

# Chapter 1

## The Role of Managerial Finance

### ■ Instructor's Resources

#### Overview

This chapter introduces the students to the field of finance and explores career opportunities in both financial services and managerial finance. The three basic legal forms of business organization (sole proprietorship, partnership, and corporation) and their strengths and weaknesses are described. The managerial finance function is defined and differentiated from economics and accounting. A discussion of the financial manager's goals—maximizing shareholder wealth and preserving stakeholder wealth—and the role of ethics in meeting these goals is presented. The chapter then summarizes the three key activities of the financial manager: financial analysis and planning, making investment decisions, and making financing decisions. The chapter includes discussion of the agency problem—the conflict that exists between managers and owners in a large corporation.

This chapter, and all that follow, emphasizes how the chapter content plays a vital role in the student's professional and personal life. Each chapter includes an early discussion of the relevance of the topic to majors in accounting, information systems, management, marketing, and operations. Throughout each chapter are detailed examples of how the chapter's topic relates to the student's financial life. These pedagogic tools should motivate students to grasp quickly an understanding of the chapter content and employ it in both their professional and personal lives.

### ■ Suggested Answer to *Opener-in-Review* Question

**Facebook sold shares to investors at \$38 each in its IPO. One year later, its stock price was hovering around \$26. What was the percentage drop in Facebook shares in its first year as a public company? Just after the IPO, Facebook's CEO, Mark Zuckerberg, owned 443 million shares. What was the total value of his Facebook stock immediately after the IPO and one year later? How much wealth did Zuckerberg personally lose over the year?**

Percentage drop in Facebook shares in its first year as a public company

$$= (\$38 - \$26) / \$38 \times 100 = 31.58\%$$

Total value of Mark Zuckerberg's Facebook stock immediately after the IPO

$$= \$38 \times 443 \text{ million} = \$16,834 \text{ million}$$

Total value of Mark Zuckerberg's Facebook stock one year after the IPO

$$= \$26 \times 443 \text{ million} = \$11,518 \text{ million}$$

Total personal loss of Mark Zuckerberg over the year

$$= \$16,834 \text{ million} - \$11,518 \text{ million}$$

$$= \$5,316 \text{ million}$$

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## ■ Answers to Review Questions

1. *Finance* is the art and science of managing money. Finance affects all individuals, businesses, and governments in the process of the transfer of money through institutions, markets, and instruments. At the personal level, finance is concerned with an individual's decisions regarding the spending and investing of income. Businesses also have to determine how to raise money from investors, how to invest money in an attempt to earn a profit, and how to reinvest profits in the business or distribute them back to investors.
2. *Financial services* is the area of finance concerned with the design and delivery of advice and financial products to individuals, businesses, and governments. It involves a variety of interesting career opportunities within the areas of banking, personal financial planning, investments, real estate, and insurance. Managerial finance is concerned with the duties of the financial manager working in a business. *Managerial finance* encompasses the functions of budgeting, financial forecasting, credit administration, investment analysis, and funds procurement for a firm. Managerial finance is the management of the firm's funds within the firm. This field offers many career opportunities, including financial analyst, capital budgeting analyst, and cash manager. (*Note: Other answers are possible.*)
3. Sole proprietorships are the most common form of business organization, while corporations are responsible for the majority of business revenues. The majority of sole proprietorships operate in the wholesale, retail, service, and construction industries. Although corporations engage in all types of businesses, manufacturing firms account for the largest portion of corporate business receipts and net profits.
4. Stockholders are the owners of a corporation, whose ownership, or equity, takes the form of common stock or, less frequently, preferred stock. They elect the board of directors, which has the ultimate authority to guide corporate affairs and set general policy. The board is usually composed of key corporate personnel and outside directors. The president or chief executive officer (CEO) reports to the board. He or she is responsible for day-to-day operations and carrying out the policies established by the board. The owners of the corporation do not have a direct relationship with management but give their input through the election of board members and voting on major charter issues. The owners of the firm are compensated through the receipt of dividends paid by the firm or by realizing capital gains through increases in the price of their common stock shares.
5. The most popular form of limited liability organizations other than corporations are:
  - Limited partnerships—A partnership with at least one general partner with unlimited liability and one or more limited partners who have limited liability. In return for the limited liability, the limited partners are prohibited from active management of the partnership.
  - S corporation—If certain requirements are met, the S corporation can be taxed as a partnership but receive most of the benefits of the corporate form of organization.
  - Limited liability company (LLC)—This form of organization is like an S corporation in that it is taxed as a partnership but primarily functions like a corporation. The LLC differs from the S corporation in that it is allowed to own other corporations and be owned by other corporations, partnerships, and non-U.S. residents.
  - Limited liability partnership (LLP)—A partnership form authorized by many states that gives the partners limited liability from the acts of other partners, but not from personal individual acts of malpractice. The LLP is taxed as a partnership. This form is most frequently used by legal and accounting professionals.

These firms generally do not have large numbers of owners. Most typically they have fewer than 100 owners.

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6. Virtually every function within a firm is in some way connected with the receipt or disbursement of cash. The cash relationship may be associated with the generation of sales through the marketing department, the incurring of raw material costs through purchasing, or the earnings of production workers. Because finance deals primarily with management of cash for operation of the firm, every person within the firm needs to be knowledgeable of finance to work effectively with employees of the financial departments.

Individuals plan, monitor, and assess the financial aspects of their activities over a given period through the consideration of cash inflows and outflows.

7. The *goal of a firm*, and therefore of all managers, is to maximize shareholder wealth. This goal is measured by share price; an increasing price per share of common stock relative to the stock market as a whole indicates achievement of this goal.
8. Profit maximization is not consistent with wealth maximization due to: (1) the timing, (2) earnings that do not represent cash flows available to stockholders, and (3) a failure to consider risk.
9. *Risk* is the chance that actual outcomes may differ from expected outcomes. Financial managers must consider both risk and return because of their inverse effect on the share price of the firm. Increased risk may decrease the share price, while increased return is likely to increase the share price.
10. In recent years, the magnitude and severity of “white collar crime” has increased dramatically, with a corresponding emphasis on prosecution by government authorities. As a result, the actions of all corporations and their executives have been subjected to closer scrutiny. The increased scrutiny of this type of crime has resulted in many firms establishing corporate ethics guidelines and policies to cover employee actions in dealing with all corporate constituents. The adoption of high ethical standards by a corporation strengthens its competitive position by reducing the potential for litigation, maintaining a positive corporate image, and building shareholder confidence. The result is enhancement of long-term value and a positive effect on share price.
11. The treasurer or the chief financial manager typically manages a firm’s cash, investing surplus funds when available and securing outside financing when needed. The treasurer also oversees a firm’s pension plans and manages critical risks related to movements in foreign currency values, interest rates, and commodity prices. The treasurer in a mature firm must make decisions with respect to handling financial planning, acquisition of fixed assets, obtaining funds to finance fixed assets, managing working capital needs, managing the pension fund, managing foreign exchange, and distribution of corporate earnings to owners.
12. Finance is often considered a form of applied economics. Firms operate within the economy and must be aware of the economic principles, changes in economic activity, and economic policy. Principles developed in economic theory are applied to specific areas in finance. The primary economic principle used in managerial finance is *marginal cost–benefit analysis*, the principle that financial decisions should be made and actions taken only when the added benefits exceed the added costs. Nearly, all financial decisions ultimately come down to an assessment of their marginal benefits and marginal costs.
13. Accountants operate on an accrual basis, recognizing revenues at the point of sale and expenses when incurred. The financial manager focuses on the actual inflows and outflows of cash, recognizing revenues when actually received and expenses when actually paid.

Accountants primarily collect and present financial data; financial managers devote attention primarily to decision making through analysis of financial data.

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14. The two key activities of the financial manager as related to a firm's balance sheet are
  - a. Making investment decisions: Determining both the most efficient level and the best mix of assets; and
  - b. Making financing decisions: Establishing and maintaining the proper mix of short- and long-term financing and raising needed financing in the most economical fashion.

Investment decisions generally refer to the items that appear on the left-hand side of the balance sheet (current and fixed assets). Financing decisions deal with the items that appear on the right-hand side of the balance sheet (current liabilities, long-term debt, and stockholders' equity).

15. *Corporate governance* refers to a system of organizational control that is used to define and establish lines of responsibility and accountability among major participants in a corporation. These participants include the shareholders, board of directors, officers and managers of the corporations, and other stakeholders. A company's organizational chart is an example of a broad arrangement of corporate governance. More detailed responsibilities would be established within each branch of the organizational chart.

The Sarbanes-Oxley Act of 2002 is directed toward reducing the apparent conflicts of interest that exist in many corporate structures. The act has many provisions, but the major thrust of the act is to reduce the number of situations in which a conflict of interest can arise and to hold management more accountable for the financial and operating information they communicate to the public.

16. Agency problems arise when managers deviate from the goal of maximization of shareholder wealth by placing their personal goals ahead of the goals of shareholders. These problems in turn give rise to agency costs. Agency costs are costs borne by shareholders due to the presence or avoidance of agency problems, and in either case represent a loss of shareholder wealth. For example, shareholders incur agency costs when managers fail to make the best investment decision or when managers have to be monitored to ensure that the best investment decision is made, because either situation is likely to result in a lower stock price.

The agency problem and the associated agency costs can be reduced by a properly constructed and followed corporate governance structure. The structure of the governance system should be designed to institute a system of checks and balances to reduce the ability and incentives of management to deviate from the goal of shareholder wealth maximization.

17. *Structuring expenditures* are currently the most popular way to deal with the agency problem—and also the most powerful and expensive. Compensation plans can be either incentive or performance plans. *Incentive plans* tie management performance to share price. Managers may receive stock options giving them the right to purchase stock at a set price. This provides the incentive to take actions that maximize stock. This form of compensation plan is not favorable because of market behavior, which has a significant effect on share price and is not under management's control. As a result, *performance plans* are more popular today. With these, compensation is based on performance measures, such as earnings per share (EPS), EPS growth, or other return ratios. Managers may receive *performance shares* and/or *cash bonuses* when stated performance goals are reached.

In practice, recent studies have been unable to document any significant correlation between CEO compensation and share price.

18. Market forces—for example, shareholder activism from large institutional investors—can reduce or avoid the agency problem because these groups can use their voting power to elect new directors who support their objectives and will act to replace poorly performing managers. In this way, these groups place pressure on management to take actions that maximize shareholder wealth.

The threat of hostile takeovers also acts as a deterrent to the agency problem. *Hostile takeovers* occur when a company or group not supported by existing management attempts to acquire the firm. Because the acquirer looks for companies that are poorly managed and undervalued, this threat motivates managers to act in the best interests of the firm's owners.

Institutional investors are a powerful source of shareholder involvement in the monitoring of managers to reduce the agency problem. Institutions hold large quantities of shares in many of the corporations in their portfolio. Managers of these institutions should be active in the monitoring of management and vote their shares for the benefit of the shareholders. The power of institutional investors far exceeds the voting power of individual investors.

## ■ Suggested Answer to *Focus on Practice Box: Professional Certifications in Finance*

**Why do employers value having employees with professional certifications?**

Studying to pass certification exams allows employees to continue their education beyond their undergraduate degree. The study will be focused on one area of finance, which is likely to be that needed to perform their job well. Furthermore, it will allow the employer to advertise the additional training of the employees and, thereby, attract additional business.

## ■ Suggested Answer to *Focus on Ethics Box: Critics See Ethical Dilemmas in Google Glass*

**Is the goal of maximization of shareholder wealth necessarily ethical or unethical?**

It is not the goal that makes maximization of shareholder wealth ethical or unethical; it is actions of financial managers in pursuit of this goal.

**What responsibility, if any, does Google have to protect the privacy of those who interact with other people wearing Glass?**

Google has a responsibility to ensure that its products and users of its product protect the privacy of those who interact with the users of Google's products. Google Glass poses an ethical challenge as users could seemingly videotape or photograph others without their knowledge. It is Google's responsibility to ensure that its devices cannot be used to capture images of people inconspicuously. For example, in some countries like Germany, it is legally prohibited to photograph a person in certain circumstances without the consent of the concerned person. Google Glass raises an ethical and legal concern as it allows for shooting pictures secretly in violation of law.

## ■ Answers to Warm-Up Exercises

E1-1. Comparison of advantages and disadvantages of a partnership versus incorporation.

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**Answer:** Partnerships as each partner is taxed on his/her personal tax return.

Strengths:

- Can raise more funds than sole proprietorships
- Borrowing power enhanced by more owners
- More available brain power and managerial skill
- Income included and taxed on partner's personal tax return

Weaknesses:

- Owners have unlimited liability and may have to cover debts of other partners
- Partnership is dissolved when a partner dies
- Difficult to liquidate or transfer partnership

E1-2 Timings of cash flows

**Answer:** Based on the information provided, the choice is not obvious. Even though the second project is expected to provide the larger overall increase in earnings and, therefore, is the more profitable project, the goal of the firm is to maximize value so timing, cash flow, and risk have to be considered to determine which project is superior. Although it is often the case that profit maximization leads to value maximization, it is definitely not always the case.

E1-3. Cash flow vs. accrued profits

**Answer:** It is not unusual for a firm to be profitable yet experience a cash crunch. The most common cause is when expenses have a shorter due date than expected revenue. In such cases, the firm must arrange short-term financing to meet its debt obligations before the revenue arrives. If the forthcoming cash crunch is not a new situation for this firm, management should probably consider going ahead with the year-end party if it is important for employee morale and the future success of the firm, as long as adequate short-term funding can be arranged. On the other hand, if the firm has not experienced such a cash crunch before, there may be larger problems looming ahead, and it would be unseemly to spend cash on a party that would be better spent meeting the debt obligations of the firm.

E1-4. Sunk costs

**Answer:** Marginal cost-benefit analysis ignores sunk costs, so the \$2.5 million dollars is irrelevant to the current decision that must be made. At this point there are two questions that must be answered. First, will the \$10,000 additional investment generate a *PV* of expected revenue that will exceed the \$10,000 investment? In other words, will the project generate a positive net *present value*? If it does, the project must be considered further to see if it is the best use of capital. If the firm has a need to ration capital, the project must then be compared to other projects competing for the limited capital to see if it is viable. The fact that the project's technology has been surpassed by new technology does not immediately disqualify the project because new technology does not ensure a positive cost-benefit result. In this case, a small \$10,000 investment might avoid a heavy expenditure in new technology. Depending upon the industry, however, failure to keep up with competitors can be devastating. The key may well lie in the description "the project has little chance to be viable," which indicates that approving the \$10,000 is likely to be throwing good money after bad.

E1-5. Agency costs

**Answer:** Agency costs are the costs borne by stockholders to maintain a governance structure that ensures against dishonest acts of management and gives managers the financial incentive to maximize share price. One example of agency costs is stock options, which are used to provide an incentive for managers to work diligently for the benefit of the firm. Tips are similar to stock options in that they are offered as rewards for good service much as stock options are used to reward managers, presumably

based on their good performance—which subsequently leads to a higher stock price. The Donut Shop, Inc., example does not represent a clear case of agency costs because it is the management itself that has instituted the “No tips” policy and the employees have responded with reduced performance. By banning tips, the management has created a situation where an agency cost may be necessary to provide an incentive for employees to resume their former level of performance.

One solution that may work for Donut Shop, Inc., is to institute a profit-sharing plan that reaches down to the employee level where the slowdown and inefficiency are occurring. A profit-sharing plan is designed to motivate the employees and could alleviate the aggravation caused by the no-tip policy but must be clearly identified as the replacement to tipping in order to be effective. A profit-sharing plan is usually viewed by the employees as a reward for good performance but does not have the immediacy of the positive effect that an employee gets from a tip.

It is unclear from the case whether the new no-tip policy is a company-wide policy or simply the actions of a few branch managers. However, the real solution here is to recognize that the no-tip policy has created an unnecessary backlash that can be alleviated by reversing management’s position without incurring the additional costs of revising the current employee benefit plan and paying out a portion of corporate profits.

## ■ Solutions to Problems

P1-1. Liability comparisons

### LG 2; Basic

- a. John will be held personally liable for the \$120,000 in outstanding debt.
- b. John and Peter will be held personally liable for the \$120,000 in outstanding debt and since the distribution is equal, both will have to \$60,000.
- c. John will be held liable for the outstanding debt to the amount he invested in the firm, that is, \$50,000.

P1-2. Accrual income vs. cash flow for a period

### LG 4; Basic

- |                    |                    |
|--------------------|--------------------|
| a. Sales revenue   | \$ 500,000         |
| Less: Costs        | <u>400,000</u>     |
| Net profit         | <u>\$ 100,000</u>  |
| b. Cash inflow     | \$ 150,000         |
| Less: Cash outflow | <u>400,000</u>     |
| Net cash flow      | <u>(\$250,000)</u> |
- c. Accountant: Firm made a profit of \$100,000 on the deal and the accountant is satisfied.  
Financial manager: Firm ran out of cash and financial manager is not satisfied.

## P1-3. Cash flow statement

**LG 4; Intermediate**

- a. Cash inflows = Interest paid + Salaries  
 = \$500 + \$5,500  
 = \$6,000
- Cash outflows = Loan repayment + Groceries bill + Gas bill + Utility bills  
 = \$1,550 + \$850 + \$200 + \$310  
 = \$2,910
- b. Net cash flow = Total cash inflows – Total cash outflows  
 = \$6,000 – \$2,910  
 = \$3,090

Sheldon's total cash inflow exceeds his total cash outflow by \$3,090.

- c. If there is a surplus of funds, Sheldon may invest the funds in some form of short-term investment.  
 d. If there is a shortfall of funds, Sheldon will have to either borrow or withdraw the amount required from his savings (short-term investments). Sheldon could also reduce his expenses by spending less.

## P1-4. Marginal cost-benefit analysis and the goal of the firm

**PG 3, 5; Challenge**

- a. Marginal cost-benefit analysis – Economic principle that states that financial decisions should be made and actions taken only when the added benefits exceed the added costs.
- b. Marginal benefit = Benefits of new system – Benefits of old system  
 = \$325,000 – \$125,000  
 = \$200,000
- c. Marginal cost = Cost of new system – Proceeds of sale of current system  
 = \$250,000 – \$55,000  
 = \$195,000
- d. Wendy will recommend that the new warehouse system should be bought as the net benefit is \$5,000 (\$200,000 – \$195,000).
- e. Yes, as the new system is expected to increase the stock price which will increase the shareholder wealth.

## P1-5. Identifying agency problems, costs, and resolutions

**LG 4; Intermediate**

The goal of management is to increase the stock price to maximize the shareholder wealth. If the management team believes that it can improve the profitability of the firm that the share price will exceed \$38.60, then management should fight the hostile takeover. If the management team believes that the company B will actually pay more than \$38.60 to acquire the company, then the management team should still fight the offer. However, if the current management team cannot increase the value of the firm beyond the bid price (\$38.60), then the management team is not acting in the interests of the stockholders by fighting the offer. Another aspect is that the current management team often loses its job when the company is acquired by another company. Due to this reason, the management team will use this as an incentive to fight takeovers.

## P1-6. Ethics Problem

**LG 3; Intermediate**

The current market price of the stock of the company reflects, among other things, market opinion about the quality of firm management. If the sale price is low, this indirectly reflects on the reputation of the managers, as well as potentially impacting their standing in the employment market. Alternatively, if the sale price is high, this indicates that the market believes current management is increasing firm value, and therefore doing a good job. An increase in the selling price would mean that shareholder wealth was maximized.

## ■ Case

*Case studies are available on [www.myfinancelab.com](http://www.myfinancelab.com).*

### **Assessing the Goal of Sports Products, Inc.**

- a. Maximization of shareholder wealth, which means maximization of share price, should be the primary goal of the firm. Unlike profit maximization, this goal considers timing, cash flows, and risk. It also reflects the worth of the owners' investment in the firm at any time. It is the value they can realize should they decide to sell their shares.
- b. Yes, there appears to be an agency problem. Although compensation for management is tied to profits, it is not directly linked to share price. In addition, management's actions with regard to pollution controls suggest a profit-maximization focus, which would maximize their earnings, rather than an attempt to maximize share price.
- c. The firm's approach to pollution control seems to be questionable ethically. While it is unclear whether their acts were intentional or accidental, it is clear that they are violating the law—an illegal act potentially leading to litigation costs—and as a result are damaging the environment, an immoral and unfair act that has potential negative consequences for society in general. Clearly, Sports Products has not only broken the law but also established poor standards of conduct and moral judgment.
- d. From the information given there appears to be a weak corporate governance system. The fact that management is able to measure and reward their performance on profits indicates that no one is watching out for the shareholders. Loren and Dale's concerns indicate that employees apparently have an interest in the long-run success of the firm. Allowing the continuation of pollution violations is also apparently escaping the interest and control ability of others who should be monitoring the firm.
- e. Some specific recommendations for the firm include:
  - Tie management, and possibly employee, compensation to share price or a performance-based measure and make sure that all involved own stock and have a stake in the firm. Being compensated partially on the basis of share price or another performance measure and owning stock in the firm will more closely link the wealth of managers and employees to the firm's performance.
  - Comply with all federal and state laws as well as accepted standards of conduct or moral judgment.
  - Establish a corporate ethics policy, to be read and signed by all employees.
  - Set up a corporate governance system that has as its basis the oversight and welfare of all the stakeholders in the firm.(Other answers are, of course, possible.)

## ■ Spreadsheet Exercise

The answer to Chapter 1's Monsanto spreadsheet problem is located on the Instructor's Resource Center at [www.pearsonglobaleditions.com/gitman](http://www.pearsonglobaleditions.com/gitman) under the Instructor's Manual.

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## ■ Group Exercise

*Group exercises are available on MyFinanceLab.*

### Notes for Adopters

The motivation for these group exercises is to place the learning goals of each chapter within the context of a fictitious firm while giving students a valuable set of teamwork skills. Creativity is encouraged, while the strong links of each assignment to a real-world, shadow firm should ground each group's work in reality. Any of these assignments and their deliverables can be modified to better fit within an adopter's course goals as they were designed with an eye toward flexibility of use. The learning through these exercises should be something students enjoy, being both applicable to the real world and less confining than traditional homework.

The first issue for adopters to address is group composition and size. Should students self-separate or be divided by their instructor? How big should the groups be? This is a semester-long assignment and students will need to get along with their fellow group members. If students choose their own groups it may, though not always, reduce the incidence of intra-group squabbles. Diversity within the groups might then be sacrificed, however. One strategy is to ask students to first pair-off. The instructor can then join the pairs into groups of four. This pairing of the pairs could be done randomly through a number-in-the-hat selection process, as could the entire group setup.

Group size does matter and these exercises were designed for a workload spread across a minimum of three students. Larger groups would lessen the homework load; however, the issue of free-riding is often more prevalent in larger groups, where slackers can hide. Management of larger groups is also more challenging for the participants. The suggested group size is between three and five students.

Group leadership is another issue. The best situation might be rotating the CEO/leader, where each group member has several opportunities to be in charge. Last, these exercises were designed to allow students freedom but with the responsibility of working somewhat independently of their instructor. In this vein, the instructions for each assignment have been written to be relatively self-explanatory.

### Chapter 1

This first chapter asks students to name their fictitious firm and describe its business. As this firm is going public, students are asked to explain why it is appropriate for them to go public and also discuss different managerial roles within the corporation. The group must choose a shadow firm to follow that is publicly held, allowing them to gather a substantial amount of information about it on the Internet. This publicly traded firm should be in an industry related to their fictitious firm.

The most important counsel students could get at the outset is to spend time making these initial decisions. Later work is going to build on these choices, and careful choosing is paramount. For example, in choosing the shadow firm, students should pick a well-established firm whose information, including financials, will be easily found. This also impacts their decisions regarding their own fictitious firm. Throughout many of the subsequent chapters, students will be taking real-world information from their shadow firm and applying it to their fictitious firm; dressing their own firm with the clothes of the shadow firm. Students should feel comfortable in these clothes, so encouraging them to choose industries they're familiar with, or interested in, is helpful.

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# Chapter 2

## The Financial Market Environment

### ■ Instructor's Resources

#### Overview

Money and capital markets and their major components are introduced in this chapter. Firms need to raise capital in order to survive. Financial institutions give firms access to the money they need to grow. However, greed can drive financial managers and institutions to commit actions that get them into trouble and even force bankruptcy. These bankruptcies result in limited capital flows to firms, and both they and the whole economy can suffer. Therefore, financial institutions and markets should be well regulated. The final section covers a discussion of the impact of taxation on the firm's financial activities.

### ■ Suggested Answer to *Opener-in-Review* Question

**Consider a buyer who purchased a home 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 worth \$195,000. Assuming that after making two 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?**

Buyer's equity in her home = \$195,000 – \$118,000 = \$77,000

Rate of return =  $(\$77,000 - \$30,000) \div \$30,000 = 156.67\%$

### ■ Answers to Review Questions

1. The key participants in financial transactions are *individuals*, *businesses*, and *governments*. These parties participate both as suppliers and demanders of funds. Individuals are the net suppliers, which means that they save more dollars than they borrow, while both businesses and governments are net demanders because they borrow more than they save. One could say that individuals provide the excess funds required by businesses and governments.

Financial institutions include commercial banks and investment banks. The former assists both individuals and companies with their banking needs, while the latter concentrates efforts in the area of assisting corporations with raising funds. Until the late 1990s, the Glass-Steagall Act created a separation between the two. A shadow banking system, where non-deposit-taking enterprises lend money to firms needing cash, has grown to be as large as the traditional banking system.

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2. *Financial markets* provide a forum in which suppliers of funds and demanders of loans and investments can transact business directly.

*Primary market* is the name used to denote the fact that a security is being issued by the demander of funds to the supplier of funds. An example would be Microsoft Corporation selling new shares of common stock to the public.

*Secondary market* refers to the trading of securities among investors subsequent to the primary market issuance. In secondary market trading, no new funds are being raised by the demander of funds. The security is trading ownership among investors. An example would be individual “A” buying common stock of Microsoft through a broker from individual “B.”

Financial institutions and financial markets are not independent of each other. It is quite common to find financial institutions actively participating in both the money market and the capital market as both suppliers and demanders of funds. Financial institutions often channel their investments and obtain needed financing through the financial markets. This relationship exists because these institutions must use the structure of the financial marketplace to find a supplier of funds.

3. The *money market* is created by a financial relationship between the suppliers and demanders of short-term debt securities maturing in one year or less, such as U.S. Treasury bills, commercial paper, and negotiable certificates of deposit. The *Eurocurrency market* is the international equivalent of the U.S. money market and is used for short-term bank time deposits denominated in dollars or other major currencies.
4. The *capital market* is a financial relationship created by a number of institutions and arrangements that allows the suppliers and demanders of long-term funds (with maturities greater than one year) to make transactions. The key securities traded in the capital markets are bonds plus common and preferred stock.
5. The *broker market* consists of national and regional securities exchanges. These organizations provide a location, such as the New York Stock Exchange, to bring together the buyers and sellers of debt and equity. They create a continuous market for securities, allocate scarce capital, determine and publicize security prices, and aid in new financing.

In contrast, dealer markets are electronic markets for the buyers and sellers of securities not listed on the major exchanges. In a dealer market, physical trading locations are replaced by security dealers who offer to buy or sell securities at stated bid/ask prices. Dealers buy securities from clients and sell them to other dealers, who in turn sell them to their clients. A majority of shares traded in the dealer market are listed on Nasdaq, the National Association of Securities Dealers Automated Quotation System.

6. In addition to the U.S. capital markets, corporations can raise debt and equity funds in capital markets located in other countries. The *Eurobond market* is the oldest and largest international debt market. Corporate and government bonds issued in this market are denominated in dollars or other major currencies and sold to investors outside the country in whose currency the bonds are denominated. Foreign bond markets also provide corporations with the opportunity to tap other capital sources. Corporations or governments issue bonds denominated in the local currency and sold only in that home market. The *international equity market* allows corporations to sell blocks of stock to investors in several countries, providing a diversified investor base and additional opportunities to raise larger amounts of capital.
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7. An *efficient market* will allocate funds to their most productive uses due to competition among wealth-maximizing investors. Prices are assumed to be a function of information about the firm and economy. Only new, unexpected information will cause investors to buy or sell securities. Investors determine the price of assets through their participation in the financial markets. Changes in supply and demand continually impact prices in an efficient market.

An alternate view of market pricing is put forth by advocates of behavioral finance. This explanation of market prices combines finance and psychology. Though prices may deviate from true value for psychological and other reasons, few investors have been able to earn a risk-adjusted, positive rate of return.

8. *Securitization* is the process of pooling mortgages and then selling claims against that pool in the secondary market. Investors buying these securities extend a loan to the homeowner.
  9. *Mortgage-backed securities* represent claims on the cash flows generated by a pool of mortgages. As the homeowners pay off their mortgages, the money serves as income to the investors. The primary risk associated with mortgage-backed securities is that homeowners may not repay their loans.
  10. When a homeowner borrows money to buy a home, he borrows a fixed amount of money. As housing prices rise, the gap between what he owes and what the house is worth widens. Lenders will allow borrowers who have difficulty making mortgage payments tap this built-up equity. Therefore, mortgage default rates are relatively low.
  11. As home prices decline, the value of homes may be less than the amount owed to the bank. Hence many borrowers will simply walk away from their homes and let lenders repossess them. There will be an added supply of housing. If multiple homes in the area are facing foreclosure, the value of remaining homes will drop. At the same time, borrowers having trouble making mortgage payments will not be able to tap into any built-up equity. These homes will also be repossessed, and the number of homes for sale in an area will rise. Excess home availability will make the remaining homes less valuable, increasing the number of homeowners with houses worth less than the amount owed to the bank.
  12. A crisis in the financial sector generally has a spillover effect on the other sectors of the economy. This can be better understood by understanding the 2008 financial crisis. As mortgage-backed security delinquency rates rose, the value of still solvent mortgage-backed securities fell. This fall led to the questions about the solvency of investors, including financial institutions. Financial institutions cut back on the amount of lending, requiring higher standards for those borrowing money. Unable to obtain money easily in the money market, firms began to hoard cash and cut back expenditures. This decline hurt suppliers and curtailed employment at companies. Throughout the economy, revenues fell as financial institutions cut back on lending.
  13. Due to their enormous impact, governments typically regulate financial institutions more than most economic sectors. Banking sector troubles and other factors contributed to the worst economic contraction in U.S. history during the Great Depression. Consequently, it is not surprising that an above-average amount of legislation was enacted in the 1930s.
  14. The Securities Act of 1933 was designed to regulate activity in the primary market, ensuring that sellers of new securities provided extensive disclosure. The Securities Exchange Act of 1934 regulates the trading of securities in secondary markets. The latter legislation also created the Securities Exchange Commission to enforce federal securities laws.
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15. The *ordinary income* of a corporation is income earned through the sale of a firm's goods or services. Taxes on corporate ordinary income have two components: a fixed amount on the base figure for its income bracket level, plus a progressive percentage, ranging from 15% to 39%, applied to the excess over the base bracket figure. A *capital gain* occurs when a capital asset is sold for more than its initial purchase price. Capital gains are added to ordinary income and taxed at the regular corporate rates. The *average tax rate* is calculated by dividing taxes paid by taxable income. For firms with taxable income of \$10 million or less, it ranges from 15% to 34%. For firms with taxable income in excess of \$10 million, it ranges between 34% and 35%. The *marginal tax rate* is the rate at which additional income is taxed.
16. Dividends received from another corporation, in which the shareholding firm's position is less than one-fifth of outstanding shares, is subject to a 70% exclusion for tax purposes. The tax rate is only 30% of what it would be on fully taxable income.
17. The tax deductibility of corporate expenses reduces their actual after-tax cost. Corporate interest is a tax-deductible expense, while dividends are not.

### ■ **Suggested Answer to *Focus on Practice Box*: Berkshire Hathaway: Can Buffet Be Replaced?**

**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?**

The primary reason that Berkshire Hathaway does not split the price of its common stock is because Warren Buffett's philosophy is that a stock split is financially meaningless and only serves as a way to lower the stock price so that more investors are able to purchase the stock. Mr. Buffett has stated his belief that true investors are long-term investors who hold a stock through thick and thin. With fewer shareholders, there are fewer people that the company management must answer to, and investors who can afford the steep price of the Berkshire Hathaway stock are likely to be serious individual investors or institutional investors such as mutual funds.

### ■ **Suggested Answer to *Focus on Ethics Box*: The Ethics of Insider Trading**

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

Price efficiency does not necessarily imply that insider trading is either ethical or unethical. The efficient-market hypothesis suggests that stock prices reflect all publicly available information. Those in favor of allowing insider trading argue that it will allow private information to become public faster, allowing prices to adjust more rapidly to this information.

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

It certainly could. Consider Fama's point discussed in the case. If insider trading is allowed, insiders might have the incentive to hold back information in order to profit from the information before releasing it to the public. If this were the case, stock prices could impound information more slowly when insider trading is permitted.

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## ■ Answers to Warm-Up Exercises

E2-1. Suppliers and demanders of funds

**Answer:** Individuals as a whole spend less than they earn. The excess is invested, making it available for businesses. If individuals consume more, fewer dollars will be available for investment. This would reduce the amount of money available for new projects and drive up the required return (i.e., required return of investors buy bonds). Over time, employment, salaries, and gross domestic product would decline.

E2-2 Raising funds

**Answer:** This stock would be traded on primary market as a private offering, as it is the first time ever the company is issuing stock. This transaction would take place on the capital market as the issuing of stock is focusing on long-term finance.

E2-3 Money market vs. capital market

**Answer:** Money markets are short-term markets, so firms using these would be in need of funds for less than a year. Perhaps the business needs to increase inventory for a season, such as RV dealerships building inventory prior to the spring/summer sales period. Immediately after a large sale, a business may need to finance the presence of accounts receivable on their balance sheet. Capital markets, by contrast, typically are used for fixed assets, which a company will use over several years.

E2-4 Mortgage-backed securities

**Answer:** Questions you would ask include

- a. Real estate location (after all, the three most important determinants of real estate price are “location, location, location”)
- b. Percentage of properties in the region that are “under water” (homeowners owe more than they borrowed) or in foreclosure
- c. Type of real estate (commercial properties offer less liquidity if the market turns sour, because empty homes can be rented for revenue)
- d. Precedence in bankruptcy (would other lenders have a senior claim to properties in bankruptcy?)
- e. Quality of real estate (is it in good condition, or would there need to be repairs prior to sale?)
- f. Creditworthiness of borrowers (how likely is it that borrowers will lose their job and be unable to make payments on a timely basis?)
- g. What percentage of borrowers are behind on their mortgage payments?
- h. Will borrowers soon be experiencing an interest rate increase because they took out a mortgage with a low initial rate that was adjustable after a period of time?

E2-5 Biggest benefit of government regulation

**Answer:** While 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 benefit of government regulation is the resulting trust and confidence in the financial institutions and markets derived by society. This trust and confidence is necessary to ensure society’s participation in the financial market environment that nearly individual in one way or another hopes to benefit from.

E2-6. Dividends received exclusion

**Answer:** While 100% of corporate interest income is taxed at ordinary tax rates, only 30% of corporate dividend income is treated as taxable income. This would be the equivalent of recognizing only 1.5% [5% (1 – 0.7)] of the 5% annual dividend for tax purposes. Based solely on the tax treatment of corporate dividend income vs. interest income, Pruro, Inc., would have greater after-tax income if it chooses the Reston stock paying 5% dividends over the promissory note paying 5% interest.

## ■ Solutions to Problems

P2-1. Corporate taxes

### LG 6; Basic

- a. Total taxes due =  $\$13,750 + [0.34 \times (\$78,000 - 75,000)]$   
 =  $\$13,750 + (0.34 \times \$3,000)$   
 =  $\$14,770$
- b. Average tax rate = Tax liability / Taxable earnings  
 =  $\$14,770 / \$78,000$   
 = 18.94%
- c. 34%
- d. Earnings after tax = Taxable earnings – Tax liability  
 =  $\$78,000 - \$14,770$   
 =  $\$63,230$

P2-2. Average corporate tax rates

### LG 6; Basic

- a. The tax liability for each year:  
 2009:  $\$7,500 + [0.25 \times (\$57,000 - \$50,000)] = \$9,250$   
 2010:  $\$7,500 + [0.25 \times (\$64,000 - \$50,000)] = \$11,000$   
 2011:  $\$7,500 + [0.25 \times (\$66,500 - \$50,000)] = \$11,625$   
 2012:  $\$13,750 + [0.34 \times (\$75,250 - \$75,000)] = \$13,835$   
 2013:  $\$13,750 + [0.34 \times (\$79,350 - \$75,000)] = \$15,229$   
 The tax liability increased every year in proportion to the increase in taxable earnings.
- b. The average tax rates for each year:  
 2009:  $\$9,250 / \$57,000 = 16.23\%$   
 2010:  $\$11,000 / \$64,000 = 17.19\%$   
 2011:  $\$11,625 / \$66,500 = 17.48\%$   
 2012:  $\$13,835 / \$75,250 = 18.39\%$   
 2013:  $\$15,229 / \$79,350 = 19.19\%$   
 As the taxable earnings, and thus the tax liability increase, the average tax rate also increases. The increase in the average tax rate is very small.