

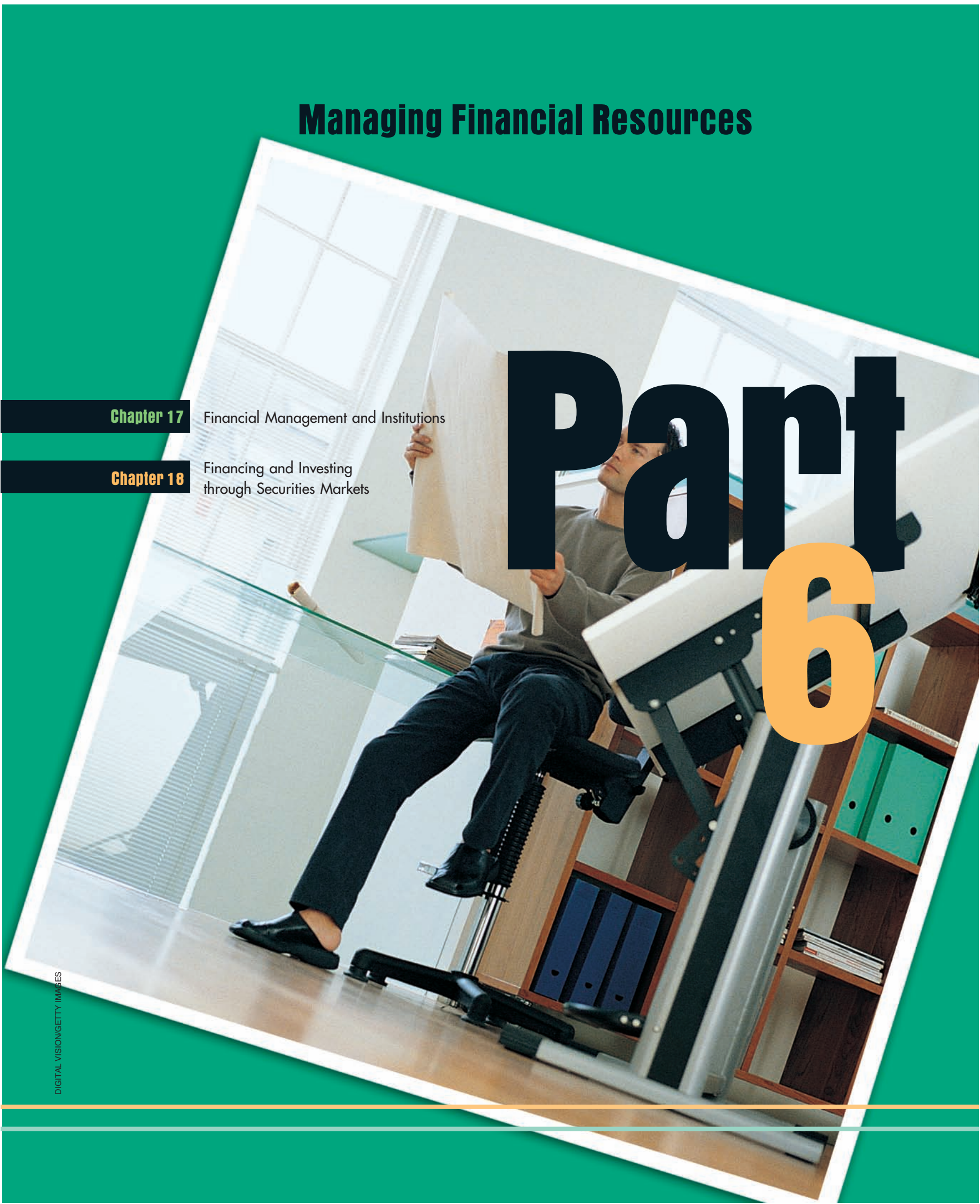
Managing Financial Resources

Part 6

Chapter 17 Financial Management and Institutions

Chapter 18 Financing and Investing through Securities Markets

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Chapter 17

Learning Goals

- 1 Identify the functions performed by a firm's financial managers.
- 2 Describe the characteristics a form of money should have, and list the functions of money.
- 3 Identify the various measures of the money supply.
- 4 Explain how a firm uses funds.
- 5 Compare the two major sources of funds for a business.
- 6 Identify the likely sources of short- and long-term funds for business operations.
- 7 Describe the financial system and the major financial institutions.
- 8 Explain the functions of the Federal Reserve System and the tools it uses to control the supply of money and credit.
- 9 Describe the global financial system.

Financial Management and Institutions

Fannie Mae and Freddie Mac are two of the largest financial institutions in the United States. Their odd names are shortened forms of their official titles, the Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation. Both were created by the federal government and have special charters, even though they are stockholder owned. Their purpose is to increase the supply of mortgage credit available to the public, especially to low- and moderate-income families in all areas of the country and under all economic conditions. Fannie and Freddie, as they are known, buy mortgage loans from banks, mortgage bankers, and other private sources. They finance these purchases by selling bonds and a variety of other types of securities.

Over the years Fannie and Freddie have helped millions of new homeowners and worked to ensure fair



the results were that the validity of its past financial reports was called into question. A report by the Office of Federal Housing Enterprise Oversight found what it called “pervasive misapplication of accounting rules” in the

Reining in Fannie and Freddie



lending practices. They help finance half the home mortgage loans granted in the United States each year and make money from the difference in value between the mortgages they buy and their cost of financing. Thanks to them, says one congressional representative, “we have the strongest, most dynamic housing market in the world.”

But recently members of Congress, the Federal Reserve chairman, and some prominent economists have expressed concern that Fannie and Freddie are too loosely regulated. First, Freddie Mac was found to be improperly accounting for its use of certain exotic financial instruments called *derivatives*, and the company was slapped with a \$125 million fine. A management shake-up followed.

A few months later, government investigators turned their attention to Fannie Mae. Soon Fannie was criticized too for also using improper accounting methods; among

company’s records, some of which allowed Fannie Mae’s managers to receive bonuses in a recent year that would not otherwise have been paid. The company was accused of maintaining a corporate culture that encouraged such problems to continue unchecked. Fannie Mae was fined \$400 million, one of the largest penalties in an accounting fraud case.

The Senate Banking Committee passed a bill to rein in the two companies with tighter controls as well as by shrinking their investment portfolios, which add up to about \$1.5 trillion, by forcing the companies to sell assets that are not related to their mortgage businesses. Passage of the bill in the House remains in doubt, however, and both Fannie Mae and Freddie Mac have criticized its provisions.¹

Previous chapters discuss two essential functions that a business must perform. First, the company must produce a good or service or contract with suppliers to produce it. Second, the firm must market its good or service to prospective customers. This chapter introduces a third, equally important function: a company's managers must ensure that it has enough money to perform its other tasks successfully, in both the present and the future. Adequate funds must be available to buy materials and equipment, pay bills, purchase additional facilities, and compensate employees. This third business function is **finance**—planning, obtaining, and managing the company's funds in order to accomplish its objectives effectively and efficiently.

An organization's financial objectives include not only meeting expenses but also maximizing its overall worth, often determined by the value of the firm's common stock. Financial managers are responsible for meeting expenses and increasing profits to shareholders.

This chapter focuses on the role of financial managers, the reasons businesses need funds, and the various types and sources of funds. It discusses the role of money and measures of the money supply. The chapter explains the purpose and structure of the financial system, the operations of financial institutions, and the way the Federal Reserve System functions. A discussion of the role of the financial system in the global business environment concludes the chapter.

finance business function of planning, obtaining, and managing a company's funds in order to accomplish its objectives effectively and efficiently.

financial manager executive who develops and implements the firm's financial plan and determines the most appropriate sources and uses of funds.

THE ROLE OF THE FINANCIAL MANAGER

Organizations are placing greater emphasis on measuring and reducing the costs of conducting business as well as increasing revenues and profits. As a result, **financial managers**—executives who develop and implement their firm's financial plan and determine the most appropriate sources and uses of funds—are among the most vital people on the corporate payroll.

The finance organization of a typical company might look like this: at the top is the chief financial officer (CFO). The CFO usually reports directly to the company's chief executive officer (CEO) or chief operating officer (COO), if the firm has one. In some companies, the CFO is also a member of the board of directors. Robert Wayman, for instance, is CFO of Hewlett-Packard and is also a member of the HP board of directors. Reporting directly to the CFO are often three senior managers. While titles can vary, these three executives are commonly called the **vice president for financial management (or planning)**, the **treasurer**, and the **controller**. The vice president for financial management or planning is responsible for preparing financial forecasts and analyzing major investment decisions. Major investment decisions include new products, new production facilities, and acquisitions. The treasurer is responsible for all of the company's financing activities, including cash management, tax planning and preparation, and shareholder relations. The treasurer also works on the sale of new security issues to investors. The controller is the chief accounting manager. The controller's functions include keeping the company's books, preparing financial statements, and conducting internal audits.

The growing importance of financial professionals is reflected in an expanding number of CEOs promoted from financial positions. By one estimate, around 20 percent of all newly appointed CEOs during a recent year spent time in the finance ranks. A recent example is Louis Raspino. Prior to becoming CEO of oil services firm Pride International, Raspino served as the firm's CFO.² The importance of finance professionals is also reflected in how much CFOs earn today. According to a recent survey, annual compensation for CFOs averages around \$2.4 million.³

In performing their jobs, financial professionals continually seek to balance risks with expected financial returns. Risk is the uncertainty of gain or loss; return is the gain or loss that results from an investment over a specified period of time. Financial managers strive to maximize the wealth of their firm's shareholders by striking the optimal balance between risk and

return. This balance is called the **risk-return trade-off**. For example, heavy reliance on borrowed funds may increase the return to shareholders, but the more money a firm borrows, the greater the risks to shareholders. An increase in a firm's cash on hand reduces the risk of meeting unexpected cash needs. However, because cash does not earn any return, failure to invest surplus funds in an income-earning asset—such as in marketable securities—reduces a firm's potential return or profitability.

Every financial manager must perform this risk-return balancing act. For example, in the late 1990s, Airbus wrestled with a major decision: whether to begin development and production of the giant A380 jetliner. The development costs for the aircraft—to be the world's largest jetliner—were initially estimated at more than \$10 billion. Before committing to such a huge investment, financial managers had to weigh the potential profits of the A380 with the risk that the profits would not materialize. With its future on the line, Airbus decided to go ahead with the development of the A380. After spending more than \$14 billion, Airbus rolled out the first A380 in 2005. Airbus has orders for approximately 150 jetliners at a list price of around \$285 million each. It's unclear, however, whether the A380 investment turns out to be a smart, and profitable, decision.⁴

The Financial Plan

Financial managers develop their organization's **financial plan**, a document that specifies the funds needed by a firm for a period of time, the timing of inflows and outflows, and the most appropriate sources and uses of funds. The financial plan is based on forecasts of production costs, purchasing needs, and expected sales activities for the period covered. Financial managers use forecasts to determine the specific amounts and timing of expenditures and receipts. They build a financial plan based on the answers to three questions:

1. What funds will the firm require during the appropriate period of operations?
2. How will it obtain the necessary funds?
3. When will it need more funds?

Some funds flow into the firm when it sells its goods or services, but funding needs vary. The financial plan must reflect both the amounts and timing of inflows and outflows of funds. Even a profitable firm may well face a financial squeeze as a result of its need for funds when sales lag, when the volume of its credit sales increases, or when customers are slow in making payments.

The cash inflows and outflows of a business are similar to those of a household. The members of a household may depend on weekly or monthly paychecks for funds, but their expenditures vary greatly from one pay period to the next. The financial plan should indicate when the flows of funds entering and leaving the organization will occur and in what amounts.

A good financial plan also involves financial control, a process of checking actual revenues, costs, and expenses and comparing them against forecasts. If this process reveals significant differences between projected and actual figures, it is important to discover them early to take timely corrective action.

Paula Brock, CFO of the Zoological Society of San Diego (which operates the famous San Diego Zoo), credits the zoo's financial plan and planning process with helping it weather a recent outbreak of an exotic bird disease in Southern California. When the disease first appeared, the zoo took immediate action to protect its valuable bird collection. Thanks to these actions, no birds got sick, and the damage to the zoo's finances were minimal, even though the zoo spent more than half a million dollars. The financial plan raised the alarm as resources were redirected to fight the disease, allowing managers to make the necessary adjustments.⁵

risk-return trade-off
optimal balance between the expected payoff from an investment and the investment's risk.

financial plan document that specifies the funds a firm will need for a period of time, the timing of inflows and outflows, and the most appropriate sources and uses of funds.

"They Said It"

"When I was young, I used to think that money was the most important thing in life; now that I am older, I know it is."

—Oscar Wilde
(1854–1900)

Humorist and playwright

assessment check

1. Define finance and explain the role of the financial manager.
2. What are the three questions on which a financial plan is based?

CHARACTERISTICS AND FUNCTIONS OF MONEY

Playwright George Bernard Shaw once said that the lack of money is the root of all evil. Added comedian Woody Allen, “Money is better than poverty, if only for financial reasons.” Most businesspeople would agree, because money is the lubricant of contemporary business.

Characteristics of Money

money anything generally accepted as payment for goods and services.

Money is anything generally accepted as payment for goods and services. Most early forms of money imposed a number of serious disadvantages on users. For example, a cow is a poor form of money for an owner who wants only a loaf of bread and some cheese. Exchanges based on money permit economic specialization and provide a general basis for purchasing power, provided that the form of money used has certain characteristics. Money must be divisible, portable, durable, difficult to counterfeit, and stable in value.

“They Said It”

“The chief value of money lies in the fact that one lives in a world in which it is overestimated.”

—H. L. Mencken
(1880–1956)
Journalist and editor

Divisibility A U.S. dollar is divided into cents, nickels, dimes, and quarters. The Canadian dollar is divided similarly, except that Canada has a 20-cent coin and no quarter. Mexico’s nuevo peso is broken down into centavos (100 centavos equals one nuevo peso). People can easily exchange these forms of money for products ranging from a cup of coffee to automobiles. Today, most economic activity involves making and spending money.

Portability The light weight of modern paper currency facilitates the exchange process. Portability is an important characteristic, because a typical dollar bill changes hands around 400 times during its lifetime, staying in the average person’s pocket or purse fewer than two days.

Durability U.S. dollar bills survive an average of twelve to eighteen months, and they can survive folding some 4,000 times without tearing. Coins, on the other hand, can last 30 years or longer. Most countries have replaced small-denomination paper currency with coins. For instance, there are no one-euro or two-euro bills—only one- and two-euro coins. In the United States there have been several attempts to get Americans to switch to dollar coins, none of which have met with much success. Americans, it appears, are reluctant to give up the dollar bill—the greenback is one of the great icons of American culture. This hasn’t stopped the government from trying again. The latest attempt to wean Americans from the paper dollar bill is described in the “Hit & Miss” feature.

Difficulty in Counterfeiting Widespread distribution of counterfeit money undermines a nation’s monetary system and economy by ruining the value of legitimate money. For this reason, governments consider counterfeiting a serious crime and take elaborate steps to prevent it. Among counterfeiters, U.S. currency is the most popular. To increase the difficulty of counterfeiting U.S. currency in this age of sophisticated computers and color printers, the U.S. Treasury has redesigned paper bills. The new design adds a letter to each bill’s serial number along with the seal of the Federal Reserve, larger portraits that are off-center, and polymer threads that run vertically through the bills and glow under ultraviolet light.

Stability Money should also maintain a relatively stable value. If the value of money fluctuates too much, people hesitate to use it. They begin to abandon it and look for safer means of storing their wealth. Businesses start to demand that bills be paid in other, more stable currencies.

As part of a broad economic reform program, Argentina pegged the value of its currency, the peso, to the U.S. dollar in the early 1990s; one peso equaled one dollar. This policy



HIT & MISS

Getting Americans to Break the Dollar Habit

Unless you're a coin collector, the first thing that comes to mind about the U.S. dollar coin is probably how you lost 75 cents when you spent it by mistaking it for a quarter. Despite failing twice to get U.S. consumers to adopt the dollar coin as money and not a collectible, starting in 2007 Congress is trying again with a plan to introduce four dollar coins a year, bearing likenesses of the presidents. Like the series of quarters commemorating the states, the new dollars are likely to be hoarded instead of spent. The U.S. Mint isn't worried about that, however; it costs just pennies to mint dollar coins, which last 30 years compared with twelve to eighteen months for a dollar bill. So even if the bid to get them into circulation fails, the new dollars will save money for the government.

Silver dollars were minted from 1794 to the 1930s, and a copper-and-nickel dollar was made in the 1970s. In 1978 the mint unveiled the Susan B. Anthony dollar to great fanfare, but the public rejected it, partly owing to its resemblance to a quarter. A similar fate befell the golden or Sacagawea dollar (named for Lewis and Clark's Shoshone guide) in 2000, despite its more distinctive look.

Critics of the dollar coin say the government has not done a good enough job promoting the new cur-

rency—particularly the Sacagawea dollar—and suggest taking paper dollars out of circulation to force consumers to stop hoarding the coins. Canada, for example, stopped printing one- and two-dollar bills after coins were introduced. Mint officials say it takes a year to build awareness of the dollar, and the next step is to get people to use it. The question remaining is, will the third time do the trick?

Questions for Critical Thinking

1. Do consumers really need a dollar coin? Does the government? Why or why not?
2. How do you think the government could do a better job of changing consumers' perception of the dollar coin from curiosity to currency? Would taking the paper dollar out of circulation be a wise move? Why or why not?

Sources: "United States Dollar," Answers.com, accessed July 27, 2006, <http://www.answers.com>; "The Golden Dollar, One Year Later," About.com, accessed July 27, 2006, <http://collectibles.about.com>; Gordon T. Anderson, "Congress Tries Again for a Dollar Coin," CNN Money, accessed July 27, 2006; <http://money.cnn.com>.

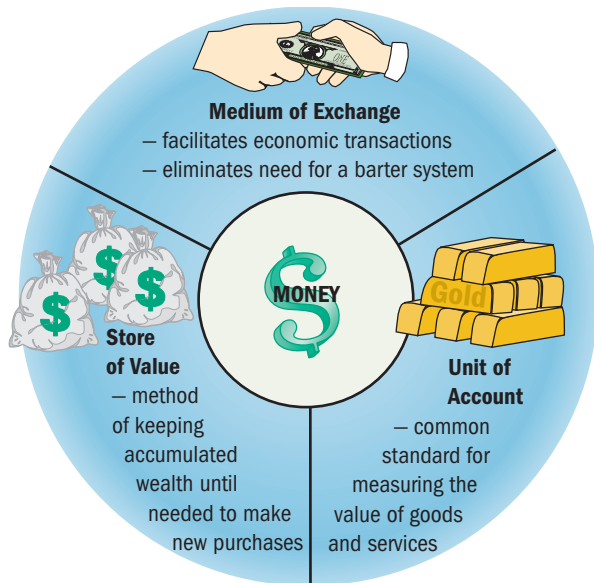
worked well for a while as inflation fell sharply and economic growth accelerated. However, a strong U.S. dollar meant a strong peso. This made Argentinean products more expensive and hurt exports. The country's economy started to unravel. The government was forced to close banks and limit cash withdrawals. Finally, it allowed its currency to float independently of the dollar. The peso promptly lost 70 percent of its value relative to the dollar as Argentineans scrambled to convert their pesos into dollars.

Functions of Money

Money performs three basic functions, shown in Figure 17.1. First, it serves primarily as a medium of exchange—a means of facilitating economic transactions and eliminating the need for a barter system. For example, assume you work part time and are paid \$10 per hour—money is being used as the medium of exchange: payment for your labor. Second, money functions as a unit of account—a common standard for measuring the value of goods and services. For example, assume the cost of renting an apartment off campus is \$500 per month. This standardized unit of account allows you to compare the cost of renting an off-campus apartment to the cost of on-campus housing. Third, money acts as a temporary store of value—a way of keeping accumulated wealth until the owner needs it to make new purchases. Money offers one big advantage as a store of value: its high liquidity allows people to obtain

Figure

17.1 Basic Functions of Money



it and dispose of it in quick and easy transactions. Money is immediately available for purchasing products or paying debts. You purchase \$200 worth of goods from the bookstore. You can pay for your purchases using cash, a credit or debit card, or a check. In each case you're using money as a temporary store of value.

assessment check

1. What characteristics should money have?
2. List the three basic functions of money.

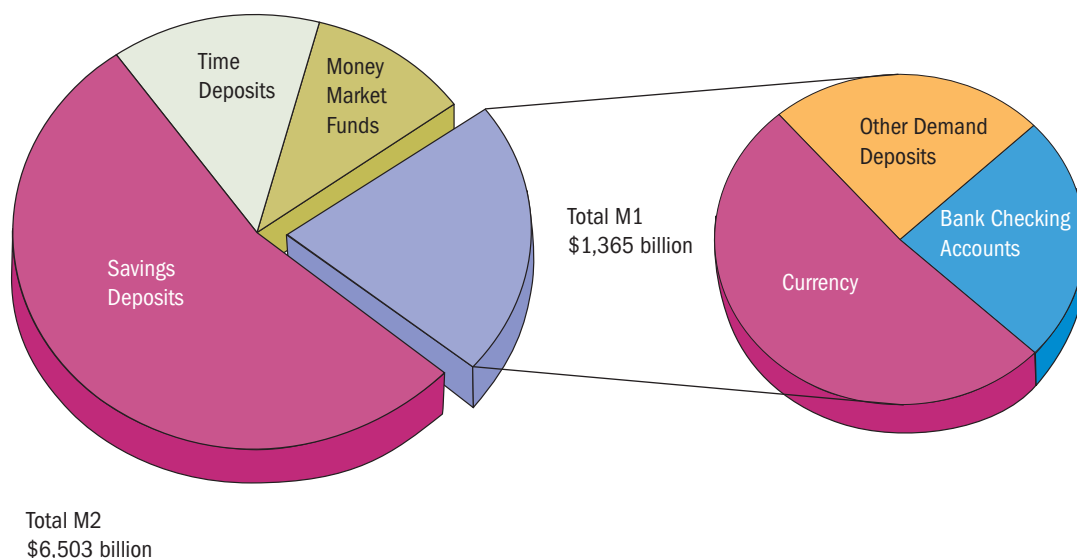
THE MONEY SUPPLY

Ask someone on the street to define the money supply, and he or she might answer that the money supply is the total value of all currency and coins in circulation. That answer, however, is only half right. One measure of the U.S. money supply consists of coins and currency as well as financial assets that also serve as a medium of exchange: traveler's checks, bank checking accounts, and other so-called **demand deposit** accounts (such as NOW accounts and credit union share draft accounts). Government reports and business publications use the term **M1** to refer to the total value of coins, currency, traveler's checks, bank checking account balances, and the balances in other demand deposit accounts. The current breakdown of M1 is shown on the right in Figure 17.2.

Another, broader definition of the money supply is also widely used. Called **M2**, this measure of the money supply includes M1 plus a number of other financial assets that are

Figure

17.2 Breakdown of M1 and M2



Sources: Federal Reserve, accessed August 3, 2006, <http://www.federalreserve.gov>.

CREDIT CARDS HIT CAMPUS AND DEBTS FOLLOW

Today's college students often graduate with a heavy load of debt, whether they borrowed for tuition expenses or not. More than half have at least one consumer credit card and many are already in debt in their freshman year, carrying an average balance of more than \$2,000, often at interest rates up to 15 percent.

This amount may not seem too large, but it can take several years to pay off after graduation. Some students are further burdened by annual fees, by penalties and higher interest rates on delinquent or late monthly payments, or by the even higher fees and rates attached to cash advances.

New college students are bombarded with credit card offers, promoted by "free gifts" such as T-shirts and sunglasses, and many are woefully unprepared for the financial consequences of charging pizza and beer for several years. Parents are not required to cosign the credit applications, and some can't afford to pick up the resulting debt. Debtors age 18 to 24 are among the fastest-growing group of bankruptcy filers. "Abuse of credit cards is a serious problem for young people," said a federal bankruptcy judge in San Diego.

Should the government restrict the marketing of credit cards to college students?

PRO

1. Students can ruin their credit rating in college, making it hard to rent an apartment or even get a job.
2. Credit card companies are taking unfair advantage of students' inexperience with budgeting and managing their money.

CON

1. Most students eventually pay their bills, learning an important lesson from their credit card experience.
2. Many students are responsible about spending, and credit cards offer them a way to pay for necessities without carrying cash.

Summary

Following in the footsteps of hundreds of colleges and universities, Washington State's house of representatives is reviewing a bill to regulate credit companies operating on state campuses. The bill has few teeth—it

only requires campuses to set policies, such as limiting the times and places cards can be marketed or forbidding free gift offers. But given the snowballing debt that student cards can create, the bill might be a step in the right direction.

Sources: Amy L. Cooper, "Credit Card Debt: A Survival Guide for College Students," *Young Money*, accessed July 27, 2006, <http://www.youngmoney.com>; "Senate Approves Bill Restricting Credit Card Marketing to College Students," *News Target*, accessed July 27, 2006, <http://www.newstarget.com>; Michael Kinsman, "Debt-Loaded Message," *San Diego Union-Tribune*, May 19, 2005, p. C-1.

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ETHICAL

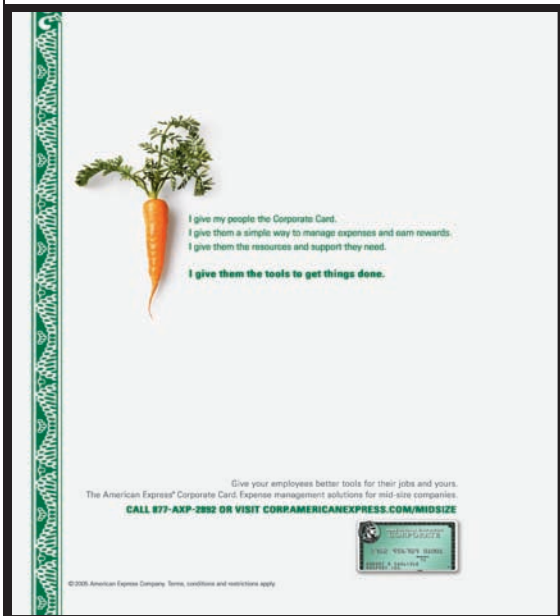
controversy



almost as liquid as cash but do not serve directly as a medium of exchange. These assets include various savings accounts, certificates of deposit, and money market mutual funds. Users must complete some sort of transaction before these assets can fulfill all the functions of money. The current breakdown of M2 is shown on the left in Figure 17.2.

The use of credit cards—often referred to as plastic money—has increased significantly. Over the past 20 years, for instance, the amount of outstanding credit card debt has risen by more than 400 percent.⁶ Credit card companies spend billions of dollars each year trying to attract new customers. Recently, many credit card companies have targeted college students in their marketing efforts. Consequently, the percentage of college students with at least one credit card now exceeds 50 percent. Concerns over rising credit card balances among college students have led some states to restrict the marketing of credit cards to college students. The issue of marketing credit cards to college students is debated in the "Solving an Ethical Controversy" feature.

MasterCard and Visa, issued by banks, dominate the credit card market, though the Discover Card has made some inroads. In addition, American Express offers several credit cards. However, its flagship American Express card is not really a credit card but rather a charge



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Corporate credit cards are issued to companies. Employees use the cards to pay for business-related expenses.

put more money on them anytime. Many cards can also be used to make online purchases. Some cards offer users perks such as special discounts. If you use a Wal-Mart shopping card to buy gas at a station located at a Wal-Mart store, you receive a 3 cent per gallon discount.

Many entrepreneurs rely on credit cards, as mentioned in Chapter 6, to provide seed capital in financing their new ventures. Movie director Spike Lee, for example, reportedly used his American Express card to finance his first film.

Although credit cards are convenient and easy to use, they are a very expensive source of business or consumer credit, with annual interest rates averaging around 15 percent. Another problem with credit cards is fraud. As discussed in Chapter 7, online purchases are especially vulnerable to fraud and cost credit



USED WITH PERMISSION, VISA USA

Visa's approach to credit card security to reduce fraud.

assessment check

1. Explain the differences between M1 and M2.
2. Who issues Visa and MasterCard credit cards? Explain the difference between a credit card and a charge card.

card issuers, merchants, and consumers billions of dollars each year. The credit card industry is experimenting with a variety of ways to improve security and reduce fraud.

WHY ORGANIZATIONS NEED FUNDS

Organizations require funds for many reasons. They need money to run day-to-day operations, compensate employees and hire new ones, pay for inventory, make interest payments on loans, pay dividends to shareholders, and purchase property, facilities, and equipment. A firm's financial plan identifies the amount and time of its specific cash needs.

By comparing these needs with expenditures and expected cash receipts (from sales, payments made by credit purchasers, and other sources), financial managers determine precisely what additional funds they must obtain at any given time. If inflows exceed cash needs, financial managers invest the surplus to earn interest. On the other hand, if inflows do not meet cash needs, they seek additional sources of funds. Figure 17.3 illustrates this process.

Generating Funds from Excess Cash

Many financial managers invest most of their firms' excess cash balances in marketable securities. These financial instruments are very close to cash because they are, by definition, marketable and easy to convert into cash. Four of the most popular marketable securities are U.S. Treasury bills, commercial paper, repurchase agreements, and certificates of deposit.

Treasury bills are short-term securities issued by the U.S. Treasury and backed by the full faith and credit of the U.S. government. Treasury bills are sold with a maturity of either 30, 90, 180, or 360 days and have a minimum denomination of \$10,000. They are considered virtually risk-free and easy to resell. Commercial paper is securities sold by corporations, such as General Electric, maturing anywhere from 1 to 270 days from the date of issue. Although slightly riskier than Treasury bills, commercial paper is generally still considered a very low-risk security. Repurchase agreements, or *repos*, are an arrangement in which one party sells a package of U.S. government securities to another party, agreeing to buy back, or repurchase, the securities at a higher price on a later date. Repos are also considered low-risk securities.

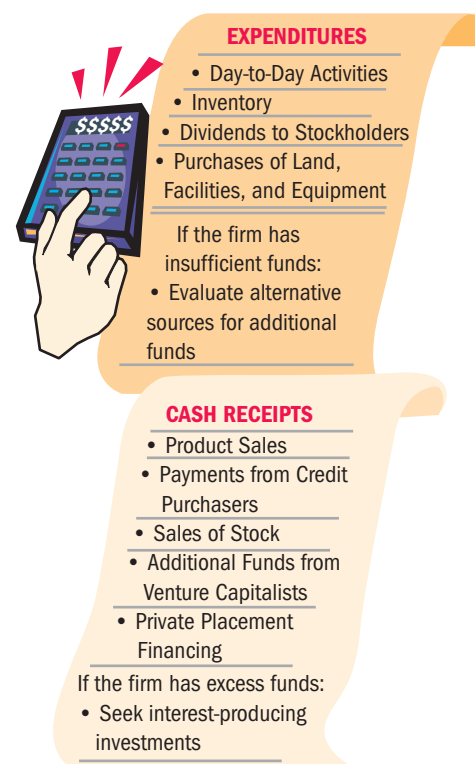
A certificate of deposit (CD) is a time deposit at a financial institution, such as a commercial bank, savings bank, or credit union. The sizes and maturity dates of CDs vary considerably and can often be tailored to meet the needs of purchasers. CDs with denominations of \$100,000 or less per depositor are federally insured. CDs with larger denominations are not federally insured but can be sold more easily prior to maturity.

SOURCES OF FUNDS

To this point, the discussion has focused on half of the definition of finance—the reasons why organizations need funds and how they use them. A firm's financial plan must give equal importance, however, to the choice of the best sources of needed funds. Sources of funds fall into two categories: debt capital and equity capital.

Debt capital represents funds obtained through borrowing (referred to as *debt financing* in Chapter 6). **Equity capital** consists of funds provided by the firm's owners when they reinvest earnings, make additional contributions, liquidate assets, issue stock to the general public, or raise capital from venture capitalists and other investors (an approach referred to as *equity financing* in Chapter 6). A firm also obtains equity capital whenever it makes a profit.

A company's cash needs vary from one time period to the next, and even an established firm may not generate sufficient funds from operations to cover all costs of a major expansion



assessment check

1. Why do organizations need funds?
2. List several alternatives to holding large cash balances.

“They Said It”

“If you can count your money, you don't have a billion dollars.”

—J. Paul Getty
(1892–1976)

American oil industrialist

debt capital funds obtained through borrowing.

equity capital funds provided by the firm's owners when they reinvest earnings, make additional contributions, or issue stock to investors.

17.1 Characteristics of Debt and Equity Capital

Characteristics	Debt Capital	Equity Capital
1. Payments to security holders	Contractual payment of interest and repayment of principal.	No contractual payments.
2. Maturity	Pays a fixed amount of principal at a set future date.	No maturity.
3. Claim on assets	Lenders have a prior claim on assets in the event of bankruptcy.	In the event of bankruptcy, equity holders receive nothing unless all creditors are repaid.
4. Control	As long as payments are made when due and other terms of the lending contract are followed, debt holders have no control over the company.	Equity holders are owners of the company and usually have the right to vote on major company issues and elect the board of directors.

assessment check

1. What are the two major sources of funds?
2. Do different companies take different approaches to the mix between debt and equity capital?

or a significant upgrade of equipment. In these instances, financial managers must evaluate the potential benefits and drawbacks of seeking funds by borrowing. As an alternative to borrowing, the firm may raise new equity capital. A financial manager's job includes determining the most cost-effective balance between equity and borrowed funds and the proper blend of short-term and long-term funds. Table 17.1 compares debt capital and equity capital on the basis of four important criteria.

Different companies can take very different approaches to the mix between debt and equity capital. For instance, Home Depot and Lowe's are both large, profitable, and fast-growing home improvement retailers. Home Depot, however, relies less on debt capital than does Lowe's. For each dollar in debt capital, Home Depot has about \$1.64 in equity capital. By contrast, Lowe's has less than \$1.19 in equity capital for each dollar in debt capital.⁷

“They Said It”

“A bank is a place that will lend you money if you can prove that you don't need it.”

—Bob Hope (1903–2003)
Actor and comedian

Short-Term Sources of Funds

Many times throughout a year, an organization may discover that its cash needs exceed its available funds. For example, retailers generate surplus cash for most of the year, but they need to build up inventory during the late summer and fall to get ready for the holiday shopping season. Consequently, they often need funds to pay for merchandise until holiday sales generate revenue. Then retailers use the incoming funds to repay the borrowed funds. In these instances, financial managers evaluate short-term sources of funds. By definition, short-term sources of funds are repaid within one year.

Three major sources of short-term funds exist: trade credit, short-term loans, and commercial paper. Trade credit is extended by suppliers when a firm receives goods or services, agreeing to pay for them at a later date. Short-term loans can be either unsecured, meaning the firm does not pledge any assets as collateral, or secured, meaning that specific assets such as inventory are pledged as collateral. A major source of short-term loans is commercial banks such as PNC Bank and Sun Trust. Commercial paper was briefly described earlier in the chapter. The interest cost on commercial paper is typically 1 or 2 percent lower than the interest rate on short-term bank loans, and firms can raise large amounts of money in the commercial paper market. However, only large firms with considerable financial strength and stability can sell commercial paper.

Long-Term Sources of Funds

Funds from short-term sources can help a firm meet current needs for cash or inventory. A larger need, however, such as acquiring another company or making a major investment in real estate or equipment, often requires funds for a much longer period of time. Unlike short-term sources, long-term sources are repaid over many years.

Organizations acquire long-term funds from three sources. One is long-term loans obtained from financial institutions such as commercial banks, life insurance companies, and pension funds. A second source is **bonds**—certificates of indebtedness sold to raise long-term funds for firms and governments. A third source is equity financing acquired by selling stock in the firm or reinvesting company profits (known as *retained earnings*).

bond certificate of indebtedness sold to raise long-term funds for a corporation or government agency.

Public Sale of Stocks and Bonds Sales of stocks and bonds represent a major source of funds for corporations. Such sales provide cash inflows for the issuing firm and either a share in its ownership (for a stock purchaser) or a specified rate of interest and repayment at a stated time (for a bond purchaser). Because stock and bond issues of many corporations are traded in the securities markets, stockholders and bondholders can easily sell these securities. The decision of whether to issue stock or bonds to finance a firm's plans is an important decision discussed in more detail in Chapter 18.

Private Placements Some new stock or bond issues may not be sold publicly but rather only to a small group of large investors such as pension funds and insurance companies. These sales are referred to as **private placements**. Most private placements involve corporate debt issues. In a typical year, about one-third of all new corporate debt issues are privately placed. Recent private placements include a \$200 million debt issue by SC Johnson and a \$300 million debt issue by media company Hearst.⁸

It is often cheaper for a company to sell a security privately than publicly, and there is less government regulation with which to contend. Institutions buy private placements because they typically carry slightly higher interest rates than publicly issued bonds. In addition, the terms of the issue can be tailored to meet the specific needs of both the issuer and the institutional investors. Of course, the institutional investor gives up liquidity. Privately placed securities do not trade in securities markets.

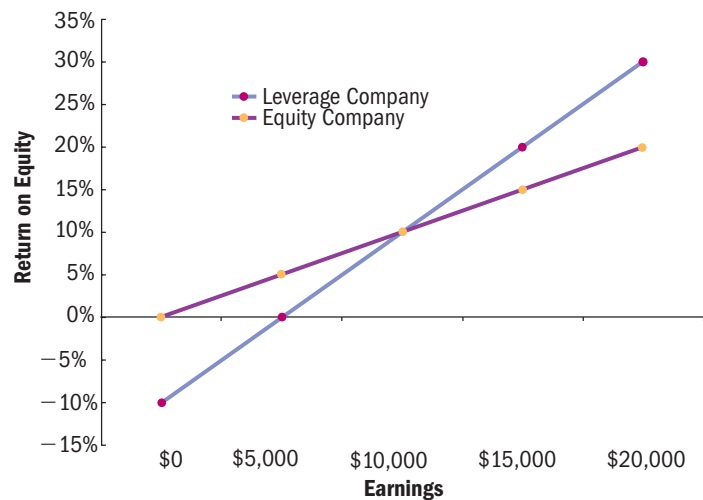
Venture Capitalists Venture capitalists are an important source of long-term financing, especially to new companies. **Venture capitalists** raise money from wealthy individuals and institutional investors and invest these funds in promising firms. Venture capitalists also provide management consulting advice as well as funds. In exchange for their investment, venture capitalists become part owners of the business. If the business succeeds, venture capitalists can earn substantial profits. US Venture Partners is one of many venture capital firms operating today. Over the past fifteen years, California-based US Venture Partners has invested close to \$2 billion in 370 companies, including Sun Microsystems and Check Point Software.⁹

Leverage Raising needed cash by borrowing allows a firm to benefit from the principle of **leverage**, a technique of increasing the rate of return on funds invested through the use of borrowed funds. The key to managing leverage is ensuring that a company's earnings remain larger than its interest payments, which increases the leverage on the rate of return on shareholders' investment. Of course, if the company earns less than its interest payments, shareholders lose money on their original investments.

leverage technique of increasing the rate of return on an investment by financing it with borrowed funds.

Figure 17.4 shows the relationship between earnings and shareholder returns for two identical hypothetical firms that choose to raise funds in different ways. Leverage Company obtains 50 percent of its funds from lenders who purchase company bonds (Leverage Company pays

17.4 The Impact of Leverage on Risk and Return



assessment check

1. List the three sources of short-term funds.
2. Define leverage and explain how leverage increases both potential returns and potential risks to owners.

financial system system by which funds are transferred from savers to users.

“They Said It”

“It is well that the people of the nation do not understand our banking and monetary system, for if they did, I believe there would be a revolution before tomorrow morning.”

—Henry Ford (1863–1947)
American industrialist

THE FINANCIAL SYSTEM AND FINANCIAL INSTITUTIONS

Households, businesses, government, financial institutions, and financial markets together form what is known as the financial system. The **financial system** is the process by which money flows from savers to users. A simple diagram of the financial system is shown in Figure 17.5.

On the left are savers—those with excess funds. For a variety of reasons, savers choose not to spend all of their current income, so they have a surplus of funds. Users are the opposite of savers; their spending needs exceed their current income so they have a deficit. They need to obtain additional funds to make up the difference. Savings are provided by households, businesses, and government. At the same time, borrowers also consist of households, businesses, and government. Households need money to buy automobiles or homes. Businesses need money to purchase inventory or build new production facilities. Governments need money to build highways and new schools or to fund budget deficits.

Generally, in the United States, households are net savers—meaning that in the aggregate they save more funds than they use—while businesses and governments are net users—meaning that they use more funds than they save. The fact that most of the net savings in the U.S. financial system are provided by households may be a bit of a surprise initially, because Americans do not have the reputation of being thrifty. Yet even though the savings rate of American households is low compared with those of other countries, American households still save hundreds of billions of dollars each year.

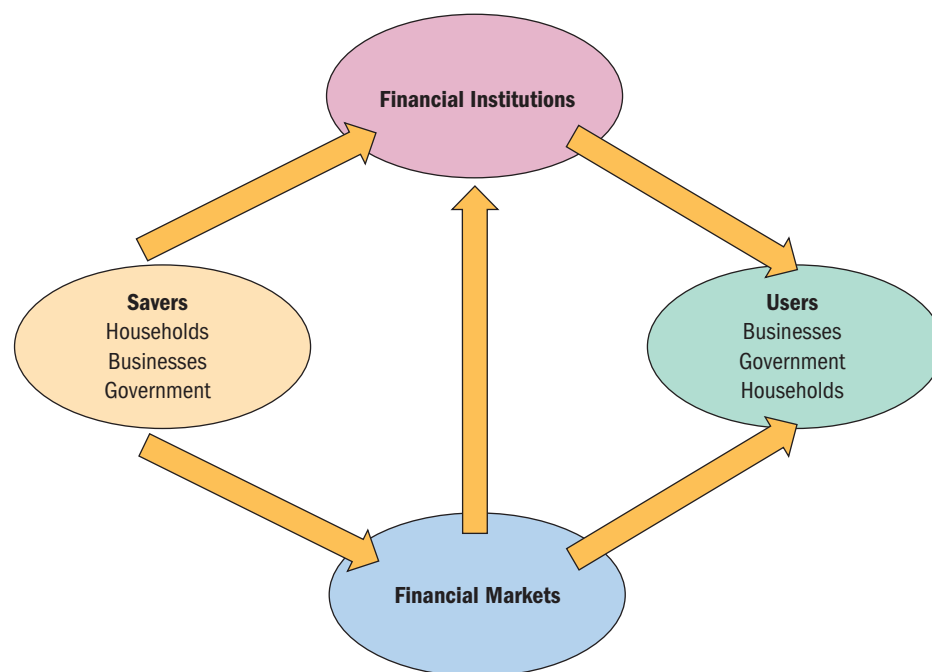
Funds can be transferred between savers and users in two ways. One is through the financial markets. For example, whenever a company sells stocks or bonds publicly or privately, funds are transferred between savers and users. Savers expect to receive some sort of return from the firm for the use of their money. The role and functioning of the financial markets will be described in more depth in the next chapter.

The other way in which funds can be transferred is through financial institutions—for example, a commercial bank such as Cincinnati-based Fifth Third or Cleveland-based Key Corporation. For instance, whenever a consumer or business deposits money into a bank account,

10 percent interest on its bonds). Equity Company raises all of its funds through sales of company stock.

Notice that if earnings double, from say \$10,000 to \$20,000, returns to shareholders of Equity Company also double (from 10 percent to 20 percent). On the other hand, returns to shareholders of Leverage Company more than double (from 10 percent to 30 percent). However, leverage works in the opposite direction as well. If earnings fall from \$10,000 to \$5,000, a decline of 50 percent, returns to shareholders of Equity Company also fall by 50 percent (from 10 percent to 5 percent). By contrast, returns to shareholders of Leverage Company fall from 10 percent to zero. Thus, leverage increases potential returns to shareholders but also increases risk. Another problem with borrowing money is that an overreliance on borrowed funds reduces management’s flexibility in future financing decisions.

Overview of the Financial System and Its Components



money is transferred indirectly to users. The bank pools customer deposits and uses the funds to make loans to businesses and consumers. These borrowers pay the bank interest, and it, in turn, pays depositors interest for the use of their money.

Financial institutions greatly increase the efficiency and effectiveness of the transfer of funds between savers and users. Because of financial institutions, savers earn more, and users pay less, than they would without financial institutions. Indeed, it is difficult to imagine how any modern economy could function without well-developed financial institutions. Think about how difficult it would be for a businessperson to obtain inventory financing or a consumer to purchase a new home without financial institutions. Prospective borrowers would have to identify and negotiate terms with each saver individually.

Traditionally, financial institutions have been classified into **depository institutions**—institutions that accept deposits that customers can withdraw on demand—and nondepository institutions. Examples of depository institutions include commercial banks (such as Regions and Wells Fargo), savings banks (such as Golden West and Ohio Savings), and credit unions (such as the State Employees Credit Union of North Carolina). Nondepository institutions include life insurance companies (such as Northwestern Mutual), pension funds (such as the Florida state employee pension fund), and the various government-sponsored financial institutions such as Fannie Mae and Freddie Mac (profiled in the chapter's opening vignette). In total, financial institutions have trillions of dollars in assets. Figure 17.6 shows the relative sizes of the major types of financial institutions in the United States.

depository institutions

financial institutions that accept deposits that can be converted into cash on demand.

You've always known that **windows of opportunity** open only for companies unafraid to fly.

- MANAGING CASH
- STRATEGIC ADVICE
- COMMERCIAL FINANCING
- RAISING CAPITAL

That staying **ahead of the curve** happens solely by traveling the road a few thousand times.

That the things **keeping you awake** at night are the only things keeping you awake, period.

You've always known **the next big thing** won't come from the same old thinking.

Which is why you've never given your choice of bank **a second thought.**

Achieve anything.
Call 1-800-KEY6070, or visit Key.com/corporate

KeyBank

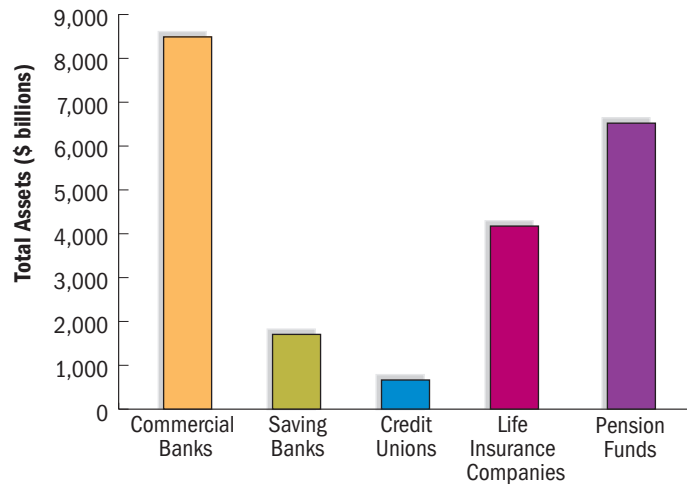
All loans subject to credit approval. Key.com is a federally registered trademark of KeyCorp. Courtesy of KeyBank N.A. ©2005 KeyCorp

COURTESY OF KEYBANK N.A.

Commercial banks such as KeyBank offer many services to businesses, such as managing cash, strategic advice, commercial financing, and raising capital.

Figure

17.6 Total Assets of Major Types of Financial Institutions



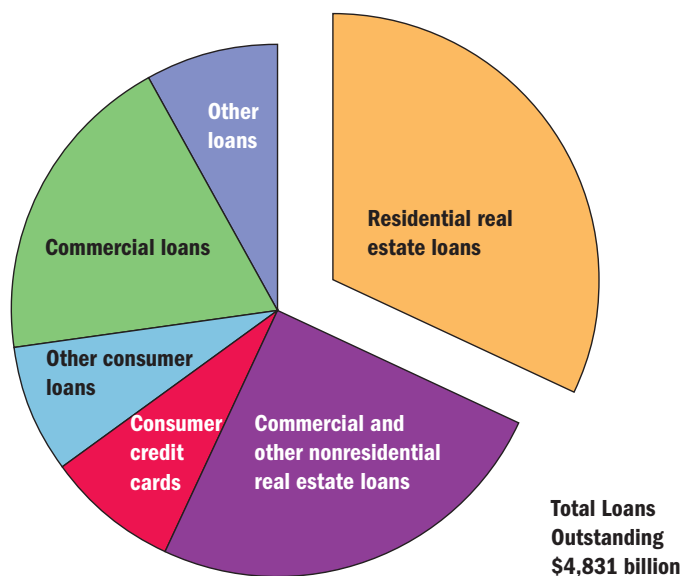
Source: Insurance Information Institute, Financial Services Facts, accessed August 2, 2006, <http://www.financialservicesfacts.org>.

smaller banks. In one recent year, almost 300 banks were acquired by other banks.¹¹

While the overall trend in the banking industry has been toward fewer, larger banks, a countertrend has also emerged: the growth of small *community banks*. More than 100 such banks began operation during a recent year.¹² Community banks typically serve a single city or county and have millions, rather than billions, of dollars in assets and deposits. Many consumers and small-business owners prefer smaller banks because they feel they're offered a higher level of personal service and often pay lower fees. As the "Hit & Miss" feature illustrates, this segment of the banking industry is thriving.

Figure

17.7 Distribution of Outstanding Commercial Bank Loans



Source: FDIC, *Statistics on Banking*, accessed August 3, 2006, <http://www.fdic.gov>.

Commercial Banks

Commercial banks are the largest and probably most important financial institution in the United States, and in most other countries as well. In the United States today, the approximately 7,600 commercial banks have total assets of almost \$8.5 trillion.¹⁰ Commercial banks offer the most services of any financial institution. These services include a wide range of checking and savings deposit accounts, consumer loans, credit cards, home mortgage loans, business loans, and trust services. Commercial banks also sell other financial products, including securities and insurance.

Although 7,600 may sound like a lot of banks, the number of banks has actually declined dramatically in recent years; 25 years ago there were 14,000 commercial banks. At the same time, banks have gotten larger: today, the typical commercial bank is about five times as large as it was ten years ago. Both changes can be explained by the fact that larger banks are buying

How Banks Operate Banks raise funds by offering a variety of checking and savings deposits to customers. The banks then pool these deposits and lend most of them out in the form of a variety of consumer and business loans. At the end of a recent year, banks held than \$5.5 trillion in deposits and had almost \$5 trillion in outstanding loans.¹³ The distribution of outstanding loans is shown in Figure 17.7. As the figure shows, banks lend a great deal of money to both households and businesses, for a variety of purposes. Commercial banks are an especially important source of funds for small businesses.

Banks make money primarily because the interest rate they charge borrowers is higher than the rate of interest they pay depositors. Banks also make money from other sources, such as fees charged customers for checking accounts and using automated teller machines. Fees and other so-called *noninterest income* now makes up around one-third of total bank revenue.¹⁴

Electronic Banking More and more funds each year move through **electronic funds transfer systems (EFTSs)**, computerized systems for conducting financial transactions over electronic links. Millions of businesses and con-



HIT & MISS

Small Banks Thriving in the Land of the Giants

Have you received a free bottle of water lately at your bank? If you're like most customers of the country's increasingly large banks, you bank online, by phone, or by machine, and you haven't seen a human bank teller in months. But tiny Western National Bank in Phoenix is bucking the trend toward bank consolidation and automation. At its single ground-floor location in the city's business district, a curbside teller greets you by name and hands you a free bottle of spring water.

"Our customers absolutely love it," says Bill Hinz II, the bank's owner. That's just one of the personal touches the bank offers to customers tired of faceless giants with billions in assets. Western National, with about 400 accounts and \$32 million in assets, understands that customers with a few thousand in savings or a small-business loan want to be treated as if they were important, by a bank that's part of their community. Big banking networks aren't set up to do that, says Hinz.

The Federal Deposit Insurance Corporation (FDIC) says community banks are on the rise, with 112 charters for such institutions issued in a recent year. "We're seeing more small community banks popping up," reports a banking consultant in Houston. "People want

to bank with people, not machines." Thanks in part to recent low interest rates that increased the demand for loans, the uptick in community banking also reflects small banks' ability to cater to market niches such as ethnic or religious minorities and small-business owners. "The stock-in-trade of small banks is customization," says the FDIC's chief economist.

Questions for Critical Thinking

1. Why do small banks do a better job of personalizing the banking experience for their customers?
2. With higher interest on savings, lower fees, extended hours, online banking, and a wider variety of banking services, large banks offer depositors many advantages. What are some of their disadvantages? How important are they to you as a banking customer?

Sources: Eve Tahmincioglu, "Small Business: Small Banking in a Big Bank World," *New York Times*, accessed August 9, 2006, <http://www.nytimes.com>; Chris Taylor, "Restoring Success," *Sales and Marketing Management*, accessed July 27, 2006, <http://www.salesandmarketing.com>; Peralte C. Paul, "Banking on Small Success," *Atlanta Journal-Constitution*, accessed July 27, 2006, <http://www.ajc.com>.

sumers now pay bills and receive payments electronically. Most employers, for example, directly deposit employee paychecks in their bank accounts, rather than issuing employees paper checks. Today nearly all Social Security checks and other federal payments made each year arrive as electronic data rather than paper documents.

One of the original forms of electronic banking, the automated teller machine (ATM), continues to grow in popularity. ATMs allow customers to make banking transactions 24 hours a day, 7 days a week by inserting an electronic card into the machine and entering a personal identification number. Networked systems enable ATM users to access their bank accounts in distant states and even throughout the world. In the United States alone, there are around 400,000 ATMs, which process almost 11 billion transactions annually.¹⁵ Bank of America alone has almost 17,000 ATMs located in around 30 states.¹⁶

Most banks now offer customers debit cards—also called *check cards*—which allow customers to make purchases directly from their checking or savings account. A debit card looks like a credit card but acts like a check and replaces the customer's ATM card. A growing number of retailers—including Supervalu, Target, and Walgreen's—have installed special terminals that allow customers to use their ATM or debit cards to make purchases. Customers are required to enter their personal identification numbers and can often get cash back. Consumers enjoy the convenience of this feature; at the same time, it eliminates the problem of bad checks for retailers.

Online Banking Today, many consumers do some or all of their banking on the Internet. According to one survey, more than one-third of American households use some online banking

Savings Banks and Credit Unions

While commercial banks are by far the largest depository financial institution in the United States, savings banks and credit unions are also important financial institutions. Today savings banks and credit unions offer many of the same services as commercial banks.

Savings banks used to be called savings and loan associations or thrift institutions. They were originally established in the early 1800s to make home mortgage loans. Savings and loans originally raised funds by accepting only savings deposits and then lent these funds to consumers to buy homes. Today, there are around 1,300 savings banks with total assets of about \$1.7 trillion.¹⁹ Although the typical savings bank offers many of the same services as a commercial bank, including checking accounts, savings banks are not major lenders to businesses. More than 70 percent of their outstanding loans are still home mortgage loans. Washington Mutual, the nation's largest savings bank, is also the nation's largest mortgage lender. Deposits in savings banks are now FDIC insured, and savings banks are regulated in much the same way as commercial banks.

Credit unions are unique financial institutions. They are cooperative financial institutions that are owned by their depositors, all of whom are members. Around 85 million Americans belong to one of the nation's approximately 9,200 credit unions. Combined, credit unions have more than \$650 billion in assets.²⁰ By law, credit union members must share similar occupations, employers, or membership in certain organizations. This law effectively caps the size of credit unions. In fact, the nation's largest bank—Bank of America—holds more deposits than all the country's credit unions combined. The Navy Federal Credit Union is the largest credit union in the country, with around 2.5 million members and \$25 billion in deposits.²¹ Membership is open to active-duty personnel in the Navy and Marine Corps, retired personnel, civilian employees of the Navy Department, and members of their immediate families.

(b)usiness (e)tiquette

Mastering the Art of Small Talk

When people sit down with a bank employee to discuss the very personal topic of their money, they want to feel comfortable. It is up to the banker to offer the personal warmth that creates trust, and that begins with the art of small talk.

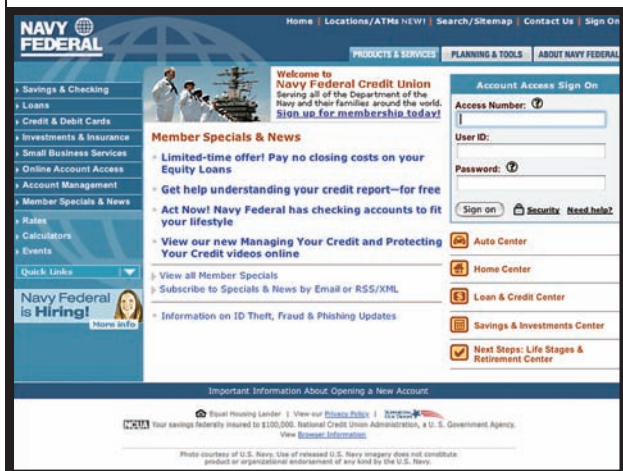
Here are a few tips for establishing common ground with a few minutes of polite conversation before getting to the business reason for a meeting.

1. Always greet clients by looking them in the eye, smiling, saying their name, and offering a firm handshake and a chair.
2. Eliminate any possible distractions such as phone calls or music playing in the office.
3. Offer tea, coffee, or other refreshments, if available.
4. You can never go wrong by asking, "How are you today?"
5. If asked how you are, always respond briefly and turn the conversation back to your customer. Avoid saying anything about being ill or having any personal problems.
6. If you are already acquainted with the customer and his or her family, inquire about other family members. You might want to keep a brief file of personal information about your regular customers for this purpose. If not, ask whether they have any fam-

ily, how many, where they live, and so on.

7. Remember that people are nearly always eager to talk about their children and grandchildren.
8. Even more, people like to talk about themselves. Sometimes all they need is an opening such as a question about their work, their interests and hobbies, recent travels, and so on.
9. Borrow a trick from Eleanor Roosevelt, who would mentally run through the alphabet thinking of topics to introduce in conversation. For instance, A might remind you of animals, and you can ask whether the person has any pets; B might suggest books, and you can inquire whether the person has read a popular best-seller; C could suggest cuisine, as in, "Have you tried the new restaurant around the corner?"
10. Know when to stop. Use observation and empathy to help you determine when the person has started to relax and feel comfortable. Then it's time to ask, "How may I help you today?"

Sources: "Learning Small Talk," Mannersmith, accessed August 16, 2006, <http://www.mannersmith.com>; Melissa Leonard, "Avoid the 'Fatal' Faux Pas," ABA Banking Online, accessed July 27, 2006, <http://www.ababj.com>; "How to Master Small Talk," Canadian Business Online, accessed July 3, 2006, <http://www.canadianbusiness.com>.



Credit unions, such as Navy Federal, provide a variety of services to members.

demand deposits. Three examples of nondepository financial institutions are insurance companies, pension funds, and finance companies.

Insurance Companies Households and businesses buy insurance to transfer risk from themselves to the insurance company. The insurance company accepts the risk in return for a series of payments, called *premiums*. **Underwriting** is the process insurance companies use to determine whom to insure and what to charge. During a typical year, insurance companies collect more in premiums than they pay in claims. After they pay operating expenses, they invest this difference. Insurance companies are a major source of short- and long-term financing for businesses. Life insurance companies alone have total assets of more than \$4 trillion invested in everything from bonds and stocks to real estate.²² Examples of life insurers include Prudential and New York Life.

Pension Funds Pension funds provide retirement benefits to workers and their families. They are set up by employers and are funded by regular contributions made by employers and employees. Because pension funds have predictable long-term cash inflows and very predictable cash outflows, they invest heavily in long-term assets, such as common stocks and real estate. By some estimates, more than 25 percent of all common stocks are owned by pension funds. In total, pension funds have more than \$6.5 trillion in assets.²³ General Motors, General Electric, and IBM have the largest private-employer pension funds. The largest public-employer pension funds are the California and New York state employee pension funds and the federal employee pension fund.²⁴

Most private-employer pension funds are insured by the Pension Benefit Guaranty Corporation (PBGC), a federal agency. Employers pay premiums to the PBGC in return for pension insurance. Should an employer default on its pension obligations or go bankrupt, PBGC will continue to provide limited pension benefits to affected employees. PBGC currently insures the pensions of around 44 million Americans.²⁵ Recently, some have raised concerns about the financial health of the PBGC, noting that the agency's assets are only a fraction of insured pension obligations. When United Airlines recently terminated its employee pension plans, the PBGC was forced to pick up around \$6.8 billion in pension obligations for over 100,000 current and retired United employees.²⁶

Finance Companies Consumer and commercial finance companies, such as Ford Credit, John Deere Capital Corporation, and Pennsylvania-based Dollar Financial, offer short-term loans to

Credit unions are designed to serve consumers, not businesses. Credit unions raise funds by offering members a number of demand and saving deposits—checking accounts at credit unions are referred to as *share draft accounts*—and then, in turn, lend these funds to members. Because credit unions are not-for-profit institutions, they often pay savers higher rates of interest, charge lower rates of interest on loans, and have fewer fees than other financial institutions. Credit unions can have either state or federal charters, and deposits are insured by a federal agency, the National Credit Union Administration (NCUA), which functions essentially the same as the FDIC.

Nondepository Financial Institutions

Nondepository financial institutions accept funds from businesses and households, much of which they then invest. Generally, these institutions do not offer checking accounts or other types of

borrowers. A commercial finance company supplies short-term funds to businesses that pledge tangible assets such as inventory, accounts receivable, machinery, or property as collateral for the loan. A consumer finance company plays a similar role for consumers. Finance companies raise funds by selling securities or borrowing funds from commercial banks. Many finance companies, such as GMAC, are actually subsidiaries of a manufacturer, such as General Motors. GMAC finances dealer inventories of new cars and trucks, as well as providing loans to consumers and other buyers of GM products.

assessment check

1. Describe the financial system. How are funds transferred between savers and borrowers?
2. What is the difference between a depository institution and a nondepository institution? Give an example of each.
3. Who regulates commercial banks?

THE FEDERAL RESERVE SYSTEM

Created in 1913, the **Federal Reserve System**, or Fed, is the central bank of the United States and is an important part of the nation's financial system. The Fed has four basic responsibilities: regulating commercial banks, performing banking-related activities for the U.S. Treasury, providing services for banks, and monetary policy. Not all banks belong to the Fed. Banks with federal charters are required to belong to the Fed, but membership is optional for state-chartered banks. Because the largest banks in the country are all federally chartered, the bulk of banking assets are controlled by Fed members. The Fed acts as the banker's bank for members. It provides wire transfer facilities, clears checks, replaces worn-out currency, and even lends banks money.

Federal Reserve System
U.S. central bank.

Organization of the Federal Reserve System

The nation is divided into twelve federal reserve districts, each with its own federal reserve bank. Each district bank supplies banks within its district with currency and facilitates the clearing of checks. District banks are run by a nine-member board of directors, headed by a president.

The governing body of the Fed is the board of governors. The board consists of seven members, including a chair and vice chair, appointed by the president and confirmed by the Senate. A full term for a Fed governor is fourteen years. If a governor serves a full term, he or she cannot be reappointed. A governor can be reappointed if he or she was initially appointed to an unexpired term. The chair and vice chair serve in that capacity for four years and can be reappointed. The chair of the board of governors is a very important position. Some have commented, only half jokingly, that the Fed chair is the second most powerful person in the nation.

The Fed is designed to be politically independent. Terms for Fed governors are staggered in such a way that a president could not appoint a majority of members, assuming that all members serve their entire terms. The Fed also has its own sources of revenue and does not depend on congressional appropriations.

An important part of the Fed is the Federal Open Markets Committee (FOMC). The FOMC sets most policies concerning monetary policy and interest rates. It consists of twelve members—the seven Fed board governors plus five representatives of the district banks who serve on a rotating basis. The Fed chair is also chair of the FOMC.

Check Clearing and the Fed

As mentioned earlier, one of the Fed's responsibilities is to help facilitate the clearing of checks. Even in this age of electronic and online banking, Americans still write billions of paper checks each year. The clearing of a check is the process by which funds are transferred from the check writer to the recipient.

“They Said It”

“Most Americans have no real understanding of the operation of the international money lenders. The accounts of the Federal Reserve System have never been audited. It operates outside the control of Congress and manipulates the credit of the United States.”

—Barry Goldwater
(1909–1998)
U.S. senator

Assume the owner of Gulf View Townhouses of Tampa buys a \$600 carpet cleaner from the local Home Depot and writes a check. If Home Depot has an account at the same bank as Gulf View, the bank will clear the check in house. It will decrease the balance in the owner's account by \$600 and increase the balance in Home Depot's account by \$600. If Home Depot has an account at another bank in Tampa, the two banks may still clear the check directly with one another. This process is cumbersome, however, so it is more likely that the banks will use the services of a local check clearinghouse.

On the other hand, if Home Depot has its account with a bank in another state—perhaps in Atlanta, where Home Depot is based—the check will likely be cleared through the Federal Reserve System. Home Depot will deposit the check in its Atlanta bank account. Its bank, in turn, will deposit the check in the Federal Reserve Bank of Atlanta. The Atlanta Federal Reserve bank will present the check to Gulf View's bank for payment, which pays the check by deducting \$600 from Gulf View's account. Regardless of the method used, the *Check Clearing for the 21st Century Act* allows banks and the Fed to use electronic images of checks—rather than the paper documents themselves—during the clearing process. Because these images are transferred electronically, the time it takes to clear a check has been reduced substantially.

Monetary Policy

monetary policy using interest rates and other tools to control the supply of money and credit in the economy.

The Fed's most important function is controlling the supply of money and credit, or **monetary policy**. The Fed's job is to make sure that the money supply grows at an appropriate rate, allowing the economy to expand and inflation to remain in check. If the money supply grows too slowly, economic growth will slow, unemployment will increase, and the risk of a recession will increase. If the money supply grows too rapidly, inflationary pressures will build. The Fed uses its policy tools to push interest rates up or down. If the Fed pushes interest rates up, the growth rate in the money supply will slow, economic growth will slow, and inflationary pressures will ease. If the Fed pushes interest rates down, the growth rate in the money supply will increase, economic growth will pick up, and unemployment will fall. The Fed has three major policy tools: reserve requirements, the discount rate, and open market operations.

The Fed requires that banks maintain reserves—defined as cash in their vaults plus deposits at district Federal Reserve banks—equal to some percentage of what the banks hold in deposits. For example, if the Fed sets the reserve requirement at 5 percent, a bank that receives a \$500 deposit must reserve \$25, so it has only \$475 to invest or lend out. By changing the reserve requirement, the Fed can affect the amount of money available for making loans. The higher the reserve requirement, the less banks can lend out to consumers and businesses. The lower the reserve requirement, the more banks can lend out. Because any change in the reserve requirement can have a sudden and dramatic impact on the money supply, the Fed rarely uses this tool. In fact, the Fed has not changed reserve requirements in more than ten years. Reserve requirements range from 0 to 10 percent, depending on the type of account.

Another policy tool is the so-called **discount rate**, the interest rate at which Federal Reserve banks make short-term loans to member banks. A bank might need a short-term loan if transactions leave it short of reserves. If the Fed wants to slow the growth rate in the money supply, it increases the discount rate. This increase makes it more expensive for banks to borrow funds. Banks, in turn, raise the interest rates they charge on loans to consumers and businesses. The end result is a slowdown in economic activity. Lowering the discount rate has the opposite effect.

The third policy tool, and the one used most often, is **open market operations**, the technique of controlling the money supply growth rate by buying or selling U.S. Treasury securities. If the Fed buys Treasury securities, the money it pays enters circulation, increasing the

Tools Used by the Federal Reserve to Regulate the Growth in the Money Supply

Tool	Brief Description	Impact on the Growth Rate of the Money Supply	Impact on Interest Rates and the Economy	Frequency of Use
1. Reserve requirements	Change in the percentage of deposits held as reserves.	Increases in reserve requirements slow the growth rate in the money supply.	Increases in reserve requirements push interest rates up and slow economic growth.	Rarely used.
2. Discount rate	Change in the rate the Fed charges banks for loans.	An increase in the discount rate slows the growth rate in the money supply.	An increase in the discount rate pushes interest rates up and slows economic growth.	Used only in conjunction with open market operations.
3. Open market operations	Buying and selling government securities to increase or decrease bank reserves.	Selling government securities reduces bank reserves and slows the growth rate in the money supply.	Selling government securities pushes interest rates up and slows economic growth.	Used frequently.

money supply and lowering interest rates. When the Fed sells Treasury securities, money is taken out of circulation and interest rates rise. When the Fed uses open market operations it employs the so-called *federal funds rate*—the rate at which banks lend money to one another overnight—as its benchmark. Table 17.2 illustrates how the tools used by the Federal Reserve can stimulate or slow the economy.

The Federal Reserve also has the authority to exercise selective credit controls when it feels the economy is growing too rapidly or too slowly. These credit controls include the power to set margin requirements—the percentage of the purchase price of a security that an investor must pay in cash on credit purchases of stocks or bonds.

Transactions in the foreign exchange markets also affect the U.S. money supply and interest rates. The Fed can lower the exchange value of the dollar by selling dollars and buying foreign currencies, and it can raise the dollar's exchange value by doing the opposite—buying dollars and selling foreign currencies. When the Fed buys foreign currencies, the effect is the same as buying securities because it increases the U.S. banking system's reserves. Selling foreign currencies, on the other hand, is like selling securities, in that it reduces bank reserves.

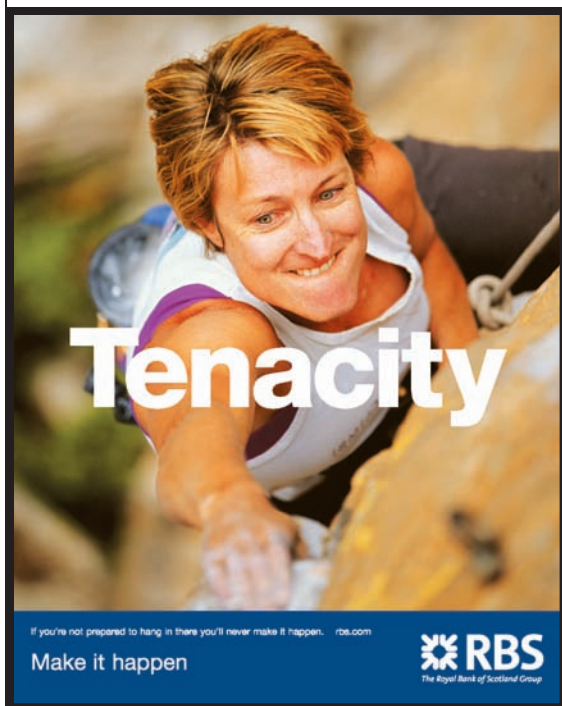
assessment check

1. How is the Federal Reserve organized?
2. List and briefly explain the various methods by which the Fed can control the supply of money and credit. Which method is used most frequently?

U.S. FINANCIAL INSTITUTIONS: A GLOBAL PERSPECTIVE

Financial institutions have become a global industry, and any review should consider U.S. financial institutions in their international context. Major U.S. banks—such as Citibank, J. P. Morgan Chase, and Bank of America—have extensive international operations. They have offices, lend money, and accept deposits from customers throughout the world. According to recent statistics, U.S. banks have more than \$200 billion in outstanding loans to international customers.²⁷

While most Americans recognize large U.S. banks such as Citibank among the global financial giants, only 3 of the 20 largest banks in the world (measured by total assets) are U.S.



The Royal Bank of Scotland is one of the world's largest banks.

USED WITH PERMISSION. THE ROYAL BANK OF SCOTLAND GROUP.

assessment check

1. How does the size of U.S. banks compare to the size of banks located in other countries?
2. Do other countries have organizations that play roles similar to those played by the Federal Reserve?



WHAT'S AHEAD

This chapter introduced the finance function of contemporary business. Finance deals with planning, obtaining, and managing the company's funds to accomplish its objectives effectively and efficiently. The chapter also described the role of money, where and how firms obtain funds, and what the financial system does. The next chapter explores how securities—stocks and bonds—are bought and sold. It also describes the investment characteristics of stocks and bonds and the ways investors choose specific securities. Chapter 18 also outlines how securities' market regulations protect investors.

institutions—Bank of America, Citibank, and J. P. Morgan Chase. The other 17 are based in France, Germany, Holland, Japan, Switzerland, and the United Kingdom. The world's largest bank is Japan's Mitsubishi UFJ Holdings, with more than \$1.7 trillion in assets.²⁸ These international banks also operate worldwide, including in the United States.

Virtually all nations have some sort of a central bank, similar to the U.S. Federal Reserve. Examples include the Banks of Canada, England, and Japan, and the European Central Bank. These central banks play roles much like the Fed, such as controlling the money supply and regulating banks. Policy makers at other nations' central banks often respond to changes in the U.S. financial system by making similar changes in their own systems. For example, if the Fed pushes U.S. interest rates lower, central banks in Japan and Europe may also push their interest rates lower. These changes can influence events in countries around the world. Lower U.S. and European interest rates not only decrease the cost of borrowing for U.S. and European firms but also increase the amount of money available for loans to borrowers in other countries such as Chile and India.

International banks and other providers of financial services play important roles in global business. They help transfer purchasing power from buyers to sellers and from lenders to borrowers. They also provide credit to importers and reduce the risk associated with changes in exchange rates.

Summary of Learning Goals

1 Identify the functions performed by a firm's financial managers.

The major responsibility of financial managers is to develop and implement a financial plan for their organization. The firm's financial plan is based on forecasts of expenditures and receipts for a specified period and reflects the timing of cash inflows and outflows. The financial managers systematically determine their company's need for funds during the period

and the most appropriate sources from which it can obtain them. In short, the financial manager is responsible for both raising and spending money.

Assessment Check Answers

1.1 Define *finance* and explain the role of the financial manager.

Finance deals with planning, obtaining, and managing a company's funds to accomplish objectives efficiently

and effectively. The financial manager is the executive who develops and implements the firm's financial plan and determines the most appropriate sources and uses of funds.

1.2 What are the three questions on which a financial plan is based?

A financial plan revolves around the answers to three questions: How much money will the firm require for a specific period of time? Where will the necessary funds come from? When will the company need additional funds?

2 Describe the characteristics a form of money should have, and list the functions of money.

Money should be divisible, portable, durable, difficult to counterfeit, and stable in value. Money in countries with modern economies have all of these characteristics. The functions of money are as a medium of exchange, a store of value, and a unit of account.

Assessment Check Answers

2.1 What characteristics should money have?

Money should be divisible, portable, durable, difficult to counterfeit, and stable in value.

2.2 List the three basic functions of money.

The functions of money are as a medium of exchange, a store of value, and a unit of account.

3 Identify the various measures of the money supply.

The two most commonly used measures of the money supply are M1 and M2. M1 is defined as anything generally accepted as payment for goods and services, such as coins, paper money, and checks. M2 consists of M1 plus other assets that are almost as liquid as money but do not function directly as a medium of exchange, such as savings deposits and money market mutual funds. The use of credit cards—also known as plastic money—has increased sharply in recent years. While credit cards are convenient and easy to use, they are a very expensive source of consumer and business credit.

Assessment Check Answers

3.1 Explain the differences between M1 and M2.

M1 consists of anything that is generally accepted as payment for goods and services. M2 consists of M1 plus other assets that are almost as liquid as currency and demand deposits but do not function directly as a medium of exchange.

3.2 Who issues Visa and MasterCard credit cards? Explain the difference between a credit card and a charge card.

All Visa and MasterCard credit cards are issued by banks. A credit card gives the holder the option of paying part or all of the balance due each month. Finance charges are levied on the portion of the balance not paid each month. A charge card requires that the balance be paid in full each month.

4 Explain how a firm uses funds.

Organizations use funds to run their day-to-day operations, pay for inventories, make interest payments on loans, pay dividends to shareholders, and purchase land, facilities, and equipment. If a firm finds itself with a surplus of cash, most financial managers invest that excess cash in marketable securities.

Assessment Check Answers

4.1 Why do organizations need funds?

Companies need funds for a variety of purposes, including paying for daily operations, compensating employees, paying suppliers, making interest payments on loans, paying dividends to shareholders, and purchasing new assets.

4.2 List several alternatives to holding large cash balances.

Many financial managers hold excess cash balances in marketable securities, because these securities pay interest but are easy to convert into cash. Examples of marketable securities include Treasury bills, commercial paper, repurchase agreements, and large certificates of deposit.

5 Compare the two major sources of funds for a business.

Debt capital and equity capital are the two major sources from which businesses acquire funds. Debt capital represents funds obtained through borrowing. Equity capital comes from several sources, including the sale of stock, additional investments by the firm's owners, and reinvested earnings.

Assessment Check Answers

5.1 What are the two major sources of funds?

Debt capital and equity capital are the major sources from which businesses acquire funds. Debt capital consists of borrowed funds, while equity capital represent funds provided by owners and reinvested earnings.

5.2 Do different companies take different approaches to the mix between debt and equity capital?

Yes, some companies rely more on debt financing than other companies.

6 Identify the likely sources of short- and long-term funds for business operations.

Sources of short-term funds include trade credit (accounts payable), unsecured loans, secured loans (for which the firm must pledge collateral), and sales of commercial paper by large, financially sound firms. Sources of long-term funds include long-term loans repaid over one year or longer, bonds, equity funds (ownership obtained from selling stock, accumulating additional contributions from owners, or reinvesting earnings in the firm). Leverage—the use of borrowed funds—increases the potential returns to shareholders (owners) but also increases risk.

Assessment Check Answers

6.1 List three sources of short-term funds.

The three sources of short-term funds are trade credit; loans from financial institutions, such as banks; and commercial paper.

6.2 Define leverage and explain how leverage increases both potential returns and potential risks to owners.

Leverage is the technique of increasing the rate of return on owners' funds through the use of borrowed funds. As long as the company's earnings are higher than its interest payments, leverage increases the return to owners. However, if earnings are less than interest payments, the owners lose some of their original investment.

7 Describe the financial system and the major financial institutions.

The financial system is the process by which funds are transferred between savers and users of funds. Funds can be transferred either through the financial markets or through financial institutions. Depository institutions—commercial banks, savings banks, and credit unions—accept deposits from customers that can be redeemed on demand. Depository institutions are closely regulated by state and federal authorities. Nondepository institutions include pension funds and insurance companies. Nondepository institutions invest a large portion of their funds in stocks, bonds, and real estate.

Assessment Check Answers

7.1 Describe the financial system. How are funds transferred between savers and borrowers?

The financial system is the process by which funds are transferred between savers (households, businesses, and governments) and users (also households, businesses, and governments). While funds can move directly between savers and users, most funds are transferred indirectly through the financial markets or through financial institutions.

7.2 What is the difference between a depository financial institution and a nondepository institution? Give an example of each.

A depository institution accepts deposits that are payable on demand—such as checking accounts. Nondepository institutions do not accept these types of deposits. A commercial bank is an example of a depository institution; a life insurance company is an example of a nondepository institution.

7.3 Who regulates commercial banks?

Banks with federal charters are regulated by the Federal Reserve; banks with state charters are regulated by state banking authorities. Any bank—regardless of charter—that is a member of the FDIC is subject to FDIC regulation as well. Virtually all banks are members of the FDIC.

8 Explain the functions of the Federal Reserve System and the tools it uses to control the supply of money and credit.

The Federal Reserve System is the central bank of the United States. The Federal Reserve regulates banks, performs banking functions for the U.S. Treasury, and acts as the banker's bank (clearing checks, lending money to banks, and replacing worn-out currency). It controls the supply of credit and money in the economy to promote growth and control inflation. The Federal Reserve's tools include reserve requirements, the discount rate, and open market operations. Selective credit controls and purchases and sales of foreign currencies also help the Federal Reserve manage the economy.

Assessment Check Answers

8.1 How is the Federal Reserve organized?

The Federal Reserve System divides the nation into twelve districts, each with a district bank. The governing body is the board of governors, consisting of seven members appointed by the president and confirmed by the Senate. The governors serve for staggered terms and are headed by the Fed chair. Another important part of the Fed is the Federal Open Markets Committee, consisting of the seven Fed governors plus

five district bank presidents (who serve on a rotating basis). The Fed has its own sources of revenue and doesn't depend on congressional appropriations.

8.2 List and briefly explain the various methods by which the Fed can control the supply of money and credit. Which method is used most frequently?

The Fed has three policy tools to control the supply of money and credit: reserve requirements (the percentage of deposits banks must maintain as reserves), the discount rate (the rate the Fed charges member banks for loans), and open market operations (adding or subtracting bank reserves through the sale of U.S. government securities). The Fed relies most frequently on open market operations to control the supply of money and credit.

9 Describe the global financial system.

Large U.S. banks and other financial institutions have a global presence. They accept deposits, make loans, and have branches throughout the world. Foreign banks also operate worldwide. The average Euro-

pean or Japanese bank is much larger than the average American bank. Virtually all nations have central banks that perform the same roles as the U.S. Federal Reserve System. Central bankers often act together, raising and lowering interest rates as economic conditions warrant.

Assessment Check Answers

9.1 How does the size of U.S. banks compare to the size of banks located in other countries?

Only 3 of the world's 20 largest banks are located in the United States. The others are located in Japan and Europe.

9.2 Do other countries have organizations that play roles similar to those played by the Federal Reserve?

Virtually all countries have central banks that function essentially like the U.S. Federal Reserve and perform the same functions.

Business Terms You Need to Know

finance 548

financial manager 548

risk-return tradeoff 549

financial plan 549

money 550

debt capital 555

equity capital 555

bond 557

leverage 557

financial system 558

depository institutions 559

Federal Reserve System 565

monetary policy 566

Other Important Business Terms

vice-president for financial management 548

treasurer 548

controller 548

demand deposits 552

M1 552

M2 552

private placements 557

venture capitalist 557

electronic funds transfer

systems 560

underwriting 564

discount rate 566

open market operations 566

Review Questions

1. Define *finance*. Briefly explain the risk-return trade-off in finance.
2. What is a financial plan? In building a financial plan, what three questions must be answered?
3. What characteristics should money have? List the three functions of money.
4. Explain the difference between M1 and M2. What is a demand deposit?
5. What are some of the reasons organizations need funds? What do many companies do if they find themselves with excess cash?

6. What is the difference between debt capital and equity capital? List several examples of each.
7. Define *leverage*. Construct a simple numerical example to illustrate the effect of leverage.
8. What is the financial system? Why is the direct transfer of funds between savers and users rare?
9. Explain the difference between a depository and a nondepository financial institution. Give several examples of each type of financial institution.
10. Briefly outline how a commercial bank operates. Why is deposit insurance so important?
11. Compare and contrast a commercial bank, a savings bank, and a credit union. Give an example of each.
12. Explain the role of life insurance companies and pension funds in the financial system.
13. How is the Federal Reserve System organized? Discuss the process by which a check clears.
14. Explain how open market operations work.
15. Briefly discuss the global perspective of U.S. financial institutions.

Projects and Teamwork Applications

1. Assume you would like to start a business. Put together a rough financial plan that addresses the three financial planning questions listed in the text.
2. Your business has really grown, but now it needs a substantial infusion of capital. A venture capital firm has agreed to invest the money you need. In return, the venture capital firm will own 75 percent of the business. You will be replaced as board chairman and CEO, but retain the title of company founder and president, and the venture capital firm will provide a new CEO. Would you be willing to take the money but lose control of your business?
3. The owner of your company is trying to decide how to raise an additional \$1.5 million, and she has asked for your advice about whether the firm should use debt capital or equity capital. Working in a small group, prepare a brief memo to the owner outlining the advantages and disadvantages of both debt capital and equity capital. Be sure to explain the concept of leverage. Assume your company can borrow \$1.5 million at an annual interest rate of 8 percent. It currently has \$1.5 million in equity and no debt.
4. As noted in the prior chapter, a company whose stock is publicly traded is required to report financial results on a regular basis. Working with a partner, choose three public companies. Collect recent balance sheets, determine how levered each company is, and decide whether each company has become more or less levered in recent years. Why do some companies appear to rely more heavily on debt financing than other companies? (Note: A good source of financial statements is MSN Money Central, <http://moneycentral.msn.com>.)
5. Compared with most businesses, is a bank more vulnerable to failure? Why or why not? Why does federal deposit insurance help protect the soundness of the banking system?
6. Working in a small team, identify a large bank. Visit that bank's Web site and obtain its most recent financial statements. Compare the bank's financial statements to those of a nonfinancial company, such as a manufacturer or retailer. Report on your findings.
7. An exchange rate is the rate at which one currency can be exchanged for another. Working with a partner, use the Internet to find the current exchange rate between the U.S. dollar and the following currencies: Australian dollar, euro, British pound, Japanese yen, and Brazilian real. Has the dollar been rising or falling in value relative to these currencies? Assume that there was general agreement that the dollar was "undervalued." Why would an increase in U.S. interest rates help increase the value of the dollar relative to other currencies? Explain how the Federal Reserve could push U.S. interest rates higher.
8. Choose one of the following countries: Canada, the United Kingdom, or Japan. Research that country's central bank. How is the bank organized? Who appoints the members of the central bank? What functions does the central bank perform? How is the central bank similar to the U.S. Federal Reserve? How does it differ from the Fed?

Case 17.1**At Giant Bank of America, Small Businesses Rule**

Bank of America is the nation's largest bank in terms of deposits. But small-business lending is still its primary mission, and it maintains a commitment to building local communities with investment and loans.

The Bank of America was recently named Lender of the Year for Oregon and Southwest Washington by the government's Small Business Administration (SBA), for approving 183 loans worth more than \$5.5 million. It was also named co-winner of the Minority Lender of the Year award for making loans worth more than \$1.2 million to minority-owned small businesses in the area. Such awards are not unusual for the bank, which has also been ranked the number one SBA lender in California, where its average small-business loan is worth \$35,000. "The strength of our SBA lending, combined with our conventional lending, is a clear indicator that we intend to be known as 'the' small business bank," says the bank's small-business banking president.

Bank of America is the lender for about 20 percent of the small businesses in the 29 states and the District of Columbia in which it does business. With nearly 3.3 million clients, it is the largest small-business bank in the country.

The bank provides more services than just loans, of course, and among its clients it also counts individual consumers and large corporations, including nearly all the *Fortune* 500 companies. It offers banking, investing, asset management, and risk management services through its roughly 5,800 retail banking offices.

The bank is also broadening its commitment to community development, with an ambitious plan covering the next decade. Working primarily in low- and moderate-income communities, Bank of America plans to focus on lending and investment to support affordable housing, small-business/small-farm loans, con-

sumer loans, and economic development. It will lend and invest about \$750 billion as its Community Goal, one of the largest in U.S. commercial banking history, unfolds across the country.

Conventional loans and lines of credit will be available for small businesses and small farms, which the bank calls "the economic engines of local communities." Personal, car, and student loans will be available (excluding credit card borrowing), and in fulfillment of its economic development goal, Bank of America will work with government agencies, non-profit developers, and financial intermediaries to promote neighborhood redevelopment, job creation, and core neighborhoods in rural and urban areas.

To maintain its good record of accountability, Bank of America will report regularly on the results of its plan, both through its Web site (<http://www.bankofamerica.com>) and directly to shareholders.

Questions for Critical Thinking

1. What kind of image do you think Bank of America conveys to its small-business customers? What is the source of their loyalty to the bank?
2. What are some of the benefits to local areas of the bank's Community Goal? What are the benefits to the bank?

Sources: Kennedy Smith, "SBA Recognizes Lenders of the Year for Oregon and Southwest Washington," *All-Business*, accessed August 16, 2006, <http://www.allbusiness.com>; "Bank of America Retains Top SBA Lender Status in California," PR Newswire, accessed July 27, 2006, <http://www.prnewswire.com>; "Bank of America Releases Targets for \$750 Billion Community Development Goal," PR Newswire, accessed July 27, 2006, <http://www.prnewswire.com>.

**Case 17.2****JPMorganChase Lends a Hand to Small Business**

This video case appears on page 627. A recently filmed video, designed to expand and highlight the written case, is available for class use by instructors.