2 The Financial Market Environment

Learning Goals

- LG 1 Understand the role that financial institutions play in managerial finance.
- LG 2 Contrast the functions of financial institutions and financial markets.
- LG 3 Describe the differences between the capital markets and the money markets.
- LG 4 Explain the root causes and subsequent effects of the 2008 financial crisis and recession.
- LG 5 Understand the major regulations and regulatory bodies that affect financial institutions and markets.
- LG 6 Discuss business taxes and their importance in financial decisions.

Why This Chapter Matters to You

In your *professional* life

ACCOUNTING You need to understand how business income is taxed and the difference between average and marginal tax rates.

INFORMATION SYSTEMS You need to understand how information flows between the firm and financial markets.

MANAGEMENT You need to understand why healthy financial institutions are an integral part of a healthy economy and how a crisis in the financial sector can spread and affect almost any type of business.

MARKETING You need to understand why it is important for firms to communicate about their operating results with external investors and how regulations constrain the types of communication that occur.

OPERATIONS You need to understand why external financing is, for most firms, an essential aspect of ongoing operations.

In your *personal* life

Making financial transactions will be a regular occurrence throughout your entire life. These transactions may be as simple as depositing your paycheck in a bank or as complex as deciding how to allocate the money you save for retirement among different investment options. Many of these transactions have important tax consequences, which vary over time and from one type of transaction to another. The content in this chapter will help you make better decisions when you engage in any of these transactions.

A Crisis in Housing Finance

Under Water in the Desert

For decades, Phoenix, Arizona, was thriving. Its sunny, dry weather attracted retirees from colder and wetter climates in the United States, and the technology industry brought thousands of new jobs to the city. The boom in Phoenix was reflected in the area's house prices. Starting in September 1992, the average price of a home in Phoenix rose for 166 consecutive months, in the process increasing by almost 250 percent. All that began to unravel in June 2006 when house prices started to fall. They reached bottom in August 2011, dropping more than 56 percent in 5 years. It was bad news for homeowners in Phoenix, but financial markets helped spread this bad news around the world.

Consider the position of a home buyer who purchased a $300,000 home in Phoenix in June 2006. Suppose that the buyer purchased the home with $30,000 of his or her own money and a 30-year mortgage for $270,000 obtained from a local bank. Five years later, the home was worth just $150,000, much less than the outstanding mortgage balance, meaning that the homeowner had "negative equity" in the house. Many homeowners in this position defaulted on their mortgages. Through a process called securitization, mortgages that had been taken out by home buyers in Phoenix were sold to banks and other investors all over the country; thus, mortgage defaults had consquences that were felt a long way from the Arizona desert. Although the decline in house prices was more severe in Phoenix than in most other places, home prices were falling in nearly every major U.S. city, and mortgage defaults were rising rapidly. The nation's largest banks appeared to be near collapse in 2008, which led the U.S. government to take a variety of steps in an attempt to "bail out" ailing financial institutions. Credit became more difficult for borrowers to obtain, contributing to the deepest and longest lasting recession since the Great Depression.

The experience of the financial crisis and the recession that followed illustrates how important financial markets are to the functioning of a market economy. Financial markets help transfer funds from savers to borrowers, and the smooth flow of credit is vital to the health of the economy. When that flow is interrupted and firms are denied access to credit, they invest less and hire fewer people. In this chapter, you will see how financial markets help allocate capital, and you will learn about efforts that policy makers have made to try to prevent another financial crisis.

LG1 LG2 LG3 2.1 Financial Institutions and Markets

Most successful firms have ongoing needs for funds. They can obtain funds from external sources in three ways. The first source is through a *financial institution* that accepts savings and transfers them to those that need funds. A second source is through *financial markets*, organized forums in which the suppliers and demanders of various types of funds can make transactions. A third source is through *private placement*. Because of the unstructured nature of private placements, here we focus primarily on the role of financial institutions and financial markets in facilitating business financing.

FINANCIAL INSTITUTIONS

financial institution
An intermediary that channels the savings of individuals, businesses, and governments into loans or investments.

Financial institutions serve as intermediaries by channeling the savings of individuals, businesses, and governments into loans or investments. Many financial institutions directly or indirectly pay savers interest on deposited funds; others provide services for a fee (for example, checking accounts for which customers pay service charges). Some financial institutions accept customers' savings deposits and lend this money to other customers or to firms, others invest customers' savings in earning assets such as real estate or stocks and bonds, and some do both. Financial institutions are required by the government to operate within established regulatory guidelines.

Key Customers of Financial Institutions

For financial institutions, the key suppliers of funds and the key demanders of funds are individuals, businesses, and governments. The savings that individual consumers place in financial institutions provide these institutions with a large portion of their funds. Individuals not only supply funds to financial institutions but also demand funds from them in the form of loans. However, individuals as a group are the *net suppliers* for financial institutions: They save more money than they borrow.

Business firms also deposit some of their funds in financial institutions, primarily in checking accounts with various commercial banks. Like individuals, firms borrow funds from these institutions, but firms are *net demanders* of funds: They borrow more money than they save.

Governments maintain deposits of temporarily idle funds, certain tax payments, and Social Security payments in commercial banks. They do not borrow funds *directly* from financial institutions, although by selling their debt securities to various institutions, governments indirectly borrow from them. The government, like business firms, is typically a *net demander* of funds: It typically borrows more than it saves. We've all heard about the federal budget deficit.

Major Financial Institutions

The major financial institutions in the U.S. economy are commercial banks, savings and loans, credit unions, savings banks, insurance companies, mutual funds, and pension funds. These institutions attract funds from individuals, businesses, and governments, combine them, and make loans available to individuals and businesses.

Commerical Bank: BNI,BRI, BCA, any banks except BI

COMMERCIAL BANKS, INVESTMENT BANKS, AND THE SHADOW BANKING SYSTEM

commercial banks
Institutions that provide savers with a secure place to invest their funds and that offer loans to individual and business borrowers.

investment banks
Institutions that assist companies in raising capital, advise firms on major transactions such as mergers or financial restructurings, and engage in trading and market making activities.

Glass-Steagall Act
An act of Congress in 1933 that created the federal deposit insurance program and separated the activities of commercial and investment banks.

shadow banking system
A group of institutions that engage in lending activities, much like traditional banks, but do not accept deposits and therefore are not subject to the same regulations as traditional banks.

Commercial banks are among the most important financial institutions in the economy because they provide savers with a secure place to invest funds and they offer both individuals and companies loans to finance investments, such as the purchase of a new home or the expansion of a business. **Investment banks** are institutions that (1) assist companies in raising capital, (2) advise firms on major transactions such as mergers or financial restructurings, and (3) engage in trading and market making activities.

The traditional business model of a commercial bank—taking in and paying interest on deposits and investing or lending those funds back out at higher interest rates—works to the extent that depositors believe that their investments are secure. Since the 1930s, the U.S. government has given some assurance to depositors that their money is safe by providing deposit insurance (currently up to $250,000 per depositor). Deposit insurance was put in place in response to the banking runs or panics that were part of the Great Depression. The same act of Congress that introduced deposit insurance, the **Glass-Steagall Act,** also created a separation between commercial banks and investment banks, meaning that an institution engaged in taking in deposits could not also engage in the somewhat riskier activities of securities underwriting and trading.

Commercial and investment banks remained essentially separate for more than 50 years, but Congress, with the approval of President Bill Clinton, decided to repeal Glass-Steagall in 1999. Companies that had formerly engaged only in the traditional activities of a commercial bank began competing with investment banks for underwriting and other services. In addition, the 1990s witnessed tremendous growth in what has come to be known as the shadow banking system. The **shadow banking system** describes a group of institutions that engage in lending activities, much like traditional banks, but these institutions do not accept deposits and are therefore not subject to the same regulations as traditional banks. For example, an institution such as a pension fund might have excess cash to invest, and a large corporation might need short-term financing to cover seasonal cash flow needs. A business like Lehman Brothers, which filed for bankruptcy in the early days of the 2008 financial crisis, acted as an intermediary between these two parties and helped facilitate a loan, thereby becoming part of the shadow banking system. In March 2010, Treasury Secretary Timothy Geithner noted that at its peak the shadow banking system financed roughly $8 trillion in assets and was roughly as large as the traditional banking system.

Matter of fact

Consolidation in the U.S. Banking Industry

The U.S. banking industry has been going through a long period of consolidation. According to the Federal Deposit Insurance Corporation (FDIC), the number of commercial banks in the United States declined from 11,463 in 1992 to 6,048 as of March 2013, a decline of 47 percent. The decline is concentrated among small community banks, which larger institutions have been acquiring at a rapid pace.

FINANCIAL MARKETS

financial markets
Forums in which suppliers of funds and demanders of funds can transact business directly.

Financial markets are forums in which suppliers of funds and demanders of funds can transact business directly. Whereas the loans made by financial institutions are granted without the direct knowledge of the suppliers of funds (savers), suppliers in the financial markets know where their funds are being lent or invested. The two key financial markets are the money market and the capital market. Transactions in short-term debt instruments, or marketable securities, take place in the *money market*. Long-term securities—bonds and stocks—are traded in the *capital market*.

private placement
The sale of a new security directly to an investor or group of investors.

public offering
The sale of either bonds or stocks to the general public.

To raise money, firms can use either private placements or public offerings. A **private placement** involves the sale of a new security directly to an investor or group of investors, such as an insurance company or pension fund. Most firms, however, raise money through a **public offering** of securities, which is the sale of either bonds or stocks to the general public.

primary market
Financial market in which securities are initially issued; the only market in which the issuer is directly involved in the transaction.

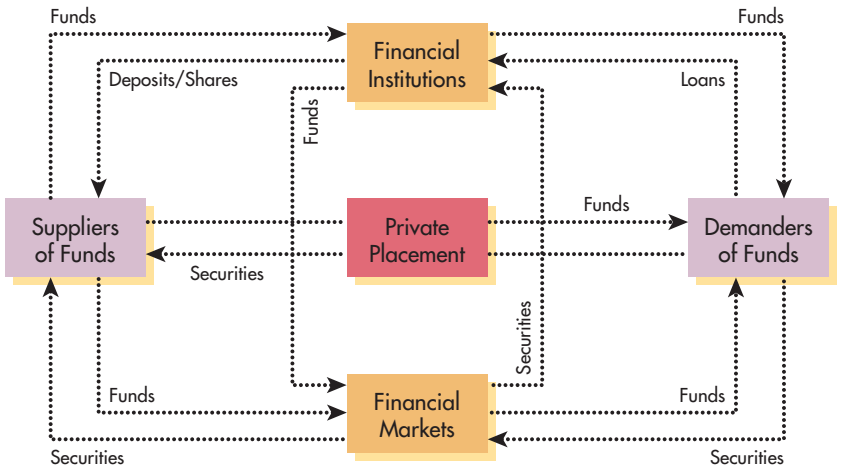
secondary market
Financial market in which preowned securities (those that are not new issues) are traded.

When a company or government entity sells stocks or bonds to investors and receives cash in return, it is said to have sold securities in the **primary market.** After the primary market transaction occurs, any further trading in the security does not involve the issuer directly, and the issuer receives no additional money from these subsequent transactions. Once the securities begin to trade between investors, they become part of the **secondary market.** On large stock exchanges, billions of shares may trade between buyers and sellers on a single day, and these trades are all secondary market transactions. Money flows from the investors buying stocks to the investors selling them, and the company whose stock is being traded is largely unaffected by the transactions. The primary market is the one in which "new" securities are sold. The secondary market can be viewed as a "preowned" securities market.

THE RELATIONSHIP BETWEEN INSTITUTIONS AND MARKETS

Financial institutions actively participate in the financial markets as both suppliers and demanders of funds. Figure 2.1 depicts the general flow of funds through and between financial institutions and financial markets as well as the mechanics of private placement transactions. Domestic or foreign individuals, businesses,

FIGURE 2.1
Flow of Funds
Flow of funds for financial institutions and markets



and governments may supply and demand funds. We next briefly discuss the money market, including its international equivalent: the *Eurocurrency market*. We then end this section with a discussion of the capital market, which is of key importance to the firm.

THE MONEY MARKET

money market
A financial relationship created between suppliers and demanders of *short-term funds*.

The **money market** is created by a financial relationship between suppliers and demanders of *short-term funds* (funds with maturities of 1 year or less). The money market exists because some individuals, businesses, governments, and financial institutions have temporarily idle funds that they wish to invest in a relatively safe, interest-bearing asset. At the same time, other individuals, businesses, governments, and financial institutions find themselves in need of seasonal or temporary financing. The money market brings together these suppliers and demanders of short-term funds.

marketable securities
Short-term debt instruments, such as U.S. Treasury bills, commercial paper, and negotiable certificates of deposit issued by government, business, and financial institutions, respectively.

Most money market transactions are made in **marketable securities,** which are short-term debt instruments such as U.S. Treasury bills, commercial paper, and negotiable certificates of deposit issued by government, business, and financial institutions, respectively. Investors generally consider marketable securities to be among the least risky investments available. Marketable securities are described in Chapter 15.

Eurocurrency market
International equivalent of the domestic money market.

The international equivalent of the domestic money market is called the **Eurocurrency market.** This market for short-term bank deposits is denominated in U.S. dollars or other major currencies. Eurocurrency deposits arise when a corporation or individual makes a bank deposit in a currency other than the local currency of the country where the bank is located. For example, if a multinational corporation were to deposit U.S. dollars in a London bank, this action would create a Eurodollar deposit (a dollar deposit at a bank in Europe). Nearly all Eurodollar deposits are *time deposits,* which means that the bank would promise to repay the deposit, with interest, at a fixed date in the future, in 6 months, for example. During the interim, the bank is free to lend this dollar deposit to creditworthy corporate or government borrowers. If the bank cannot find a borrower on its own, it may lend the deposit to another international bank.

THE CAPITAL MARKET

capital market
A market that enables suppliers and demanders of *long-term funds* to make transactions.

The **capital market** is a market that enables suppliers and demanders of *long-term funds* to make transactions. Included are securities issues of business and government. The backbone of the capital market is formed by the broker and dealer markets that provide a forum for bond and stock transactions. International capital markets also exist.

Key Securities Traded: Bonds and Stocks

The key capital market securities are *bonds* (long-term debt) and both *common stock* and *preferred stock* (equity, or ownership).

bond
Long-term debt instrument used by business and government to raise large sums of money, generally from a diverse group of lenders.

Bonds are long-term debt instruments used by business and government to raise large sums of money, generally from a diverse group of lenders. *Corporate bonds* typically pay interest *semiannually* (every 6 months) at a stated *coupon interest rate*. They have an initial *maturity* of from 10 to 30 years, and a *par,* or *face, value* of $1,000 that must be repaid at maturity. Bonds are described in detail in Chapter 7.

Example 2.1 ▸

MyFinanceLab Solution Video

Lakeview Industries, a major microprocessor manufacturer, has issued a 9% coupon interest rate, 20-year bond with a $1,000 par value that pays interest semiannually. Investors who buy this bond receive the contractual right to $90 annual interest (9% coupon interest rate × $1,000 par value) distributed as $45 at the end of each 6 months (1/2 × $90) for 20 years, plus the $1,000 par value at the end of year 20.

preferred stock
A special form of ownership having a fixed periodic dividend that must be paid prior to payment of any dividends to common stockholders.

As noted earlier, shares of *common stock* are units of ownership, or equity, in a corporation. Common stockholders earn a return by receiving dividends—periodic distributions of cash—or by realizing increases in share price. **Preferred stock** is a special form of ownership that has features of both a bond and common stock. Preferred stockholders are promised a fixed periodic dividend that must be paid prior to payment of any dividends to common stockholders. In other words, preferred stock has "preference" over common stock. Preferred stock and common stock are described in detail in Chapter 8. See the *Focus on Practice* box for the story of one legendary stock price and the equally legendary man who brought it about.

Broker Markets and Dealer Markets

broker market
The securities exchanges on which the two sides of a transaction, the buyer and seller, are brought together to trade securities.

securities exchanges
Organizations that provide the marketplace in which firms can raise funds through the sale of new securities and purchasers can resell securities.

dealer market
The market in which the buyer and seller are not brought together directly but instead have their orders executed by securities dealers that "make markets" in the given security.

market makers
Securities dealers who "make markets" by offering to buy or sell certain securities at stated prices.

Nasdaq market
An all-electronic trading platform used to execute securities trades.

over-the-counter (OTC) market
Market where smaller, unlisted securities are traded.

By far, the vast majority of trades made by individual investors take place in the secondary market. Trading mechanisms and processes in the secondary market have evolved rapidly in recent years. In the past, it was possible to classify the secondary market into two segments *on the basis of how securities were traded.* Those two segments were broker markets and dealer markets. Those segments are still relevant today, but the distinctions between them are not as sharp as they once were.

The key difference between broker and dealer markets is a technical point dealing with the way trades are executed. That is, when a trade occurs in a **broker market,** the two sides to the transaction, the buyer and the seller, are brought together, and the trade takes place at that point: Party A sells his or her securities directly to the buyer, Party B. In a sense, with the help of a *broker,* the securities effectively change hands, perhaps literally on the floor of the exchange. The broker market consists of national and regional **securities exchanges,** which are organizations that provide a marketplace in which firms can raise funds through the sale of new securities and purchasers can resell securities.

In contrast, when trades are made in a **dealer market,** the buyer and the seller are never brought together directly. Instead, **market makers** execute the buy/sell orders. Market makers are *securities dealers* who "make markets" by offering to buy or sell certain securities at stated prices. Essentially, two separate trades are made: Party A sells his or her securities (in, say, Dell) to a dealer, and Party B buys his or her securities (in Dell) from another, or possibly even the same, dealer. Thus, there is always a dealer (*market maker*) on one side of a dealer–market transaction. The dealer market is made up of both the **Nasdaq market,** an all-electronic trading platform used to execute securities trades, and the **over-the-counter (OTC) market,** where smaller, unlisted securities are traded.

In recent years, the distinctions between broker and dealer markets have blurred. Electronic trading platforms using sophisticated algorithms place buy and sell orders very rapidly (so-called high-frequency trading), often without any human intervention. These algorithms may be used to speculate on a stock's price movements, or they may be used to take a single, large buy or sell order and break

focus on **PRACTICE**

Berkshire Hathaway: Can Buffett Be Replaced?

in practice In early 1980, investors could buy one share of Berkshire Hathaway Class A common stock (stock symbol: BRKA) for $285. That may have seemed expensive at the time, but by May 2013 the price of just one share had climbed to $169,700. The wizard behind such phenomenal growth in shareholder value is the chairman of Berkshire Hathaway, Warren Buffett, nicknamed the Oracle of Omaha.

With his partner, Vice-Chairman Charlie Munger, Buffett runs a large conglomerate of dozens of subsidiaries with 288,000 employees and more than $162 billion in annual revenues. He makes it look easy. In his words, "I've taken the easy route, just sitting back and working through great managers who run their own shows. My only tasks are to cheer them on, sculpt and harden our corporate culture, and make major capital-allocation decisions. Our managers have returned this trust by working hard and effectively."[a]

Buffett's style of corporate leadership seems rather laid back, but behind that "aw-shucks" manner is one of the best analytical minds in business. He believes in aligning managerial incentives with performance. Berkshire employs many different incentive arrangements, with their terms depending on such elements as the economic potential or capital intensity of a CEO's business. Whatever the compensation arrangement, Buffett tries to keep it both simple and fair. Buffett himself receives an annual salary of $100,000, which isn't much in this age of supersized CEO compensation packages. Listed for many years among the world's wealthiest people, Buffett has donated most of his Berkshire stock to the Bill and Melinda Gates Foundation.

Berkshire's annual report is a must-read for many investors due to the popularity of Buffett's annual letter to shareholders with his homespun take on such topics as investing, corporate governance, and corporate leadership. Shareholder meetings in Omaha, Nebraska, have turned into cultlike gatherings, with thousands traveling to listen to Buffett answer questions from shareholders. One question that has been firmly answered is that of Buffett's ability to create shareholder value.

The next question that needs to be answered is whether Berkshire Hathaway can successfully replace Buffett (age 83) and Munger (age 89). In October 2010, Berkshire hired hedge fund manager Todd Combs to handle a significant portion of the firm's investments. In May 2013, Buffett announced that members of Berkshire's board of directors were solidly in agreement as to whom the next chief executive should be, but he didn't mention any names. Berkshire shareholders hope that Buffett's special wisdom applies as well to identifying new managerial talent as it does to making strategic investment decisions.

▶ *The share price of BRKA has never been split. Why might the company refuse to split its shares to make them more affordable to average investors?*

[a]Berkshire Hathaway, Inc., "Letter to Shareholders of Berkshire Hathaway, Inc.," *2006 Annual Report,* p. 4.

it into many smaller orders to try to minimize the price effect of buying or selling a large quantity of shares. An increasing amount of trading takes place today "off exchange," often in private trading venues known as "dark pools." Roughly one-third of secondary market trading occurs in these off-exchange environments.

Broker Markets If you are like most people, when you think of the "stock market," the first name to come to mind is the New York Stock Exchange, known currently as the NYSE Euronext after a series of mergers that expanded the exchange's global reach. In point of fact, the NYSE Euronext is the dominant broker market. Several *regional exchanges* are also broker markets. In 2012, the NYSE Euronext accounted for a little more than 25 percent of the *total dollar volume* of all shares traded in the U.S. stock market.

Most exchanges are modeled to some degree after the NYSE Euronext. For a firm's securities to be listed for trading on a stock exchange, a firm must file an application for listing and meet a number of requirements. For example, to be

eligible for listing on the NYSE Euronext, a firm must have at least 400 stockholders owning 100 or more shares; a minimum of 1.1 million shares of publicly held stock outstanding; pretax earnings of at least $10 million over the previous 3 years, with at least $2 million in each of the previous 2 years; and a minimum market value of public shares of $100 million. Clearly, a firm has to reach a certain level of success to be listed on the NYSE Euronext.

Once placed, an order to buy or sell on the NYSE Euronext can be executed in minutes, thanks to sophisticated telecommunication devices. New Internet-based brokerage systems enable investors to place their buy and sell orders electronically. Information on publicly traded securities is reported in various media, both print, such as the *Wall Street Journal,* and electronic, such as MSN Money (www.moneycentral.msn.com).

Dealer Markets One of the key features of the *dealer market* is that it has no centralized trading floors. Instead, it is made up of a large number of *market makers* who are linked together via a mass-telecommunications network.

bid price
The highest price offered to purchase a security.

ask price
The lowest price at which a security is offered for sale.

Each market maker is actually a securities dealer who makes a market in one or more securities by offering to buy or sell them at stated bid/ask prices. The **bid price** and **ask price** represent, respectively, the highest price offered to purchase a given security and the lowest price at which the security is offered for sale. In effect, an investor pays the ask price when buying securities and receives the bid price when selling them.

As described earlier, the dealer market is made up of both the *Nasdaq market* and the *over-the-counter (OTC) market,* which together account for about 22 percent of all shares traded in the U.S. market, with the Nasdaq accounting for the overwhelming majority of those trades. (As an aside, the *primary market* is also a dealer market because all new issues are sold to the investing public by securities dealers, acting on behalf of the investment banker.)

The largest dealer market consists of a select group of stocks that are listed and traded on the *National Association of Securities Dealers Automated Quotation System,* typically referred to as *Nasdaq*. Founded in 1971, Nasdaq had its origins in the OTC market but is today considered a *totally separate entity that's no longer a part of the OTC market.* In fact, in 2006 Nasdaq was formally recognized by the SEC as a "listed exchange," essentially giving it the same stature and prestige as the NYSE.

International Capital Markets

Eurobond market
The market in which corporations and governments typically issue bonds denominated in dollars and sell them to investors located outside the United States.

Although U.S. capital markets are by far the world's largest, there are important debt and equity markets outside the United States. In the **Eurobond market,** corporations and governments typically issue bonds denominated in dollars and sell

Matter of fact

NYSE Euronext is the World's Largest Stock Exchange

According to the World Federation of Exchanges, the largest stock market in the world in 2012, as measured by the total market value of securities listed on that market, is the NYSE Euronext, with listed securities worth more than $14.1 trillion in the United States and $2.8 trillion in Europe. The next largest is the Nasdaq at $4.6 trillion, with exchanges in Tokyo and London not far behind at $3.5 billion and $3.3 billion respectively.

them to investors located outside the United States. A U.S. corporation might, for example, issue dollar-denominated bonds that would be purchased by investors in Belgium, Germany, or Switzerland. Through the Eurobond market, issuing firms and governments can tap a much larger pool of investors than would be generally available in the local market.

foreign bond
A bond that is issued by a foreign corporation or government and is denominated in the investor's home currency and sold in the investor's home market.

The *foreign bond market* is an international market for long-term debt securities. A **foreign bond** is a bond issued by a foreign corporation or government that is denominated in the investor's home currency and sold in the investor's home market. A bond issued by a U.S. company that is denominated in Swiss francs and sold in Switzerland is a foreign bond. Although the foreign bond market is smaller than the Eurobond market, many issuers have found it to be an attractive way of tapping debt markets around the world.

international equity market
A market that allows corporations to sell blocks of shares to investors in a number of different countries simultaneously.

Finally, the **international equity market** allows corporations to sell blocks of shares to investors in a number of different countries simultaneously. This market enables corporations to raise far larger amounts of capital than they could in any single market. International equity sales have been indispensable to governments that have sold state-owned companies to private investors.

The Role of Capital Markets

From a firm's perspective, the role of a capital market is to be a liquid market where firms can interact with investors to obtain valuable external financing resources. From investors' perspectives, the role of a capital market is to be an **efficient market** that establishes correct prices for the securities that firms sell and allocates funds to their most productive uses. This role is especially true for securities that are actively traded in broker or dealer markets, where intense competition among investors determines the prices of securities.

efficient market
A market that establishes correct prices for the securities that firms sell and allocates funds to their most productive uses.

The price of an individual security is determined by the interaction between buyers and sellers in the market. If the market is efficient, the price of a stock is an unbiased estimate of its true value. Investors compete with one another for information about a stock's true value, so at any given time, a stock's price reflects all the information that is known about the stock. Changes in the price reflect new information that investors learn about and act on. For example, suppose that a certain stock currently trades at $40 per share. If this company announces that sales of a new product have been higher than expected, and if investors have not already anticipated that announcement, investors will raise their estimate of what the stock is truly worth. At $40, the stock is a relative bargain, so there will temporarily be more buyers than sellers wanting to trade the stock, and its price will have to rise to restore equilibrium in the market. The more efficient the market is, the more rapidly this whole process works. In theory, even information known only to insiders may become incorporated in stock prices as the *Focus on Ethics* box on page 86 explains.

New information is, almost by definition, unpredictable. For example, it is well known that retail companies in the United States have a spike in sales near the end of the calendar year as the holiday season approaches. When a firm reports higher sales near the end of the year, it is not new information because investors in the market are aware of the seasonal pattern and anticipate that sales will be higher in the fourth quarter than at any other time of year. To the market, new information would be a report from a retailer that its sales were higher (or lower) in the fourth quarter than investors had already expected. Because it is unanticipated, new information has a random quality (that is, sometimes firms announce better-than-expected results, and sometimes they announce worse-than-expected results). As new information arrives,

stock prices quickly respond, and those price movements will appear to occur at random. Therefore, one sign that a stock market is efficient is that changes in stock prices are nearly impossible to predict, even by professional investors.

Not everyone agrees that prices in financial markets are as efficient as described in the preceding paragraph. Advocates of *behavioral finance,* an emerging field that blends ideas from finance and psychology, argue that stock prices and prices of other securities can deviate from their true values for extended periods and that these deviations may lead to predictable patterns in stock prices. These people point to episodes such as the huge run-up and subsequent collapse of the prices of Internet stocks in the late 1990s and the failure of markets to accurately assess the risk of mortgage-backed securities in the more recent financial crisis as examples of the principle that stock prices sometimes can be wildly inaccurate measures of value.

Just how efficient are the prices in financial markets? That question will be debated for a long time. It is clear that prices do move in response to new information, and for most investors and corporate managers, the best advice is probably to be cautious when betting against the market. Identifying securities that the market has over- or undervalued is extremely difficult, and very few people have demonstrated an ability to bet against the market correctly for an extended time.

focus on **ETHICS**

The Ethics of Insider Trading

in practice In May 2013, news broke of an insider trading scandal involving the head auditor in the Los Angeles office of KPMG, Scott London. The U.S. Securities and Exchange Commission alleged that London passed information to a friend, Bryan Shaw, that he had gained while working on audits of two companies, Herbalife and Skechers. Shaw made $1.3 million in trading profits based on London's inside information, and he rewarded London with lavish gifts, including envelopes full of cash, a Rolex watch, and concert tickets. Shaw plead guilty to insider trading charges on May 20.

Laws prohibiting insider trading were established in the United States in the 1930s. These laws are designed to ensure that all investors have access to relevant information on the same terms. However, many market participants believe that insider trading should be permitted. Their argument is rooted in the efficient-market hypothesis (EMH). According to the EMH, stock prices fully reflect all publicly available information. Of course, a significant amount of information about every company is not publicly available. Thus, stock prices may not accurately reflect all that is known about a company.

Those who argue for allowing insider trading believe that market prices influence the allocation of resources among companies. Firms with higher stock prices find it easier to raise capital, for example. Therefore, it is important that market prices reflect as much information as possible. Advocates of allowing insider trading argue that investors would quickly convert inside information into publicly available information if insider trading were permitted. If, for example, Scott London had learned of problems at one of his audit clients and had traded on the basis of that information, market participants might have viewed his actions and concluded that the client's prospects had dimmed. Of course, the other necessary condition is that outsiders can observe the stock market transactions of insiders.

Interestingly, Eugene Fama, who is viewed by many as the father of the efficient-market hypothesis, does not believe that insider trading should be permitted.[a] Fama believes that allowing insider trading creates a moral hazard problem. For example, if insiders are allowed to trade on proprietary information, they may have the incentive to hold back information for their personal gain.

▶ *If efficiency is the goal of financial markets, is allowing or disallowing insider trading more unethical?*

▶ *Does allowing insider trading create an ethical dilemma for insiders?*

[a] www.dimensional.com/famafrench/2010/04/qa-is-insider-trading-beneficial.html

→ REVIEW QUESTIONS

2–1 Who are the key participants in the transactions of financial institutions? Who are *net suppliers,* and who are *net demanders*?

2–2 What role do *financial markets* play in our economy? What are *primary* and *secondary* markets? What relationship exists between financial institutions and financial markets?

2–3 What is the *money market*? What is the *Eurocurrency market*?

2–4 What is the *capital market*? What are the primary securities traded in it?

2–5 What are *broker markets*? What are *dealer markets*? How do they differ?

2–6 Briefly describe the international capital markets, particularly the *Eurobond market* and the *international equity market*.

2–7 What are *efficient markets*? What determines the price of an individual security in such a market?

LG 4 2.2 The Financial Crisis

In the summer and fall of 2008, the U.S. financial system, and financial systems around the world, appeared to be on the verge of collapse. Troubles in the financial sector spread to other industries, and a severe global recession ensued. In this section, we outline some of the main causes and consequences of that crisis.

FINANCIAL INSTITUTIONS AND REAL ESTATE FINANCE

In the classic film *It's a Wonderful Life,* the central character is George Bailey, who runs a financial institution called the Bailey Building and Loan Association. In a key scene in that movie, a bank run is about to occur, and depositors demand that George return the money that they had invested in the Building and Loan. George pleads with one man to keep his funds at the bank, saying:

> You're thinking of this place all wrong, as if I have the money back in a safe. The money's not here. Your money is in Joe's house. That's right next to yours—and then the Kennedy house, and Mrs. Maklin's house, and a hundred others. You're lending them the money to build, and then they're going to pay it back to you as best they can. What are you going to do, foreclose on them?

This scene offers a relatively realistic portrayal of the role that financial institutions played in allocating credit for investments in residential real estate for many years. Local banks took deposits and made loans to local borrowers. However, since the 1970s, a process called securitization has changed the way that mortgage finance works. **Securitization** refers to the process of pooling mortgages or other types of loans and then selling claims or securities against that pool in a secondary market. These securities, called **mortgage-backed securities,** can be purchased by individual investors, pension funds, mutual funds, or virtually any other investor. As homeowners repay their loans, those payments eventually make their way into the hands of investors who hold the mortgage-backed securities. Therefore, a primary risk associated with mortgage-backed securities is that homeowners may not be able to, or may choose not to, repay their loans. Banks today still lend money to individuals who want to build or purchase new homes, but they typically bundle those loans together and sell them to organizations that securitize them and pass them on to investors all over the world.

securitization
The process of pooling mortgages or other types of loans and then selling claims or securities against that pool in the secondary market.

mortgage-backed securities
Securities that represent claims on the cash flows generated by a pool of mortgages.

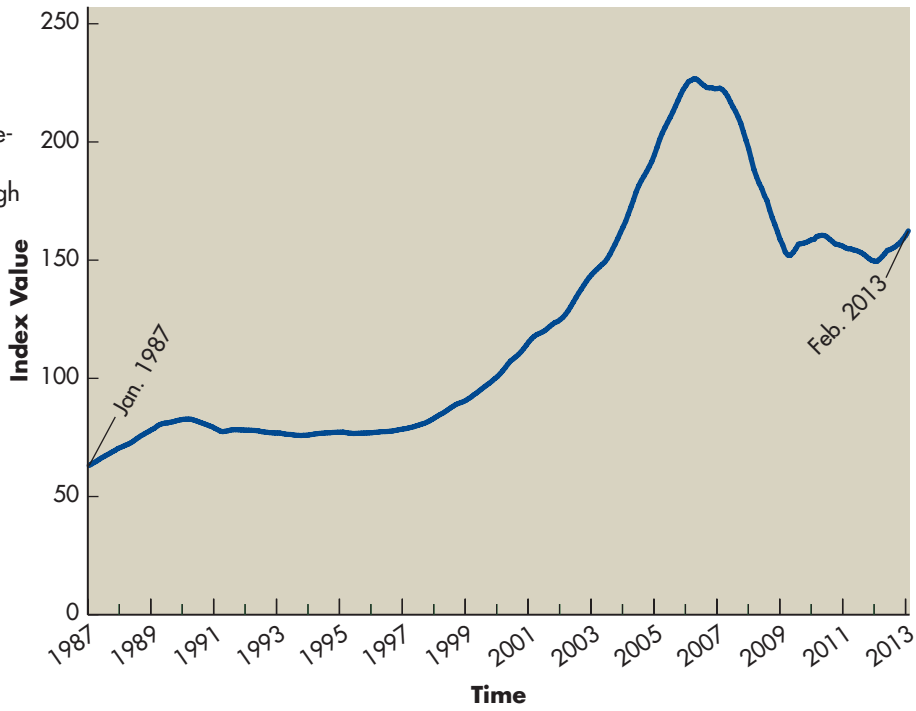
FALLING HOME PRICES AND DELINQUENT MORTGAGES

Prior to the 2008 financial crisis, most investors viewed mortgage-backed securities as relatively safe investments. Figure 2.2 illustrates one of the main reasons for this view. The figure shows the behavior of the Standard & Poor's Case-Shiller Index, a barometer of home prices in ten major U.S. cities, in each month from January 1987 to February 2013. Historically, declines in the index were relatively infrequent, and between July 1995 and April 2006 the index rose continuously without posting even a single monthly decline. When house prices are rising, the gap between what a borrower owes on a home and what the home is worth widens. Lenders will allow borrowers who have difficulty making payments on their mortgages to tap this built-up home equity to refinance their loans and lower their payments. Therefore, rising home prices helped keep mortgage default rates low from the mid-1990s through 2006. Investing in real estate and mortgage-backed securities seemed to involve very little risk during this period.

In part because real estate investments appeared to be relatively safe, lenders began relaxing their standards for borrowers. This change led to tremendous growth in a category of loans called subprime mortgages. Subprime mortgages are mortgage loans made to borrowers with lower incomes and poorer credit histories as compared to "prime" borrowers. Loans granted to subprime borrowers often have adjustable, rather than fixed, interest rates, which makes subprime borrowers particularly vulnerable if interest rates rise. Many of these borrowers (and lenders) assumed that rising home prices would allow borrowers to refinance their loans if they had difficulties making payments. Partly

FIGURE 2.2

House Prices Soar and then Crash
The figure shows the Standard and Poor's Case-Shiller Home Price Index from January 1987 through February 2013 and that home prices rose almost without interruption for nearly a decade before experiencing a prolonged slump.



through the growth of subprime mortgages, banks and other financial institutions gradually increased their investments in real estate loans. In 2000, real estate loans accounted for less than 40 percent of the total loan portfolios of large banks. By 2007, real estate loans grew to more than half of all loans made by large banks, and the fraction of these loans in the subprime category increased as well.

Unfortunately, as Figure 2.2 shows, home prices fell almost without interruption from May 2006 through May 2009. Over that 3-year period, home prices fell on average by more than 30 percent. Not surprisingly, when homeowners had difficulty making their mortgage payments, refinancing was no longer an option, and delinquency rates and foreclosures began to climb. By 2009, nearly 25 percent of subprime borrowers were behind schedule on their mortgage payments. Some borrowers, recognizing that the value of their homes was far less than the amount they owed on their mortgages, simply walked away from their homes and let lenders repossess them.

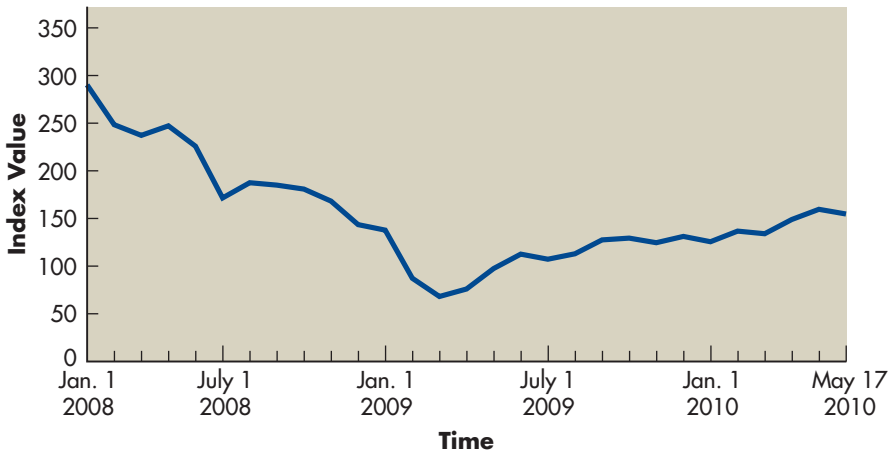
CRISIS OF CONFIDENCE IN BANKS

With delinquency rates rising, the value of mortgage-backed securities began to fall and so, too, did the fortunes of financial institutions that had invested heavily in real estate assets. In March 2008, the Federal Reserve provided financing for the acquisition (that is, the rescue) of Bear Stearns by JPMorgan Chase. Later that year, Lehman Brothers filed for bankruptcy. Throughout 2008 and 2009, the Federal Reserve, the George W. Bush administration, and finally the administration of Barack Obama took unprecedented steps to try to shore up the banking sector and stimulate the economy, but these measures could not completely avert the crisis.

Figure 2.3 shows the behavior of the Standard & Poor's Banking Index, an index that tracks bank stocks. Bank stocks fell 81 percent between January 2008 and March 2009, and the number of bank failures skyrocketed. According to the FDIC, only three banks failed in 2007. In 2008, that number rose by a factor of eight to 25 failed banks, and the number increased nearly six times to 140 failures in 2009. While the economy began to recover in 2010, bank failures continued at a rapid pace, with 157 institutions failing that year followed by 92 more failures in 2011.

FIGURE 2.3

Bank Stocks Plummet During Financial Crisis The graph shows the Standard and Poor's Banking Stock Index from January 2008 to May 2010. Concerns about the health of U.S. financial institutions drove bank stocks down by 81 percent in just over a year.



SPILLOVER EFFECTS AND THE GREAT RECESSION

As banks came under intense financial pressure in 2008, they began to tighten their lending standards and dramatically reduce the quantity of loans they made. In the aftermath of the Lehman Brothers bankruptcy, lending in the money market contracted very sharply. Corporations that had relied on the money market as a source of short-term funding found that they could no longer raise money in this market or could do so only at extraordinarily high rates.

As a consequence, businesses began to hoard cash and cut back on expenditures, and economic activity contracted. Gross domestic product (GDP) declined in five out of six quarters starting in the first quarter of 2008, and the economy shed more than 8 million jobs in 2008–2009 as the unemployment rate reached 10 percent. Congress passed an $862 billion stimulus package to try to revive the economy, and the Federal Reserve pushed short-term interest rates close to 0 percent. Although the economy began to recover in 2009, the recovery was very slow. As late as May 2013, total employment was still just 2 percent lower than it had been prior to the start of the recession.

Perhaps the most important lesson from this episode is how important financial institutions are to a modern economy. By some measures, the 2008–2009 recession was the worst experienced in the United States since the Great Depression. Indeed, there many parallels between those two economic contractions. Both were preceded by a period of rapid economic growth, rising stock prices, and movements by banks into new lines of business, and both involved a major crisis in the financial sector. Recessions associated with a banking crisis tend to be more severe than other recessions because so many businesses rely on credit to operate. When financial institutions contract borrowing, activity in most other industries slows down too.

→ REVIEW QUESTIONS

2–8 What is securitization, and how does it facilitate investment in real estate assets?

2–9 What is a mortgage-backed security? What is the basic risk associated with mortgage-backed securities?

2–10 How do rising home prices contribute to low mortgage delinquencies?

2–11 Why do falling home prices create an incentive for homeowners to default on their mortgages even if they can afford to make the monthly payments?

2–12 Why does a crisis in the financial sector spill over into other industries?

LG 5 2.3 Regulation of Financial Institutions and Markets

The previous section discussed just how vulnerable modern economies are when financial institutions are in a state of crisis. Partly to avoid these types of problems, governments typically regulate financial institutions and markets as much or more than almost any other sector in the economy. This section provides an overview of the financial regulatory landscape in the United States.

REGULATIONS GOVERNING FINANCIAL INSTITUTIONS

As mentioned in Section 2.1, Congress passed the Glass-Steagall Act in 1933 during the depths of the Great Depression. The early 1930s witnessed a series of banking panics that caused almost one-third of the nation's banks to fail. Troubles within the banking sector and other factors contributed to the worst economic contraction in U.S. history, in which industrial production fell by more than 50 percent, the unemployment rate peaked at almost 25 percent, and stock prices dropped roughly 86 percent. The Glass-Steagall Act attempted to calm the public's fears about the banking industry by establishing the **Federal Deposit Insurance Corporation (FDIC),** which provided deposit insurance, effectively guaranteeing that individuals would not lose their money if they held it in a bank that failed. The FDIC was also charged with examining banks on a regular basis to ensure that they were "safe and sound." The Glass-Steagall Act also prohibited institutions that took deposits from engaging in activities such as securities underwriting and trading, thereby effectively separating commercial banks from investment banks.

Federal Deposit Insurance Corporation (FDIC)
An agency created by the Glass-Steagall Act that provides insurance for deposits at banks and monitors banks to ensure their safety and soundness.

Over time, U.S. financial institutions faced competitive pressures from both domestic and foreign businesses that engaged in facilitating loans or making loans directly. Because these competitors either did not accept deposits or were located outside the United States, they were not subject to the same regulations as domestic banks. As a result, domestic banks began to lose market share in their core businesses. Pressure mounted to repeal the Glass-Steagall Act to enable U.S. banks to compete more effectively, and in 1999 Congress enacted and President Bill Clinton signed the **Gramm-Leach-Bliley Act,** which allows commercial banks, investment banks, and insurance companies to consolidate and compete for business in a wider range of activities.

Gramm-Leach-Bliley Act
An act that allows business combinations (that is, mergers) between commercial banks, investment banks, and insurance companies and thus permits these institutions to compete in markets that prior regulations prohibited them from entering.

In the aftermath of the recent financial crisis and recession, Congress passed the Dodd-Frank Wall Street Reform and Consumer Protection Act in July 2010. In print, the new law runs for hundreds of pages and calls for the creation of several new agencies, including the Financial Stability Oversight Council, the Office of Financial Research, and the Bureau of Consumer Financial Protection. The act also realigns the duties of several existing agencies and requires existing and new agencies to report to Congress regularly. Three years after Dodd-Frank became law, the various agencies affected or created by the new law were still writing rules specifying how the new law's provisions would be implemented. Exactly how the new legislation will affect financial institutions and markets remains unclear.

REGULATIONS GOVERNING FINANCIAL MARKETS

Two other pieces of legislation were passed during the Great Depression that had an enormous effect on the regulation of financial markets. The **Securities Act of 1933** imposed new regulations governing the sale of new securities. That is, the 1933 act was intended to regulate activity in the primary market in which securities are initially issued to the public. The act was designed to ensure that the sellers of new securities provided extensive disclosures to the potential buyers of those securities.

Securities Act of 1933
An act that regulates the sale of securities to the public via the primary market.

Securities Exchange Act of 1934
An act that regulates the trading of securities such as stocks and bonds in the secondary market.

The **Securities Exchange Act of 1934** regulates the secondary trading of securities such as stocks and bonds. The Securities Exchange Act of 1934 also

Securities and Exchange Commission (SEC)
The primary government agency responsible for enforcing federal securities laws.

created the **Securities and Exchange Commission (SEC),** which is the primary agency responsible for enforcing federal securities laws. In addition to the one-time disclosures required of security issuers by the Securities Act of 1933, the Securities Exchange Act of 1934 requires ongoing disclosure by companies whose securities trade in secondary markets. Companies must make a 10-Q filing every quarter and a 10-K filing annually. The 10-Q and 10-K forms contain detailed information about the financial performance of the firm during the relevant period. Today, these forms are available online through the SEC's website known as EDGAR (Electronic Data Gathering, Analysis, and Retrieval). The 1934 act also imposes limits on the extent to which corporate "insiders," such as senior managers, can trade in their firm's securities.

Although the type and level of government regulation will always be debatable, the idea that we need and, in fact, benefit from some level of government regulation of financial institutions and markets is quite reasonable. The biggest benefits of government regulation are the resulting trust and confidence in the financial institutions and markets derived by society. Such trust and confidence are necessary to ensure society's participation in the financial market environment that nearly individual in one way or another hopes to benefit from.

→ REVIEW QUESTIONS

5–13 Why do you think that so many pieces of important legislation related to financial markets and institutions were passed during the Great Depression?

5–14 What different aspects of financial markets do the Securities Act of 1933 and the Securities Exchange Act of 1934 regulate?

LG 6 2.4 Business Taxes

Taxes are a fact of life, and businesses, like individuals, must pay taxes on income. The income of sole proprietorships and partnerships is taxed as the income of the individual owners; corporate income is subject to corporate taxes.

Regardless of their legal form, all businesses can earn two types of income, ordinary and capital gains. Under current law, these two types of income are treated differently in the taxation of individuals; they are not treated differently for entities subject to corporate taxes. However, frequent amendments are made to the tax code, particularly as economic conditions change and when party control of the legislative and executive branches of government shifts.

ORDINARY INCOME

ordinary income
Income earned through the sale of a firm's goods or services.

The **ordinary income** of a corporation is income earned through the sale of goods or services. Ordinary income in 2012 was taxed subject to the rates depicted in the corporate tax rate schedule in Table 2.1.

TABLE 2.1 Corporate Tax Rate Schedule

Range of taxable income			Tax calculation: Base tax		(Marginal rate × amount over base bracket)			
$ 0	to	$ 50,000	$ 0	+	(15%	×	amount over	$ 0)
50,000	to	75,000	7,500	+	(25	×	amount over	50,000)
75,000	to	100,000	13,750	+	(34	×	amount over	75,000)
100,000	to	335,000	22,250	+	(39	×	amount over	100,000)
335,000	to	10,000,000	113,900	+	(34	×	amount over	335,000)
10,000,000	to	15,000,000	3,400,000	+	(35	×	amount over	10,000,000)
15,000,000	to	18,333,333	5,150,000	+	(38	×	amount over	15,000,000)
Over 18,333,333			6,416,667	+	(35	×	amount over	18,333,333)

Example 2.2 ▸ Webster Manufacturing, Inc., a small manufacturer of kitchen knives, has before-tax earnings of $250,000. The tax on these earnings can be found by using the tax rate schedule in Table 2.1:

$$\begin{aligned}\text{Total taxes due} &= \$22{,}250 + [0.39 \times (\$250{,}000 - \$100{,}000)] \\ &= \$22{,}250 + (0.39 \times \$150{,}000) \\ &= \$22{,}250 + \$58{,}500 = \underline{\underline{\$80{,}750}}\end{aligned}$$

From a financial point of view, it is important to understand the difference between average and marginal tax rates, the treatment of interest and dividend income, and the effects of tax deductibility.

Marginal versus Average Tax Rates

marginal tax rate
The rate at which *additional income* is taxed.

The **marginal tax rate** represents the rate at which the *next dollar of income* is taxed. In the current corporate tax structure, the marginal tax rate is 15 percent if the firm earns less than $50,000. If a firm earns more than $50,000 but less than $75,000, the marginal tax rate is 25 percent. As a firm's income rises, the marginal tax rate that it faces changes as shown in Table 2.1. In the example above, if Webster Manufacturing's earnings increase to $250,001, the last $1 in income would be taxed at the marginal rate of 39 percent.

average tax rate
A firm's taxes divided by its taxable income.

The **average tax rate** paid on the firm's ordinary income can be calculated by dividing its taxes by its taxable income. For most firms, the average tax rate does not equal the marginal tax rate because tax rates change with income levels. In the example above, Webster Manufacturing's marginal tax rate is 39 percent, but its average tax rate is 32.3 percent ($80,750 ÷ $250,000). For very large corporations with earnings in the hundreds of millions or even billions of dollars, the average tax rate is very close to the 35 percent marginal rate in the top bracket because most of the firm's income is taxed at that rate.

In most of the business decisions that managers make, *it's the marginal tax rate that really matters*. To keep matters simple, the examples in this text will use a *flat 40 percent tax rate*. That means that *both the average tax rate and the marginal tax rate equal 40 percent*.

Interest and Dividend Income

double taxation
Situation that occurs when after-tax corporate earnings are distributed as cash dividends to stockholders, who then must pay personal taxes on the dividend amount.

In the process of determining taxable income, any *interest received* by the corporation is included as ordinary income. Dividends, on the other hand, are treated differently. This different treatment moderates the effect of **double taxation,** which occurs when the already once-taxed earnings of a corporation are distributed as cash dividends to stockholders, who must pay taxes on dividends up to a maximum rate of 15 percent. Dividends that the firm receives on common and preferred stock held in other corporations are subject to a 70 percent exclusion for tax purposes.[1] The dividend exclusion in effect eliminates most of the potential tax liability from the dividends received by the second and any subsequent corporations.

Tax-Deductible Expenses

In calculating their taxes, corporations are allowed to deduct operating expenses, as well as interest expense. The tax deductibility of these expenses reduces their after-tax cost. The following example illustrates the benefit of tax deductibility.

Example 2.3 ▸

MyFinanceLab Solution Video

Two companies, Debt Co. and No-Debt Co., both expect in the coming year to have earnings before interest and taxes of $200,000. During the year, Debt Co. will have to pay $30,000 in interest. No-Debt Co. has no debt and therefore will have no interest expense. Calculation of the earnings after taxes for these two firms is as follows:

	Debt Co.	No-Debt Co.
Earnings before interest and taxes	$200,000	$200,000
Less: Interest expense	30,000	0
Earnings before taxes	$170,000	$200,000
Less: Taxes (40%)	68,000	80,000
Earnings after taxes	$102,000	$120,000
Difference in earnings after taxes	$18,000	

Debt Co. had $30,000 more interest expense than No-Debt Co., but Debt Co.'s earnings after taxes are only $18,000 less than those of No-Debt Co. This difference is attributable to Debt Co.'s $30,000 interest expense deduction providing a tax savings of $12,000 ($68,000 for Debt Co. versus $80,000 for No-Debt Co.). This amount can be calculated directly by multiplying the tax rate by the amount of interest expense ($0.40 \times \$30{,}000 = \$12{,}000$). Similarly, the $18,000 *after-tax cost* of the interest expense can be calculated directly by multiplying 1 minus the tax rate by the amount of interest expense $[(1 - 0.40) \times \$30{,}000 = \$18{,}000]$.

1. The 70 percent exclusion applies if the firm receiving dividends owns less than 20 percent of the shares of the firm paying the dividends. The exclusion is 80 percent if the corporation owns between 20 percent and 80 percent of the stock in the corporation paying it dividends; 100 percent of the dividends received are excluded if it owns more than 80 percent of the corporation paying it dividends. For convenience, we are assuming here that the ownership interest in the dividend-paying corporation is less than 20 percent.

The tax deductibility of expenses reduces their actual (after-tax) cost to the firm as long as the firm is profitable. If a firm experiences a net loss in a given year, its tax liability is already zero. Even in this case, losses in one year can be used to offset taxes paid on profits in prior years, and in some cases losses can be "carried forward" to offset income and lower taxes in subsequent years. Note that both for accounting and tax purposes *interest is a tax-deductible expense, whereas dividends are not.* Because dividends are not tax deductible, their after-tax cost is equal to the amount of the dividend. Thus, a $30,000 cash dividend has an after-tax cost of $30,000.

CAPITAL GAINS

capital gain
The amount by which the sale price of an asset exceeds the asset's purchase price.

If a firm sells a capital asset (such as stock held as an investment) for more than it paid for the asset, the difference between the sale price and purchase price is called a **capital gain.** For corporations, capital gains are added to ordinary corporate income and taxed at the regular corporate rates.

Example 2.4 ▸ Ross Company, a manufacturer of pharmaceuticals, has pretax operating earnings of $500,000 and has just sold for $150,000 an asset that was purchased 2 years ago for $125,000. Because the asset was sold for more than its initial purchase price, there is a capital gain of $25,000 ($150,000 sale price − $125,000 initial purchase price). The corporation's taxable income will total $525,000 ($500,000 ordinary income plus $25,000 capital gain). Multiplying its taxable income by 40% produces Ross Company's tax liability of $210,000.

→ REVIEW QUESTIONS

2–15 Describe the tax treatment of *ordinary income* and that of *capital gains*. What is the difference between the *average tax rate* and the *marginal tax rate*?

2–16 How does the tax treatment of dividend income by the corporation moderate the effects of *double taxation*?

2–17 What benefit results from the tax deductibility of certain corporate expenses?

Summary

THE ROLE OF FINANCIAL INSTITUTIONS AND MARKETS

This chapter described why financial institutions and markets are an integral part of managerial finance. Companies cannot get started or survive without raising capital, and financial institutions and markets give firms access to the money they need to grow. As we have seen in recent years, however, financial markets can be quite turbulent, and when large financial institutions get into trouble, access to capital is reduced and firms throughout the economy suffer as a result. Taxes are an important part of this story as well because the rules governing how business income is taxed shape the incentives of firms to make new investments.

REVIEW OF LEARNING GOALS

LG 1 **Understand the role that financial institutions play in managerial finance.** Financial institutions bring net suppliers of funds and net demanders together to help translate the savings of individuals, businesses, and governments into loans and other types of investments. The net suppliers of funds are generally individuals or households who save more money than they borrow. Businesses and governments are generally net demanders of funds, meaning that they borrow more money than they save.

LG 2 **Contrast the functions of financial institutions and financial markets.** Both financial institutions and financial markets help businesses raise the money that they need to fund new investments for growth. Financial institutions collect the savings of individuals and channel those funds to borrowers such as businesses and governments. Financial markets provide a forum in which savers and borrowers can transact business directly. Businesses and governments issue debt and equity securities directly to the public in the primary market. Subsequent trading of these securities between investors occurs in the secondary market.

LG 3 **Describe the differences between the capital markets and the money markets.** In the money market, savers who want a temporary place to deposit funds where they can earn interest interact with borrowers who have a short-term need for funds. Marketable securities, including Treasury bills, commercial paper, and other instruments, are the primary securities traded in the money market. The Eurocurrency market is the international equivalent of the domestic money market.

In contrast, the capital market is the forum in which savers and borrowers interact on a long-term basis. Firms issue either debt (bonds) or equity (stock) securities in the capital market. Once issued, these securities trade on secondary markets that are either broker markets or dealer markets. An important function of the capital market is to determine the underlying value of the securities issued by businesses. In an efficient market, the price of a security is an unbiased estimate of its true value.

LG 4 **Explain the root causes of the 2008 financial crisis and recession.** The financial crisis was caused by several factors related to investments in real estate. Financial institutions lowered their standards for lending to prospective homeowners, and institutions also invested heavily in mortgage-backed securities. When home prices fell and mortgage delinquencies rose, the value of the mortgage-backed securities held by banks plummeted, causing some banks to fail and many others to restrict the flow of credit to business. That, in turn, contributed to a severe recession in the United States and abroad.

LG 5 **Understand the major regulations and regulatory bodies that affect financial institutions and markets.** The Glass-Steagall Act created the FDIC and imposed a separation between commercial and investment banks. The act was designed to limit the risks that banks could take and to protect depositors. More recently, the Gramm-Leach-Bliley Act essentially repealed the elements of Glass-Steagall pertaining to the separation of commercial and investment banks. After the recent

financial crisis, much debate has occurred regarding the proper regulation of large financial institutions. The Dodd-Frank Act was passed in 2010 and contained a host of new regulatory requirements, the effects of which are yet to be determined.

The Securities Act of 1933 and the Securities Exchange Act of 1934 are the major pieces of legislation shaping the regulation of financial markets. The 1933 act focuses on regulating the sale of securities in the primary market, whereas the 1934 act deals with regulations governing transactions in the secondary market. The 1934 act also created the Securities and Exchange Commission, the primary body responsible for enforcing federal securities laws.

LG 6 **Discuss business taxes and their importance in financial decisions.** Corporate income is subject to corporate taxes. Corporate tax rates apply to both ordinary income (after deduction of allowable expenses) and capital gains. The average tax rate paid by a corporation ranges from 15 to 35 percent. Corporate taxpayers can reduce their taxes through certain provisions in the tax code: dividend income exclusions and tax-deductible expenses. A capital gain occurs when an asset is sold for more than its initial purchase price; gains are added to ordinary corporate income and taxed at regular corporate tax rates. (For convenience, we assume a 40 percent marginal tax rate throughout.)

Opener-in-Review

In the chapter opener, you read about the steep decline in home prices in Phoenix. Starting in August 2011, home prices there began to rebound. Consider a buyer who purchased a home in Phoenix that month for $150,000, using $30,000 of her own funds as a down payment and borrowing the remaining $120,000 from a bank via a 30-year mortgage. Two years later, prices in Phoenix rose by 30 percent, and the house was then worth $195,000. Assuming that after making 2 years of payments on the 30-year mortgage, the outstanding mortgage balance was still $118,000. How much equity does the buyer have in her home? What rate of return has she earned on her initial $30,000 investment?

Self-Test Problem (Solution in Appendix)

LG 6 **ST2–1** **Corporate taxes** Montgomery Enterprises, Inc., had operating earnings of $280,000 for the year just ended. During the year, the firm sold stock that it held in another company for $180,000, which was $30,000 above its original purchase price of $150,000, paid 1 year earlier.

a. What is the amount, if any, of capital gains realized during the year?

b. How much total taxable income did the firm earn during the year?

c. Use the corporate tax rate schedule given in Table 2.1 to calculate the firm's total taxes due.

d. Calculate both the *average tax rate* and the *marginal tax rate* on the basis of your findings.