, and statement of cash flow. Using each of the financial statements, identify information that provides evidence of the company's financial condition and performance. Prepare a software presentation of the financial information you selected and a description of its meaning.

# 4.4 Financial Analysis and Decision Making

**Goals**

- Recognize important financial ratios used to analyze the financial condition of a business.
- Discuss how ratios aid in financial decision making.

**Terms**

- financial ratios
- ratio analysis
- financial leverage
- operating income
- benchmark company

## Understanding Financial Ratios

Analysis of a business' financial information over time is very important in understanding management's approach to financial planning, the company's competitive position, and its attractiveness to investors. Financial managers pay a great deal of attention to financial records and financial statements of their own company and of competing companies. One important tool for analyzing financial statements is financial ratios. **Financial ratios** are comparisons of important financial data used to evaluate business performance. The financial data used to calculate ratios comes from the company's financial statements.

**Ratio analysis** is the study of relationships in a company's finances in order to understand and improve financial performance. Ratio analysis includes comparing relationships in current performance, making comparisons between current and past performance, and comparing the financial



*Financial managers analyze company performance using financial ratios.*

performance of the business with competitors' performance. Ratio analysis is used to determine areas of financial strength and weakness in order to make decisions that will strengthen the company's financial position.

There are many financial ratios that can be calculated. Financial managers and investors decide which ratios provide the information for the decisions they need to make. Ratios can be categorized in terms of the important types of financial performance and decisions in a business.

## LIQUIDITY RATIOS

No matter how profitable a company is, an important measure of its financial health is its ability to pay debts on time. To be able to finance short-term debt, a company should be in a favorable liquid position. That means it either has a good cash balance or other current assets than can be converted quickly to cash without substantial loss of their value. Commonly used liquidity ratios are the current ratio and the quick ratio.

**Current Ratio** A measure of the ability to meet current debt.

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

The current ratio shows how well the company is prepared to pay current liabilities, those debts that will come due within a year. Of course it is expected that a business have more current assets than current liabilities. A strong position in most industries is a ratio of 2:1. Financial managers and investors will look at the current assets to determine how quickly they can be converted to cash and the value of the assets listed on the company's balance sheet to make sure it is an accurate reflection of an asset's real cash value.

**Quick Ratio (acid test)** A more precise liquidity measure that reduces the value of current assets by the value of the inventory.

$$\text{Quick Ratio} = \frac{\text{Current Assets} - \text{Inventory}}{\text{Current Liabilities}}$$

Current assets cannot all be disposed of quickly in order to obtain cash to pay a company's short-term debts. Inventory is a particular problem in some industries. An inventory level is developed and maintained to meet customer needs over a period of time. If it must be liquidated quickly, prices may have to be reduced dramatically. By reducing the value of current assets by the value of the inventory, the quick ratio provides a more specific value of available current assets to cover the liabilities. The quick ratio does not have to be as high as the current ratio since the current assets used are highly liquid. A ratio of 1:1 may be acceptable in many industries.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*Prices may have to be reduced dramatically to liquidate inventory.*

f.y.i.

The Sarbanes-Oxley Act of 2002 not only affects the financial side of corporations, but also the departments whose job it is to maintain the business' print and electronic financial records. The act requires that all relevant records, including electronic records and comunications, must be saved for at least five years. The consequences for non-compliance are fines, imprisonment, or both.

## ASSET MANAGEMENT RATIOS

Businesses use their assets to make money. Assets produce sales and sales generate profits. A company that can use assets efficiently by keeping their values low in relation to sales and profits is financially stronger than companies that require a higher value of assets for the same results. Asset management ratios compare the value of key assets to sales performance.

**Inventory Turnover Ratio** Measures the efficiency of a company in maintaining inventory to generate sales.

$$\textbf{Inventory Turnover Ratio} = \frac{\textbf{Net Sales}}{\textbf{Average Inventory}}$$

A company doesn't earn money on its inventory until it is sold. The more rapidly inventory is sold, the lower the amount of financing required. If a company can maintain low inventory levels and still have high sales volume, it is using inventory very efficiently. Some industries require a lower volume of inventory or have lower total inventory costs to generate sales. Other industries require a high inventory level or the cost of inventory is quite high. A business with a low ratio should be evaluated to see if the inventory is dated or obsolete or if there is another reason that it is not being converted to sales more quickly.

**Total Assets Turnover Ratio** Measures how efficiently all assets generate sales.

$$\textbf{Total Assets Turnover Ratio} = \frac{\textbf{Sales}}{\textbf{Total Assets}}$$

The total assets turnover ratio is similar to the inventory turnover ratio except that it focuses on the efficient use of all company assets. By comparing the value of all current and fixed assets to sales, the company can determine if it has a reasonable amount of assets for the sales being produced. A low value suggests assets are not being used efficiently. Some businesses also calculate a *fixed assets turnover ratio* to examine the efficiency of land, buildings, and major equipment.



*Businesses such as auto dealerships have a high cost of inventory.*

**Accounts Receivable Turnover Ratio** Measures how quickly credit sales are converted to cash.

$$\text{Accounts Receivable Turnover Ratio} = \frac{\text{Total Credit Sales}}{\text{Accounts Receivable}}$$

The accounts receivable turnover ratio identifies how quickly customer accounts are paid. Higher ratios mean that accounts receivable are collected quickly. Long collection periods usually result in losses when older accounts are not paid. Some companies use total sales rather than total credit sales to determine the accounts receivable turnover. Another related ratio is the *average collection period ratio,* determined by dividing accounts receivable by the average daily sales. This ratio identifies how many days on average it takes to collect accounts receivable. A smaller number of days demonstrates effective credit procedures.

## DEBT MANAGEMENT RATIOS

Using debt to finance some parts of a business' operations allows owners to maintain control of the business with a lower level of investment. If debt is used effectively it is possible to get a higher rate of return on the use of the money than the actual cost of the debt. Using debt financing to increase the rate of return on assets is known as **financial leverage.** As long as a company can pay its debts when they come due, a high level of debt financing is not necessarily a problem. Stockholders like to see higher debt ratios as long as the firm is profitable because they provide higher potential earnings. Creditors on the other hand get concerned when debt ratios are high because they have fewer claims on assets if the business should fail.

**Debt Ratio** Measures how much of a company's assets are owned by creditors.

$$\text{Debt Ratio} = \frac{\text{Total Debt (current and long-term liabilities)}}{\text{Total Assets (current and long-term)}}$$

The appropriate ratio is guided by the industry in which the company operates and the financial stability of the company. A stable company with a long operating history can carry a ratio where debt is greater than 50 percent of total assets. A new company, risky industry, or volatile economy may require a ratio where debt is one-third or one-fourth of the asset value. Related debt management ratios are total debt divided by net worth, which provides a direct comparison of equity and debt financing levels; and long-term debt divided by total assets, which shows the extent to which the company's assets are financed by long-term debt.

**Times-Interest-Earned Ratio** Shows how well-positioned the company is to pay interest on its debt.

$$\text{Times-Interest-Earned Ratio} = \frac{\text{Operating Income}}{\text{Total Interest Charges}}$$

A high times-interest-earned ratio means the company has a high margin of safety in being able to pay creditors. Operating income would have to decline significantly before the company would be at risk from its creditors. To be particularly cautious, the ratio could be calculated by using the total of interest and principal charges rather than just the interest. Most creditors are satisfied if interest payments are kept up to date, but to remove debt obligations a business needs adequate income to make full payments.

> **teamwork**
> Have each team member select three financial ratios he or she believes would be the most important in determining whether to purchase a company's stock. As a team compare the choices and discuss the reasons for each person's choices.

## PROFITABILITY RATIOS

All of the financial decisions and operations of a company ultimately result in bottom-line performance. Both financial managers and investors are interested in tracking improvement in profitability and comparing it to the profitability of competitors as well as the results that could be obtained from other possible investments.

**Profit Margin on Sales Ratio** Measures the profit generated by each dollar of sales.

$$\text{Profit Margin on Sales Ratio} = \frac{\text{Net Profit}}{\text{Net Sales}}$$

The main revenues of a business come from sales. The greater the return on sales, the more efficient is the business. A lower ratio may indicate there is pressure on prices so little margin is available for profit after expenses have been paid. To assist with that analysis, companies calculate the *gross profit margin ratio* which divides gross profit by net sales. Carrying a high level of debt with accompanying interest payments could also reduce the profit margin on sales. The effect of interest and taxes on profit margins can be determined by calculating the *operating profit margin ratio*. It is determined by dividing operating income by net sales. **Operating income** is the company's earnings before interest and taxes.

**Return on Total Assets Ratio** Measures the company's earnings on each dollar of assets.

$$\text{Return on Total Assets Ratio} = \frac{\text{Net Income}}{\text{Total Assets}}$$

This ratio is particularly meaningful to managers, creditors, and investors because it evaluates the efficiency of the assets of the company. Does the company have too much money invested in assets based on the profit or are the assets particularly effective in generating income? When managers make plans for capital investments, consideration of the contribution to this ratio will be very important. A similar important profitability ratio is the return on equity ratio.



*Most revenues of a business come from sales.*

**Return on Equity Ratio** Measures how each dollar of investment by stockholders contributes to net income.

$$\text{Return on Equity Ratio} = \frac{\text{Net Profit}}{\text{Stockholders' Equity}}$$

## MARKET PERFORMANCE RATIOS

The final set of ratios examines the overall financial performance of the business in contributing to shareholder value. The results are usually examined over several years to see changes in the company's performance. These ratios are considered by both stockholders and the board of directors as important evidence of the effectiveness of executive leadership. Market performance ratios are most useful as a way to compare the financial performance of similar companies or of several companies being considered for investment purposes.

**Earnings per Share Ratio** Measures the amount of profit earned by each share of stock.

$$\text{Earnings per Share Ratio} = \frac{\text{Net Income}}{\text{Number of Shares Issued}}$$

If the company issues preferred stock, the dividends paid to preferred stockholders are subtracted from net income before dividing by the number of shares of common stock issued. Preferred stockholders receive a specified dividend which affects the overall earnings for other stockholders.

**Price Earnings Ratio** A measure of the strength of a company's earnings in affecting the price of its stock.

$$\text{Price Earnings Ratio} = \frac{\text{Market Stock Price}}{\text{Earnings per Share}}$$

When investors decide on the price to pay for a company's stock, an important consideration is the earnings they expect to receive on their investments. A company with a strong record of earnings is likely to command a higher price than one with poor earnings.

**Market to Book Ratio** The relationship between the value of stock as recorded on the company's balance sheet and its value determined by the stock price.

$$\text{Market to Book Ratio} = \frac{\text{Market Price per Share}}{\text{Book Value per Share}}$$

The book value of stock is calculated by dividing the stockholder equity by the number of shares issued. Market to book ratios are often greater than 1, meaning that investors are willing to pay more for stock than it is valued by the company. One of the reasons is that accounting valuations are conservative so the value of assets listed on the balance sheet is lower than their actual value. Also, a company has intangible assets such as goodwill that affect its market value.

**checkpoint ✓**

What are the five categories of financial ratios?


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*Comparative financial analysis should be done using companies in the same industry with similar characteristics.*

# Use Financial Ratios

Financial ratios should be used carefully because they are only general measures of a company's financial condition. Ratios calculated from only one set of a company's financial statements can be used to examine current relationships among key financial elements. For example, ratios can illustrate the proportion of assets and liabilities that are liquid versus long-term or the proportion of assets that are owned versus financed. That one-time analysis may point out strengths of the company's current financial position and performance and, more importantly, identify areas of concern if ratios indicate potential problems with some of the proportions. Those relationships are likely to change over time, so comparing ratios over several time periods provides a better picture of the company's financial condition. Another use of ratios is to compare specific aspects of the company's financial condition and performance with that of similar businesses. Examining industry trends in financial performance using financial ratios is an important part of financial analysis.

## DEVELOP A FINANCIAL ANALYSIS PLAN

Companies follow these steps to use financial ratios in financial planning.

1. Organize financial records and statements in order to access the information needed to calculate ratios.
2. Determine the key financial ratios needed to evaluate financial performance and develop financial goals. Consider the major areas of financial decisions (asset planning, asset financing, and asset management) as well as the categories of financial information needed (liquidity, asset management, debt management, profitability, and market performance).
3. Develop baseline data by calculating the first set of ratios. Because companies maintain historic financial records and financial statements, financial ratios for prior years can be calculated to serve as baseline information. Financial ratios can be calculated for several years to study the history of the company's financial performance.
4. Identify sources of comparative information in order to compare the company's financial performance with other companies. Comparison should be made with companies in the same industry and with a select group of companies that have similar characteristics affecting financial performance, such as the corporate ownership structure, age of the company, company size defined by sales and assets, and geographic location of major operations and markets.
5. Identify benchmark companies to serve as financial performance targets. A **benchmark company** is a competitor that has historically demonstrated outstanding financial performance.

**f.y.i.**

Each year, Dun and Bradstreet publishes *Industry Norms and Key Business Ratios*. It analyzes financial data for hundreds of types of businesses organized by industry. The publication provides examples of typical statements as well as 14 key financial ratios for each industry.

6. Run analyses and calculate ratios regularly. Once-a-year analysis might be misleading because the financial data such as cash flow, sales, inventory level, and accounts receivable and payable may change dramatically from quarter to quarter. Complete trend analysis where ratios are monitored over an extended period of time looking for trends that indicate improving or declining financial conditions.
7. Use the results of ratio analysis as one factor in establishing financial goals and implementing changes in business activities designed to improve financial performance.

## SOURCES OF COMPARATIVE INFORMATION

One of the uses of financial ratios is to compare specific aspects of a company's financial performance with other companies. Since most public corporations are required to publish financial statements at least annually, it is relatively easy to obtain comparative financial information. Investors also use financial statement information and financial ratios to evaluate companies in order to make sound investment decisions. Many companies serving investors collect and publish that information. Figure 4-3 lists several useful sources of comparative financial information for public corporations.

Industry and trade associations frequently collect information from their members and provide comparative financial performance data. Often that information is provided only to members or to others for a fee. Some organizations make information available to the public for free.

**checkpoint**

What is a benchmark company and how is it used when analyzing financial ratios?

**FIGURE 4-3**

**Sources of Comparative Financial Performance Information**

**Securities and Exchange Commission (SEC)** The Securities and Exchange Commission's EDGAR (Electronic Data Gathering and Retrieval) database of all filings of public companies (www.sec.gov/edgar.shtml)

**Hoover's Online** A searchable database that contains detailed company and industry information including financial information, company history, competitors, and product information (www.hoovers.com/free/)

**Yahoo! Finance** A comprehensive online research service including corporate reports, company information, earnings, analyst reports, and several research tools (biz.yahoo.com/r/)

**MSN Money** A comprehensive business and investing web site providing industry and individual company information (moneycentral.msn.com/detail/stock_quote)

**InvestorGuide.com** Offers a wide range of current and historic information on thousands of publicly traded companies with comparisons to major competitors (www.investorguide.com/)

## finance in your life

### Analyzing Personal Financial Progress

"Why do I never seem to have enough money at the end of the month?"

"How will I ever have the money to purchase a house?"

"How can I be sure I will have enough savings to retire?"

Each of these questions reflects the importance of personal financial planning. They demonstrate on a personal level the same types of financial issues facing businesses. Being able to pay bills at the end of the month is a matter of cash flow. Financing a major purchase such as a home requires taking on long-term debt. Planning for retirement requires increasing your personal net worth. Just as executives carefully study reports to plan for growth and profitability, individuals need to maintain financial records and develop expertise in financial analysis.

Financial ratios can be an important personal financial planning tool. In order to use financial ratios you will need to prepare a balance sheet and an income statement. The following ratios provide useful information on your current status and guidance on what you can do to improve your personal financial health.

- Do you have enough cash and liquid assets to pay immediate expenses?

  **Current Ratio = Current Assets ÷ Current Liabilities**
- What proportion of your assets is really owned by your creditors?

  **Debt to Total Assets Ratio = Total Liabilities ÷ Total Assets**
- How much debt do you own compared to your net worth?

  **Debt to Equity Ratio = Total Liabilities ÷ Owner's Equity**
- How does your income compare to the value of your assets and your personal net worth?

  **Net Return on Assets Ratio = Net Profit (income) ÷ Assets**

  **Net Return on Equity Ratio = Net Profit (income) ÷ Owner's Equity**

#### Think Critically

1. What changes in the relationship of assets, liabilities, and owner's equity would indicate improving personal financial health?
2. How could an individual begin to make those financial changes?

# 4.4 Lesson Assessment

## UNDERSTAND CONCEPTS

Determine the best answer for each of the following questions.

1. **True or False?** The financial data used to calculate ratios comes from the company's financial statements.
2. ____?____ ratios measure a company's ability to meet its short-term financial obligations and its use of working capital.
   a. liquidity
   b. asset management
   c. profitability
   d. market performance
3. A company's debt ratio measures how much of a company's assets are owned by
   a. stockholders
   b. the federal government
   c. creditors
   d. all of the above
4. **True or False?** Financial ratios should not be compared with those of competitors since each business is unique and has different financial goals.
5. Publicly held companies are required to publish their financial statements annually by
   a. the Internal Revenue Service
   b. the Securities and Exchange Commission
   c. Hoover's
   d. their industry association

## MAKE ACADEMIC CONNECTIONS

6. **Math** Use one of the web sites referenced in the lesson to locate the financial statements of a corporation that is headquartered in your state. Find the information needed to calculate three financial ratios. Complete the calculations to show the company's performance for each ratio. Show all of your work.
7. **Research** Use the Internet to gather information on the use of benchmarking. Prepare a one-page report that discusses how a company can use benchmarking to improve its financial performance and the value of benchmarking as a business tool.
8. **Law** Research the Sarbanes-Oxley Act of 2002. What problems was it supposed to correct, and how has it affected businesses in a positive and negative way? Prepare a three-minute oral report on your findings.
9. **Critical Thinking** Prepare a chart in which you identify one financial ratio that you believe would provide important information for each of the following groups: company executives, shareholders, and creditors. Include a short description of each ratio and why you selected the ratio for the group.

# Chapter 4 Assessment

## Summary

### 4.1 ACCOUNTING PRINCIPLES AND PRACTICES

1. Accounting is responsible for organizing a system of financial records, recording financial data, and preparing, analyzing, and interpreting financial statements.
2. Inaccurate, incomplete, or improperly prepared accounting records and statements misrepresent the financial condition of the business and mislead those who rely on the accountants' work.

### 4.2 MAINTAIN AND USE FINANCIAL RECORDS

3. The components of an effective information system are users, data collection devices, data sharing devices, analysis/interpretation of information, and organizational structures and processes.
4. Financial reports and other financial information are prepared by accountants and used to draw conclusions and make decisions that affect the financial future of the company.

### 4.3 FINANCIAL MANAGEMENT ANALYSIS TOOLS

5. Financial management is responsible for asset management in a business. It determines the best mix of assets for a business, how to acquire them, and how to use them to get the best possible financial return from their use.
6. To make effective financial decisions, managers study the value of assets, liabilities, and owner's equity, the revenues and expenses generated by the business, the company's stock position, and its use of earnings. They are concerned about the changes in the financial condition and position of the business over time, its current status, and projections for the future.

### 4.4 FINANCIAL ANALYSIS AND DECISION MAKING

7. An important tool for analyzing financial statements is financial ratios. Ratio analysis includes comparing relationships in current performance, making comparisons between current and past performance, and comparing the financial performance of the business with competitors' performance.
8. Ratios calculated from a company's financial statements can be used to examine current relationships among key financial elements. Comparing ratios over several time periods provides a better picture of the company's financial condition. Another use of ratios is to compare specific aspects of the company's financial condition and performance with that of similar businesses.

## Develop Your Business Language

Match the terms listed with the definitions. Some terms will not be used.

1. The ability of an organization to meet its financial obligations as they become due
2. A statement of financial performance issued at the end of a fiscal year
3. Study relationships in a company's financial resources in order to understand and improve financial performance
4. Commitment to completing all tasks thoroughly and with the highest level of quality
5. Offers an ownership interest to investors
6. Steps completed to ensure the accuracy of accounting records
7. A set of processes, people, and equipment for converting data into information
8. Profits earned by a company that are not paid to shareholders as dividends
9. Financial records for assets, liabilities, and categories of owner's equity
10. Using debt financing to increase the rate of return on assets
11. Responsible for carrying out the strategy and policy of the board of directors

a. accounting
b. accounting cycle
c. accounting transaction
d. accounts
e. accrual accounting
f. annual report
g. benchmark company
h. chief executive officer
i. chief financial officer
j. chief operating officer
k. debt financing
l. due care
m. equities
n. equity financing
o. financial leverage
p. financial ratios
q. fundamental accounting equation
r. information integrity
s. information system
t. operating income
u. ratio analysis
v. retained earnings
w. solvency

## Review Concepts

12. Which of the following is a responsibility of finance rather than accounting?
    a. organizing a system of financial records
    b. recording financial data
    c. analyzing and choosing among investment alternatives
    d. preparing financial statements
13. Which of the following is the first step in the accounting cycle?
    a. financial statements are prepared
    b. a trial balance of accounts is prepared
    c. journal entries are posted in the appropriate accounts
    d. transactions are recorded in journals
14. The accounting procedure that recognizes revenues and expenses when they are incurred rather than when cash is received or spent is known as
    a. expense and revenue matching
    b. accrual accounting
    c. the accounting cycle
    d. full disclosure

# Chapter 4 Assessment

## Think Critically

15. Why does a company need both accounting and finance personnel? What types of problems might occur if accounting and finance personnel do not cooperate and work effectively together?
16. Many types of activities occur in a business that result in the need for an accounting transaction. Make a list of at least ten activities that would occur in a large retail store that would result in an accounting entry. Classify each as revenue moving in, revenue moving out, or another type of activity that results in a change in an account.
17. Assume that students in your school are expected to exercise *due care* in performing their duties just as accountants are. Provide several examples of how that might affect the daily activities of students.
18. What does it mean that the board of directors represents the shareholders of a corporation? Do you believe that a focus on shareholders and profit may lead to the types of ethical problems that have been seen in some large corporations recently? Why or why not?
19. What is the difference between liquidity and profitability? How can a company that is liquid have problems with profitability? How can a profitable company have liquidity problems?

## Business Financial Calculations

20. Complete the following accounting equations by calculating the missing values.

| Assets | Liabilities | Owner's Equity |
|---|---|---|
| $1,046,326 | $583,221 | |
| | 862,210 | $923,010 |
| $542,119 | | $210,990 |

21. An accountant needs to convert financial transactions completed in a foreign currency to U.S. dollars. Calculate the values of each of the following transactions using the conversion rate provided.

| Foreign Currency | Transaction Amount | Conversion Rate | U.S. Dollar Value |
|---|---|---|---|
| Brazilian Real | 96,054 BRL | 1/0.46 USD | |
| EU Euro | 182,250 EUR | 1/1.27 USD | |
| Mexican Peso | 23,295 MXN | 1/0.092 USD | |
| Chinese Yuan | 965,880 CNY | 1/0.125 USD | |

22. Calculate each financial ratio using the information provided.
    a. current ratio: current assets $865,921, current liabilities $441,020
    b. quick ratio: current assets $428,200, current liabilities $301,905, inventory $25,025
    c. accounts receivable turnover: total credit sales $986,550, accounts receivable $96,010

## Analyze Cases

Use the case from the beginning of the chapter, Making the Right Move, to answer the following questions.

23. In your opinion, what changes in business and the economy led to the rapid growth and success of Accenture?
24. Why do you believe the executives and employees of Accenture wanted to separate themselves from the large accounting firm, Arthur Andersen, even before that company was hit with scandal?
25. Do you think that personnel employed as consultants by Accenture should have expertise in finance and accounting? Why or why not?
26. What is your view of the image Accenture tried to create by the choice of a new company name? Make several creative recommendations that Accenture could consider to strengthen its image.
27. Use the Internet to review Accenture's most recent financial statements. What evidence do you see that suggests Accenture is maintaining a strong financial position? What problems, if any, do you see? Provide information from the statements to support your analysis.

## Portfolio Activity

**COLLECT** examples that illustrate the work of financial personnel in business and government. Examples can be products, forms, ads, or other materials.

**CREATE** a visual to show how business activities are affected by the examples you have collected. Use photos, drawings, or other types of images to show the role of financial personnel in organizations.

**CONNECT** your visual to other items already in your class portfolio or relate it to an important concept you have learned in another class. Make the connection by preparing a one-minute presentation on the role of financial analysis for businesses, investors, and the economy.

## Stock Market Activity

Before buying stock in a business, it is useful to review its financial records. In this project you will learn about analyzing the information that can be found in the reports of a company.

Use Internet and library resources and the annual report for the company you have been studying (or select a different company).

1. Review the balance sheet and income statement of the company. How do the company's assets, liabilities, equity, revenue, expenses, and net income compare to recent years?
2. Prepare a ratio analysis using the ratios presented in this chapter. Compare these ratios to other companies in the same industry.
3. Continue to record of the company's stock value. Note any company, economic, or news developments that may affect stock prices.

# Planning a Career in Accounting

Transportation, Distribution & Logistics

The economy runs on money, and accountants maintain the financial records required by individuals, companies, and government agencies. There are four categories of accounting professionals. Public accountants work independently and perform a broad range of accounting activities for their clients. Management accountants are employed by large companies and maintain the financial records they require. Government accountants work in the public sector maintaining the records of government agencies and auditing private businesses and individuals whose activities are subject to government regulations or taxation. Internal auditors review the records of their companies to insure the accuracy and honesty of records and reports.

## Employment Outlook

- Employment opportunities for accountants are excellent. Increasing financial regulations and greater government scrutiny of business financial practices require more accounting professionals.
- As economies expand worldwide, increased business activity requires more people to manage financial transactions.
- New opportunities are emerging in the area of forensic accounting, where specialized accountants scrutinize financial transactions looking for white-collar crime.

## Job Titles

- Accountant
- Junior accountant
- Auditor
- Budget analyst
- Cost accountant

## Needed Skills

- A B.A. in accounting, with a M.A. in accounting or an MBA either required or preferred for many jobs.
- To advance in the profession, accountants must pass the four-part Uniform CPA Examination.
- An aptitude for mathematics to be able to analyze, compare, and interpret facts and figures.
- Proficiency in accounting and auditing computer software.

## What's It Like to Work in Accounting?

Maggie is getting ready again for one of the peak times for accounting employees in her company. At the end of every quarter and especially at the end of the year, no one is allowed to schedule a vacation and everyone can expect that workdays may be 10–12 hours or longer.

Maggie knew when she became an accountant that a major responsibility was to close the books at the end of each accounting period. She remembered over 20 years ago when she got her first corporate accounting job that all records were completed manually. Rather than the two weeks it currently takes to complete the process, she and her colleagues scheduled almost a month. "Thank goodness for computerized records and accounting systems," Maggie thought. But even two weeks is now thought to be too slow, and the company is working to find ways to speed the process. "Our managers can't wait that long to have the important financial information they need," Maggie's boss said at their last planning meeting.

**What about you?** What appeals to you about the work of accountants? What would you have to do to prepare for a career in this field?

# MARKETING MANAGEMENT SERIES EVENT ROLE PLAY

The DECA Marketing Management Series Event consists of a 100-question test and a related role-play. The role-play consists of a written scenario for the student to review. The Marketing Management Series Event involves decisions related to a product or service to sell; a situation involving communications, human relations, economics or professional development; or a business management consideration. The role-play participant must translate what they have learned into effective, efficient, and spontaneous action. A list of five performance indicators specific to the scenario is included in the instructions, indicating what the participant must accomplish during the role-play.

Participants have 10 minutes to prepare notes for their response to the role-play. During the first 10 minutes of the role-play, participants will explain their solution to the role-play problem. The judge has up to five (5) additional minutes to ask questions about the role-play solution.

**Role Play Situation** You are the manager for Bank On Us (a national bank) in Fall Creek (a growing community with 60,000 people). The average family income in Fall Creek is $82,000 per year and 78% of the population has a college degree or some college education. Since the grand opening of your bank, eight competitors have located within a five-block radius of your bank. The Regional Bank On Us president has asked for your management strategy to train employees to sell additional customer services to current customers. The president has also asked you for a promotional plan to capture business from the large number of people moving into your community. All management strategies that you suggest must be cost effective and reap the desired results. You must demonstrate an understanding of the demographics for your community, characteristics of the target market, and top customer expectations for a bank.

## Performance Indicators Evaluated

- Demonstrate a clear understanding of the bank's mission.
- Understand the demographics and banking needs of the community.
- Explain cost-effective strategies to increase business for the bank.
- Present a clear plan of action to meet the goals of the bank.
- Demonstrate a clear understanding of banking services and the competitive nature of the banking industry.

*Go to the DECA web site for more detailed information.*

## Think Critically

1. Why is customer service such a high priority for banks?
2. Why is it important for a manager to understand the competition in the banking industry?
3. How are bank employees related to the bank's overall goals?
4. How have bank teller positions changed due to the amount of competition in the banking industry?

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