Part 1 Introduction to Financial Management (Chapters 1, 2, 3, 4)

Part 2 Valuation of Financial Assets (Chapters 5, 6, 7, 8, 9, 10)

Part 3 Capital Budgeting (Chapters 11, 12, 13, 14)

Part 4 Capital Structure and Dividend Policy (Chapters 15, 16)

Part 5 Liquidity Management and Special Topics in Finance (Chapters 17, 18, 19, 20)

CHAPTER 1

Getting Started
Principles of Finance

Chapter Outline

1.1 Finance: An Overview (pgs. 36–37) → **Objective 1.** Understand the importance of finance in your personal and professional lives and identify the three primary business decisions that financial managers make.

1.2 Three Types of Business Organizations (pgs. 37–41) → **Objective 2.** Identify the key differences among the three major legal forms of business.

1.3 The Goal of the Financial Manager (pgs. 41–43) → **Objective 3.** Understand the role of the financial manager within the firm and the goal for making financial choices.

1.4 The Five Basic Principles of Finance (pgs. 43–46) → **Objective 4.** Explain the five principles of finance that form the basis of financial management for both businesses and individuals.

Principles P1, P2, P3, P4, and P5 Applied

This book examines a wide range of financial decisions that people make in their business lives as well as in their personal lives. In this chapter, we lay a foundation for the entire book by describing the boundaries of the study of finance, the different ways that businesses are organized, and the role that the financial manager plays within the firm. We also address some of the ethical dilemmas that the financial manager must face daily. Finally, we take an in-depth look at the five principles of finance that underlie all financial decisions: P Principle 1: **Money Has a Time Value**, P Principle 2: **There Is a Risk-Return Tradeoff**, P Principle 3: **Cash Flows Are the Source of Value**, P Principle 4: **Market Prices Reflect Information**, and P Principle 5: **Individuals Respond to Incentives**.

On any given day, Apple, Inc. (AAPL), will sell thousands of iPhones, iPods, iPads, and personal computers. In addition to making a myriad of production and pricing decisions, Apple must evaluate potential new products, make personnel choices, and consider new locations for Apple retail stores. Because each of these decisions affects the risk and timing of Apple's operations as well as the cash they generate, we can view all of them as financial decisions.

Like Apple, you face financial decisions in your personal life. Whether evaluating the terms of credit card offers or weighing whether to go to graduate school right after graduation or to work full-time for a year or two, you will find that the same fundamental principles that guide business decisions are useful to you in making personal financial decisions.

Regardless of Your Major…

"Welcome to the World of Finance"

For the rest of your life, you will be both working and living in a world where you will be making choices that have financial consequences. Corporations make money by introducing new products, opening new sales outlets, hiring the best people, and improving productivity. All of these actions involve investing or spending money today with the hope of generating more money in the future. Regardless of your major, after graduation you are likely to be working for an organization where your choices have uncertain costs and benefits, both now and in the future. This will be the case if you are working for a major corporation such as General Electric (GE), starting your own firm, or working for a nonprofit organization such as St. Jude Children's Research Hospital. Moreover, you will be faced with a variety of personal choices—whether you can afford a new car or a mortgage or how much to begin investing in a retirement fund—that also require you to evaluate alternatives that involve uncertain future payoffs. Regardless of your major, there is simply no getting around the fact that you will be making financial choices throughout your life.

Your Turn: See Study Question 1–1.

1.1 Finance: An Overview

To begin our study of business finance, we present an overview of the field and define the types of decisions addressed by the study of business finance. We also discuss the motivation for studying finance and briefly introduce the five principles of finance.

What Is Finance?

Finance is the study of how people and businesses evaluate investments and raise capital to fund them. Our interpretation of an investment is quite broad. In 2016, when Fitbit introduced the Fitbit Blaze, an activity-focused smartwatch, it was clearly making a long-term investment. The firm had to devote considerable expense to designing, producing, and marketing the smartwatch with the hope that it would eventually capture a sufficient amount of market share from the Apple Watch and Android Wear smartwatch to make the investment worthwhile. But Fitbit also makes an investment decision whenever it hires a fresh new graduate, knowing that it will be paying a salary for at least six months before the employee will have much to contribute.

Thus, three basic questions are addressed by the study of finance:

1. What long-term investments should the firm undertake? This area of finance is generally referred to as **capital budgeting**.
2. How should the firm raise money to fund these investments? The firm's funding choices are generally referred to as **capital structure** decisions.
3. How can the firm best manage its cash flows as they arise in its day-to-day operations? This area of finance is generally referred to as **working capital management**.

We'll be looking at each of these three areas of business finance—capital budgeting, capital structure, and working capital management—in the chapters ahead.

Why Study Finance?

Even if you are not planning a career in finance, a working knowledge of finance will take you far in both your personal and your professional lives.

Those interested in management will need to study topics such as strategic planning, personnel, organizational behavior, and human relations, all of which involve spending money today in the hope of generating more money in the future. For example, in 2016 GM made a

strategic decision to invest $500 million in Lyft, the ride-hailing start-up. GM and Lyft have joined together to develop a network of self-driving cars that riders can call up on demand, and in the short run, GM will provide cars to Lyft drivers through short-term rentals in key U.S. cities. To say the least, this was a major strategic decision that will impact both GM and Lyft for many years. Similarly, marketing majors will need to understand how to price products, when to price them aggressively, and how much to spend on advertising them. Because aggressive marketing costs money today but generates rewards in the future, it should be viewed as an investment that the firm needs to finance. Production and operations management majors will need to understand how best to manage a firm's production and control its inventory and supply chain. All these topics involve risky choices that relate to the management of money over time, which is the central focus of finance.

Although finance is primarily about the management of money, a key component of finance is the management and interpretation of information. Indeed, if you pursue a career in management information systems or accounting, finance managers are likely to be your most important clients.

For the student with entrepreneurial aspirations, an understanding of finance is essential—after all, if you can't manage your finances, you won't be in business very long.

Finally, an understanding of finance is important to you as an individual. The fact that you are reading this book indicates that you understand the importance of investing in yourself. By obtaining a college degree, you are clearly making sacrifices in the hope of making yourself more employable and improving your chances of having a rewarding and challenging career. Some of you are relying on your own earnings and the earnings of your parents to finance your education, whereas others are raising money or borrowing it from the **financial markets**, institutions that facilitate financial transactions.

Financial decisions are everywhere, both in your personal life and in your career. Although the primary focus of this book is on developing the corporate finance tools and techniques that are used in the business world, you will find that much of the logic and many of the tools we develop and explore along the way will also apply to decisions you will be making in your personal life. In the future, both your business and your personal lives will be spent in the world of finance. Because you're going to be living in that world, it's time to learn about its basic principles.

We will take an in-depth look at these principles at the end of this chapter. As you will see, you do not need an extensive knowledge of finance to understand these principles, and, once you know and understand them, they will help you understand the rest of the concepts presented in this book. When you are looking at more complex financial concepts, think of these principles as taking you back to the roots of finance.

Before you move on to 1.2

Concept Check | 1.1

1. What are the three basic types of issues that arise in business that are addressed by the study of business finance?
2. List three nonfinance careers to which the study of finance applies.

1.2 Three Types of Business Organizations

Although numerous and diverse, the legal forms of business organization fall into three categories: the sole proprietorship, the partnership, and the corporation. Figure 1.1 provides a quick reference guide for these organizational forms.

Sole Proprietorship

The **sole proprietorship** is a business owned by a single individual who is entitled to all of the firm's profits and who is also responsible for all of the firm's **debt**—that is, what the firm owes. In effect, there is no separation between the business and the owner when it comes to being liable for debts or being sued. If sole proprietors are sued, they can lose not only all they invested in the proprietorship but also all their personal assets. A sole proprietorship is often

Figure 1.1

Characteristics of Different Forms of Business

Business Form	Number of Owners	Are Owners Liable for the Firm's Debts?	Do Owners Manage the Firm?	Does an Ownership Change Dissolve the Firm?	Access to Capital	Taxation
Sole Proprietorship	One	Yes	Yes	Yes	Very limited	Personal Taxes
Partnership	Unlimited	Yes; each partner has unlimited liability	Yes	Yes	Very limited	Personal Taxes
Limited Partnership (with General Partners [GPs] and Limited Partners [LPs])	At least one GP, but no limit on LPs	GPs—unlimited liability LPs—limited liability	GPs—manage the firm LPs—no role in management	GPs—yes LPs—no, can change[1]	Limited	Personal Taxes
Limited Liability Company (LLC)	Unlimited	No	Yes	No	Dependent on size	Personal Taxes
Corporation	Unlimited	No	No—although managers generally have an ownership stake[2]	No	Very easy access	Double Taxation: Earnings taxed at corporate level Dividends taxed at personal level

[1]It is common for LPs to require approval from the other partners before a partner's ownership can be transferred.

[2]Owners are not prohibited from managing the corporation.

>> END FIGURE 1.1

used in the initial stages of a firm's life. This is in part because forming a sole proprietorship is very easy; there are no forms to file and no partners to consult—the founder of the business is the sole owner. However, these organizations usually have limited access to outside sources of financing. The owner of a sole proprietorship typically raises money by investing his or her own funds and by borrowing from a bank. However, because there is no difference between the sole proprietor and the business, there is no difference between personal borrowing and business borrowing. The owner of the business is personally liable for the debts of that business while profits are taxed at the owner's tax rate. In addition to bank loans, personal loans from friends and family are important sources of financing for sole proprietorships.

Partnership

A **general partnership** is an association of two or more persons who come together as co-owners for the purpose of operating a business for profit. Just as with the sole proprietorship, there is no separation between the general partnership and its owners with respect to being liable for debts or being sued. Its primary point of distinction from a sole proprietorship is that the **partnership** has more than one owner. Just like with a "sole proprietorship," the profits of the partnership are taxed as personal income. An important advantage of the partnership is that it provides access to **equity**, or ownership, as well as financing from multiple owners in return for partnership **shares**, or units of ownership.

In a **limited partnership**, there are two classes of partners: general and limited. The **general partner** actually runs the business and faces unlimited liability for the firm's debts, whereas the **limited partner** is liable only up to the amount the limited partner invested. The life of the partnership is tied to the life of the general partner, just as that of the sole

proprietorship is tied to the life of the owner. In addition, it is difficult to transfer ownership of the general partner's interest in the business—this generally requires the formation of a new partnership. However, the limited partner's shares can be transferred to another owner without the need to dissolve the partnership, although finding a buyer may be difficult.

Corporation

If very large sums of money are needed to build a business, then the typical organizational form chosen is the **corporation**. As early as 1819, U.S. Supreme Court Chief Justice John Marshall set forth the legal definition of a corporation as "an artificial being, invisible, intangible, and existing only in the contemplation of law."[1] The corporation legally functions separately and apart from its owners (the **shareholders**, also referred to as the **stockholders**). As such, the corporation can individually sue and be sued and can purchase, sell, or own property, and its personnel are subject to criminal punishment for crimes committed in the name of the corporation.

There are three primary advantages of this separate legal status. First, the owners' liability is confined to the amount of their investment in the company. In other words, if the corporation goes under, the owners can lose only their investment. This is an extremely important advantage of a corporation. After all, would you be willing to invest in American Airlines if you would be held personally liable if one of its planes crashed? The second advantage of separate legal status for the corporation is that the life of the business is not tied to the status of the investors. The death or withdrawal of an investor does not affect the continuity of the corporation. The management continues to run the corporation when the ownership shares are sold or passed on through inheritance. For example, the inventor Thomas Edison founded General Electric (GE) over a century ago. Edison died in 1931, but the corporation lives on. Finally, these two advantages result in a third advantage, the ease of raising capital. It is much easier to convince investors to put their money in a corporation when they know that the most they can lose is what they invest and that they can easily sell their stock if they wish to do so.

The corporation is legally owned by its current set of stockholders, or owners, who elect a board of directors. The directors then appoint managers who are responsible for determining the firm's direction and policies. Although even very small firms can be organized as corporations, it is usually the larger firms that need to raise large sums of money for investment and expansion that use this organizational form. As such, this is the legal form of business that we will be examining most frequently in this textbook.

One of the drawbacks of the corporate form is the double taxation of earnings that are paid out in the form of **dividends**. When a corporation earns a profit, it pays taxes on that profit (the first taxation of earnings) and pays some of that profit back to the shareholders in the form of dividends. Then the shareholders pay personal income taxes on those dividends (the second taxation of earnings). In contrast, the earnings of proprietorships and partnerships are not subject to double taxation. Needless to say, this is a major disadvantage of corporations.[2]

When entrepreneurs and small business owners want to expand, they face a tradeoff between the benefits of the corporate form and the potential loss of control and higher taxes that accompany it. For this reason, an attractive alternative to the corporation for such a small business is the **limited liability company (LLC)**, a cross between a partnership and a corporation. An LLC combines the tax benefits of a partnership (no double taxation of earnings) with the limited liability benefit of a corporation (the owners' liability is limited to what they invested).[3] Thus, unlike with a proprietorship or partnership, there is a separation

[1]*The Trustees of Dartmouth College v. Woodward*, 4 Wheaton 518, 636 (1819).

[2]Currently, qualified dividends from domestic corporations and qualified foreign corporations are taxed at a maximum rate of 20 percent, with some high-income investors owing an additional 3.8 percent surtax on their net investment income. However, if you're in the 10 percent or 15 percent rate bracket, your tax rate on these dividends drops to 0 percent.

[3]In addition, there is the S-type corporation, which provides limited liability while allowing the business owners to be taxed as if they were a partnership; that is, distributions back to the owners are not taxed twice, as is the case with dividends in the standard corporate form. Unfortunately, a number of restrictions that accompany the S-type corporation detract from the desirability of this business form. As a result, the S-type corporation has been losing ground in recent years in favor of the limited liability company.

between the LLC and the owners with respect to being liable for debts or being sued. As a result, the most an LLC owner can lose is what he or she invested. Because LLCs operate under state laws, both the states and the Internal Revenue Service (IRS) have rules for what qualifies as an LLC, and different states have different rules. The bottom line is that if an LLC looks too much like a corporation, it will be taxed as one.

As you can see in Figure 1.1, the corporation is the business form that provides the easiest access to capital. As a result, it is the most common choice for firms that are growing and need to raise money.

How Does Finance Fit into the Firm's Organizational Structure?

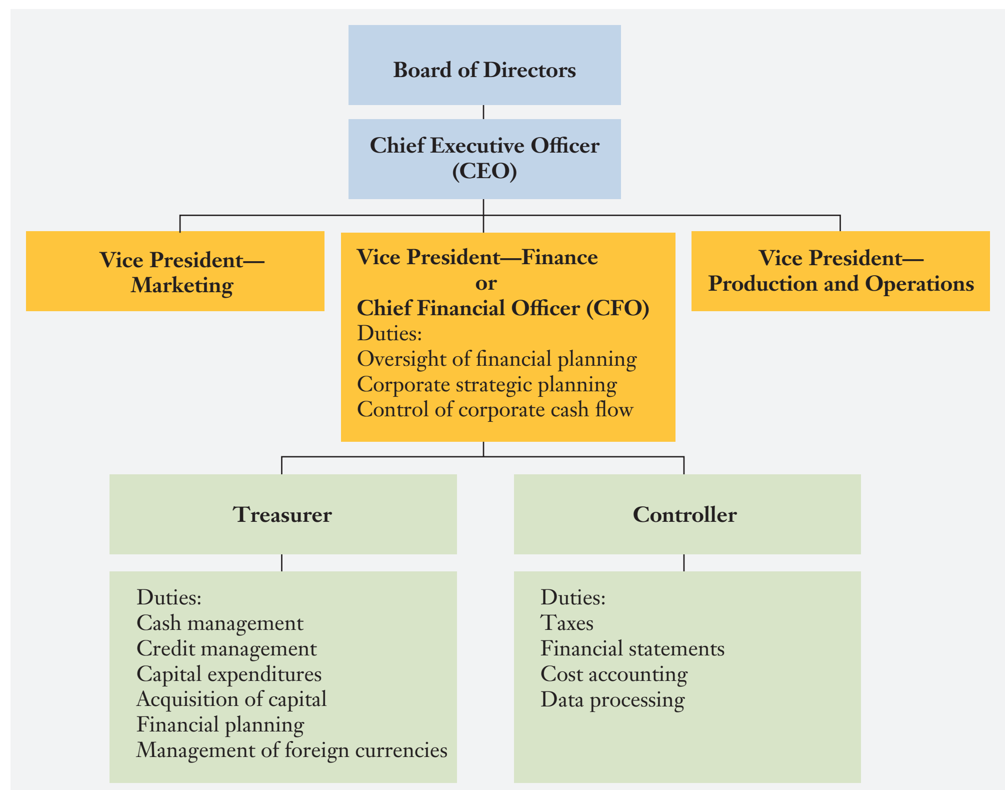
Finance is intimately woven into any aspect of the business that involves the payment or receipt of money in the future. For this reason, it is important that everyone in a business have a good working knowledge of the basic principles of finance. However, within a large business organization, the responsibility for managing the firm's financial affairs falls to the firm's chief financial officer (CFO).

Figure 1.2 shows how the finance function fits into a firm's organizational chart. In the typical large corporation, the CFO serves under the corporation's chief executive officer (CEO) and is responsible for overseeing the firm's finance-related activities. Typically, both

Figure 1.2

How the Finance Area Fits into a Corporation

A firm's vice president of finance is many times called its chief financial officer, or CFO. This person oversees all of the firm's financial activities through the offices of the firm's treasurer and controller.



>> END FIGURE 1.2

a treasurer and a controller serve under the CFO, although in a small firm the same person may fulfill both roles. The treasurer generally handles the firm's financing activities. These include managing the firm's cash and credit, exercising control over its major spending decisions, raising money, developing financial plans, and managing any foreign currency it receives. The controller is responsible for managing the firm's accounting duties. These include producing financial statements, paying taxes, and gathering and monitoring data that the firm's executives need to oversee its financial well-being.

Before you move on to 1.3

Concept Check | 1.2

1. What are the primary differences among a sole proprietorship, a partnership, and a corporation?
2. Explain why large and growing firms tend to choose the corporate form of organization.
3. What are the duties of a corporate treasurer?
4. What are the duties of a corporate controller?

1.3 The Goal of the Financial Manager

In 2001, Tony Fadell turned to Apple, Inc. (AAPL), to develop his idea for a new MP3 player. Fadell's idea had already been rejected by his previous employer and another company, but the executives at Apple were enthusiastic about it. They hired Fadell, and the rest is history. The successful sales of the new iPod MP3 player, coupled with efficient uses of financing and day-to-day funding, raised the firm's stock price. This exemplifies how a management team appointed by a corporate board made an important investment decision that had a very positive effect on the firm's total value.

As previously mentioned, we can characterize the financial activities of a firm's management in terms of three important functions within a firm. These are illustrated here using Apple's iPod example:

- Making investment decisions (capital budgeting decisions): Apple's decision to introduce the iPod, which later led to the iPhone.
- Making decisions on how to finance these investments (capital structure decisions): Apple's decision on how to finance the development and production of the iPod and eventually the iPhone.
- Making decisions on how best to manage the company's day-to-day operations (working capital management): Apple's decision regarding how much inventory to hold.

In carrying out these tasks, financial managers must be aware that they are ultimately working for the firm's shareholders, who are the owners of the firm, and that the choices they make as financial managers will generally have a direct impact on their shareholders' wealth.

Maximizing Shareholder Wealth

With a publicly owned corporation such as Coca-Cola (KO), the shareholders who purchase stock in the company elect a board of directors that, among other duties, selects the company's CEO. These shareholders, ranging from individuals who purchase stock for a retirement fund to large financial institutions, have a vested interest in the company. Because they are the company's true owners, that company will commonly have a principal goal described as maximizing shareholder wealth, which is achieved by maximizing the stock price.

With all this in mind, let's take a look at Coca-Cola's "vision" statement. While maximization of shareholder wealth is included, it is surrounded by other goals that range from sustainable growth to being responsible. It also aims Coca-Cola's efforts toward creating a caring workplace and taking care of its customers. Clearly, Coca-Cola goes well beyond the traditional goal of maximization of shareholder wealth, but each of these goals plays a part in creating a successful business, which in turn should be beneficial to the shareholder in the long run.

Now let's examine Google, Inc. (GOOG). For years, Google stated on the corporate portion of its website that its goal was "to develop services that significantly improve the lives of as many people as possible," and its first motto was simply "Don't be evil." When Google restructured under the conglomerate Alphabet, Inc., its motto became "Do the right thing." Does this mean that Google—or Alphabet, as it is now called—doesn't care about money or the firm's owners (stockholders)? For the sake of all Alphabet stockholders, we certainly hope not. After all, why do you buy stock in a company in the first place? You do it in the hope of making money, right? It's nice to be altruistic and make the world a better place, but in reality, companies had better earn money if they expect banks to continue to loan them money and stockholders to continue to buy their shares. Alphabet apparently believes both goals are possible: The company says that in addition to making the world a better place, it "will optimize for the long-term rather than trying to produce smooth earnings for each quarter."

We believe, as Alphabet does, that maximizing the wealth of your shareholders and doing the right thing can go hand in hand. Think of this goal not as moving *away* from creating wealth for shareholders but as moving *toward* what will truly increase the value of their shares in the long term. As we explain the concepts in this book, we will assume that businesses don't act out of greed to "get rich quick" and that they try to maximize the wealth of their shareholders by making decisions that have long-term positive effects. Very simply, managers can't afford to ignore the fact that shareholders want to see the value of their investments rise—they will sell their shares if it doesn't. This, in turn, will cause the company's share price to fall, jeopardizing the managers' jobs if they are seen to have an excessively short-term focus.

Ethical Considerations in Corporate Finance

Although ethics is not one of the five principles of finance, it is fundamental to the notion of trust and is therefore essential to doing business. The problem is that in order to cooperate, business participants have to rely on one another's willingness to act fairly. Although businesses frequently try to describe the rights and obligations of their dealings with others using contracts, it is impossible to write a perfect contract. Consequently, business dealings between people and firms ultimately depend on the willingness of the parties to trust one another.

Ethics, or a lack thereof, is a recurring theme in the news. Recently, finance has been home to an almost continuous series of ethical lapses. Financial scandals at companies such as Enron and WorldCom, Bernie Madoff's Ponzi scheme that cost investors billions of dollars, and the mishandling of depositor money by financial institutions such as Sanford Financial show that the business world does not forgive ethical lapses. Not only is acting in an ethical manner morally correct, but also it is a necessary ingredient of long-term business and personal success.

You might ask yourself, "As long as I'm not breaking society's laws, why should I care about ethics?" The answer to this question lies in consequences. Everyone makes errors of judgment in business, which is to be expected in an uncertain world. But ethical errors are different. Even if they don't result in anyone going to jail, they tend to end careers and thereby terminate future opportunities. Why? Because unethical behavior destroys trust, and businesses cannot function without a certain degree of trust. Throughout this book, we will point out some of the ethical pitfalls that have tripped up managers.

Regulation Aimed at Making the Goal of the Firm Work: The Sarbanes–Oxley Act

Because of growing concerns about both agency and ethical issues, in 2002 Congress passed the Sarbanes–Oxley Act—or SOX, as it is commonly called. One of the primary inspirations for this new law was Enron, which failed financially in December 2001. Prior to bankruptcy, Enron's board of directors actually voted on two occasions to temporarily suspend its own "code of ethics" to permit its CFO to engage in risky financial ventures that benefited the CFO personally while exposing the corporation to substantial risk.

SOX holds corporate advisors who have access to or influence on company decisions (such as a firm's accountants, lawyers, company officers, and board of directors) legally accountable for any instances of misconduct. The act very simply and directly identifies its purpose as being "to protect investors by improving the accuracy and reliability of corporate disclosures made pursuant to the securities laws, and for other purposes," and it mandates that senior executives take individual responsibility for the accuracy and completeness of the firm's financial reports.

SOX safeguards the interests of the shareholders by providing greater protection against accounting fraud and financial misconduct. Unfortunately, all of this has come with a price. Although SOX has received praise from the likes of former Federal Reserve Chairman Alan Greenspan and has increased investor confidence in financial reporting, it has also been criticized. The demanding reporting requirements are quite costly and, as a result, may inhibit firms from listing on U.S. stock markets.

Before you move on to 1.4

Concept Check | 1.3

1. What is the goal of a firm?
2. Why is ethics relevant to the financial management of a firm?
3. What is the Sarbanes–Oxley Act of 2002? What has it accomplished?

1.4 The Five Basic Principles of Finance

At first glance, finance can seem like a collection of unrelated decision rules. Nothing could be further from the truth. The logic behind the financial concepts covered in this textbook arises from five simple financial principles, each of which is described next.

Principle 1: Money Has a Time Value

A dollar received today is worth more than a dollar received in the future. Conversely, a dollar received in the future is worth less than a dollar received today.

Perhaps the most fundamental principle of finance is that money has a time value. A dollar received today is more valuable than a dollar received one year from now. That is, we can invest the dollar we have today to earn interest so that at the end of one year we will have more than one dollar.

Because we can earn interest on money received today, it is better to receive money sooner rather than later. For example, suppose you have a choice of receiving $1,000 either today or a year from now. If you decide to receive it a year from now, you will have passed up the opportunity to earn a year's interest on the money. Economists would say you suffered an "opportunity loss" or an **opportunity cost**.

Principle 2: There Is a Risk-Return Tradeoff

We won't take on additional risk unless we expect to be compensated with additional return.

Principle 2 is based on the idea that individuals are risk-averse, which means that they prefer to get a certain return on their investment rather than an uncertain return. However, the world is an inherently risky place, so at least some individuals will have to make investments that are risky. How are investors induced to hold these risky investments when there are safer alternative investments? By offering investors a higher *expected* rate of return on the riskier investments.

Notice that we refer to *expected* return rather than *actual* return. As investors, we have expectations about what returns our investments will earn; however, a higher expected rate of return is not always a higher realized rate of return. For example, you may have thought Netflix (NFLX) would do well in 2015, but did you really expect it would return 139.2 percent? On the other hand, not many people who invested in Chesapeake Energy (CHK), the oil and gas producer, expected its actual return for 2015 to be –77.9 percent; if they had, they wouldn't have invested in it.

The risk-return relationship will be a key concept as we value assets and propose new investment projects throughout this text. We will also describe how investors measure risk. Interestingly, much of the work for which the 1990 Nobel Prize in Economics was awarded centered on the graph shown in Figure 1.3 and how to measure risk. Both the graph and the risk-return relationship it depicts will reappear often in this text.

Principle 3: Cash Flows Are the Source of Value

Profit is an accounting concept designed to measure a business's performance over an interval of time. Cash flow is the amount of cash that can actually be taken out of the business over this same interval.

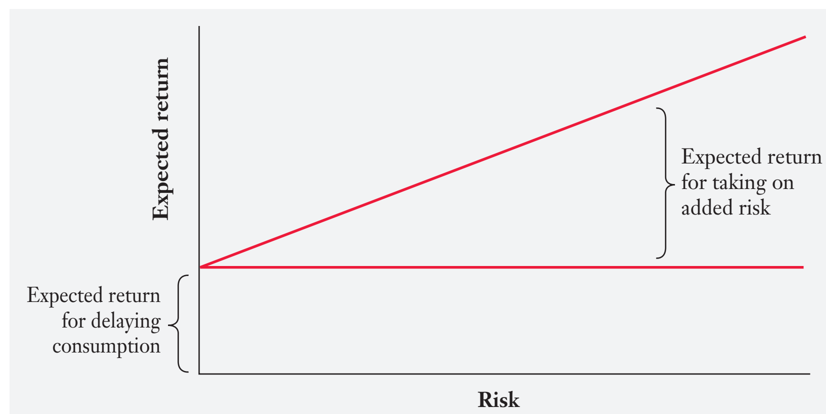
You may recall from your accounting classes that a company's profits can differ dramatically from its cash flows. Cash flows represent actual money that can be spent, and, as we will later discuss, they are what determines an investment's value.

Profits are different. To determine a company's accounting profit, its accountants have to make a judgment about how the business's costs and revenues are allocated to each time period. Consequently, different judgments result in different profit measurements. In fact, a firm can show a profit on paper even when it is generating no cash at all. This isn't to say that accounting profits are unimportant to investors. Investors see accounting profits as an

Figure 1.3

There Is a Risk-Return Tradeoff

Investors demand a return for delaying their consumption. To convince them to take on added risk, they demand a higher expected return.



>> END FIGURE 1.3

important indicator of a firm's ability in the past—and perhaps in the future—to produce cash flows for its investors. Therefore, to the extent that profits affect investors' expectations, they are an important source of information.

There is another important point we need to make about cash flows. Recall from your economics classes that people make the best choices when they look at marginal, or *incremental,* cash flows. That's why in this book we focus on the incremental cash flow to the company as a whole that is produced as a consequence of a decision. The incremental cash flow to the company as a whole is the difference between the cash flow to the company that would be produced with the potential new investment and the cash flow that would be produced without that investment. To understand this concept, let's think about the incremental cash flow produced by *Star Wars: The Force Awakens*. Not only did Disney make a lot of money on this movie, but also, once Disney finishes Star Wars Land, this movie will increase the number of people attracted to Disney theme parks, along with resulting in sales of all kinds of Star Wars items. Thus, if you were to evaluate *Star Wars: The Force Awakens*, you'd want to include its impact on sales of Star Wars T-shirts, lightsabers, action figures, and all Star Wars related items throughout the entire company.

Principle 4: Market Prices Reflect Information

Investors respond to new information by buying and selling their investments. The speed with which investors act and the way that prices respond to the information determine the efficiency of the market.

The prices of financial claims traded in the public financial markets respond rapidly to the release of new information. Thus, when earnings reports come out, prices adjust immediately to the new information, moving upward if the information is better than expected and downward if it is worse than expected. In efficient markets, such as those that exist in the United States and other developed countries, this process takes place *very* quickly. As a result, it's hard to profit from trading on publicly released information.

To illustrate how quickly stock prices can react to information, consider the following set of events: While Nike (NKE) CEO William Perez flew aboard the company's Gulfstream jet one day in November 2005, traders on the ground sold off a significant amount of Nike's stock. Why? Because the plane's landing gear was malfunctioning, and they were watching TV coverage of the event! While Perez was still in the air, Nike's stock dropped 1.4 percent. Once Perez's plane landed safely, Nike's stock price immediately bounced back. This example illustrates that in the financial markets there are ever-vigilant investors who are looking to act even *in anticipation of* the release of new information.

Consequently, managers can expect their company's share prices to respond quickly to the decisions they make. Good decisions will result in higher stock prices. Bad decisions will result in lower stock prices.

Principle 5: Individuals Respond to Incentives

Incentives motivate, and the actions of managers are often motivated by self-interest, which may result in managers not acting in the best interests of the firm's owners. When this happens the firm's owners will lose value.

Managers respond to the incentives they are given in the workplace, and, when their incentives are not properly aligned with those of the firm's stockholders, they may not make decisions that are consistent with increasing shareholder value. For example, a manager may be in a position to evaluate an acquisition that happens to be owned by his brother-in-law. Other situations are much less straightforward. For example, a financial manager may be asked to decide whether or not to close a money-losing plant, a decision that, although saving money for the firm, will involve the personally painful act of firing the employees at the plant.

The conflict of interest between the firm's managers and its stockholders is called a *principal-agent problem*, or **agency problem**, in which the firm's common stockholders, the owners of the firm, are the principals in the relationship and the managers act as agents of these owners. If the managers have little or no ownership in the firm, they have less incentive to work energetically for the company's shareholders and may instead choose to enrich

themselves with perks and other financial benefits—say, luxury corporate jets, expensive corporate apartments, or resort vacations. They also have an incentive to turn down risky investments that may jeopardize their jobs—even though their shareholders would like the company to pursue these projects. The lost shareholder value that results from managerial actions that are inconsistent with the goal of maximizing shareholder value is called an *agency cost*.

Agency problems also arise when the firm's executives are considering how to raise money to finance the firm's investments. In some situations, debt may be the cheapest source of financing, but managers may avoid debt financing because they fear the loss of their jobs if the firm is unable to pay its bills. Stockholders, on the other hand, might prefer that the firm use more debt financing because it puts pressure on management to perform at a high level.

Agency costs are typically difficult to measure, but occasionally their effect on the firm's stock price can be seen. For example, upon the announcement of the death of Roy Farmer, the CEO of Farmer Brothers (FARM), a seller of coffee-related products, the firm's stock price rose about 28 percent. Many attributed the rise in price to the perceived benefits of removing a CEO who was not acting in accordance with general stockholder interests.

Fortunately, there are several measures that can be taken to help mitigate the agency problem:

- Compensation plans can be put in place that reward managers when they act to maximize shareholder wealth.
- The board of directors can actively monitor the actions of managers and keep pressure on them to act in the best interests of shareholders.
- The financial markets can (and do) play a role in monitoring management by having auditors, bankers, and credit agencies monitor the firm's performance, while security analysts provide and disseminate information on how well the firm is doing, thereby helping shareholders monitor the firm.
- Firms that underperform will see their stock prices fall and may be taken over and have their management teams replaced.

To see the power of incentives, consider the case of football player Edgerrin James, a running back for the Indianapolis Colts for a number of years. While playing in a game against Detroit, he was told by his coach to get a first down and then fall down and run out the clock. That way the Colts wouldn't be accused of running up the score against a team they were already beating badly. However, because James's contract included incentive payments associated with rushing yards and touchdowns, he acted in his own self-interest and ran for a touchdown on the very next play. Following the play, he commented, "I heard the cash register ringing the whole way."

Before you begin end-of-chapter material

Concept Check | 1.4

1. What are the five principles of finance?
2. A fundamental guiding principle of investing is that higher risks require higher rewards or returns. Give two examples of the risk-return relationship.
3. What do we mean when we say that market prices reflect information?

Applying the Principles of Finance to Chapter 1

P Principle 1: **Money Has a Time Value** A dollar received today is worth more than a dollar received in the future. Conversely, a dollar received in the future is worth less than a dollar received today.

P Principle 2: **There Is a Risk-Return Tradeoff** We won't take on additional risk unless we expect to be compensated with additional return.

P Principle 3: **Cash Flows Are the Source of Value** Cash flow measures the amount of cash that can actually be taken out of the business over an interval of time. As a result, it is the source of value.

P Principle 4: **Market Prices Reflect Information** Investors respond to new information by buying and selling. As a result, prices reflect what is known. The speed with which investors act and prices respond reflects the efficiency of the market.

P Principle 5: **Individuals Respond to Incentives** Large firms are often run by professional managers who own a small fraction of the firm's equity. The individual actions of these managers are often motivated by self-interest, which may result in managers not acting in the best interest of the firm's owners. When this happens, the firm's owners will lose value.

Chapter Summaries

1.1 Understand the importance of finance in your personal and professional lives and identify the three primary business decisions that financial managers make. (pgs. 36–37)

SUMMARY: Finance is the study of how individuals and businesses allocate money over time. We all face choices that involve spending or receiving money now versus sometime in the future. What you will learn in this book will help you to better understand how to make those choices, both in your personal life and as a financial manager.

The decision-making process of planning and managing a firm's long-term investments is called capital budgeting. The mix of long-term sources of funds used by a firm to finance its operations is called its capital structure. Working capital management involves managing the firm's short-term investment in assets and liabilities and ensuring that the firm has sufficient resources to maintain its day-to-day business operations.

KEY TERMS

Capital budgeting, page 36 The decision-making process used to analyze potential investments in fixed assets.

Capital structure, page 36 The mix of long-term sources of funds used by the firm.

Financial markets, page 37 Mechanisms that allow people to easily buy and sell financial claims.

Working capital management, page 36 Management of day-to-day operations and decisions related to working capital and short-term financing.

Concept Check | 1.1

1. What are the three basic types of issues that arise in business that are addressed by the study of business finance?
2. List three nonfinance careers to which the study of finance applies.

1.2 Identify the key differences among the three major legal forms of business. (pgs. 37–41)

SUMMARY: The sole proprietorship is a business operation owned and managed by a single individual. Initiating this form of business is simple and generally does not involve any substantial organizational costs. The proprietor has complete control of the firm but must be willing to assume full responsibility for its outcomes.

Similar to the sole proprietorship, a general partnership is simply a coming together of two or more individuals who face unlimited liability for their involvement in the partnership. The limited partnership is another form of partnership sanctioned by states to permit all but one of the partners to have limited liability if this is agreeable to all partners. The one partner with unlimited liability is the general partner.

A business takes the form of a corporation when it has an increased need to raise capital from public investors. Although greater organizational costs and regulations are imposed on this legal entity, the corporation is more conducive to raising large amounts of capital. Limited liability, continuity of life, and ease of transfer in ownership, all of which increase the marketability of the investment, have greatly contributed to attracting large numbers of investors to the corporate environment. The formal control of the corporation is vested in the parties who own the greatest

number of shares. However, day-to-day operations are managed by the corporate officers, who theoretically act on behalf of the stockholders. An attractive alternative to the corporation for a small business is the limited liability company (LLC), a cross between a partnership and a corporation. An LLC combines the tax benefits of a partnership (no double taxation of earnings) and the limited liability benefit of a corporation (the owners' liability is limited to what they invest).

KEY TERMS

Corporation, page 39 A business entity that legally functions separate and apart from its owners.

Debt, page 37 Money that has been borrowed and must be repaid. This includes such things as bank loans and bonds.

Dividends, page 39 The portion of a corporation's earnings that is distributed to its shareholders.

Equity, page 38 The ownership interest in a corporation. It is the stockholders' investment in the firm and the cumulative profits retained in the business up to the date of the balance sheet.

General partner, page 38 A member of a general partnership or a member of a limited partnership who actually runs the business and faces unlimited liability for the firm's debts.

General partnership, page 38 A partnership in which all of the partners are fully liable for the indebtedness incurred by the partnership.

Limited liability company (LLC), page 39 A business organizational form that blends elements of the partnership and corporate forms.

Limited partner, page 38 A member of a limited partnership who is liable only up to the amount invested by that member.

Limited partnership, page 38 A partnership in which one or more of the partners have limited liability that is restricted to the amount of capital they invest in the partnership.

Partnership, page 38 The joining together of two or more individuals as co-owners to operate a business for profit.

Shareholders, page 39 The owners of the firm; those who own shares of stock in a corporation.

Shares, page 38 Units of ownership.

Sole proprietorship, page 37 A business owned by a single individual.

Stockholders, page 39 The owners of the corporation's stock. The corporation is legally owned by its current set of stockholders, or owners, who elect a board of directors.

Concept Check | 1.2

1. What are the primary differences among a sole proprietorship, a partnership, and a corporation?
2. Explain why large and growing firms tend to choose the corporate form of organization.
3. What are the duties of a corporate treasurer?
4. What are the duties of a corporate controller?

1.3 Understand the role of the financial manager within the firm and the goal for making financial choices. (pgs. 41–43)

SUMMARY: The finance function in most large firms is headed by a vice president of finance or chief financial officer (CFO). The CFO typically reports directly to the firm's chief executive officer (CEO). The CFO oversees the firm's financing decisions, including the management of the firm's cash position (in larger firms, this responsibility is delegated to the company treasurer, who reports to the CFO) as well as corporate reporting and general accounting (once again, in large firms this task is delegated to the company controller, who also reports to the CFO).

A critically important goal of finance is to design incentive compensation plans that better align the interests of managers with those of the firm's owners (stockholders).

Firms are in business to make their owners, or shareholders, wealthier. With this goal in mind, financial managers must make financial decisions regarding long-term investments, financing, and the management of short-term cash needs. For very large firms whose shares of stock are publicly traded, this goal is commonly described as *maximizing the wealth of shareholders* (the business's owners).

In finance, ethics—or a lack thereof—is a recurring theme in the news. Ethics is fundamental to the notion of trust and is therefore essential to doing business. In order to cooperate, business participants have to rely on one another's willingness to act fairly.

Concept Check | 1.3

1. What is the goal of a firm?
2. Why is ethics relevant to the financial management of a firm?
3. What is the Sarbanes–Oxley Act of 2002? What has it accomplished?

1.4 Explain the five principles of finance that form the basis of financial management for both businesses and individuals. (pgs. 43–46)

SUMMARY:

Principle 1: **Money Has a Time Value**

A dollar received today is worth more than a dollar received in the future. Conversely, a dollar received in the future is worth less than a dollar received today.

Principle 2: **There Is a Risk-Return Tradeoff**

We won't take on additional risk unless we expect to be compensated with additional return.

Principle 3: **Cash Flows Are the Source of Value**

Profit is an accounting concept designed to measure a business's performance over an interval of time. Cash flow is the amount of cash that can actually be taken out of the business over this same interval.

Principle 4: **Market Prices Reflect Information**

Investors respond to new information by buying and selling their investments. The speed with which investors act and the way that prices respond to this information determine the efficiency of the market.

Principle 5: **Individuals Respond to Incentives**

Incentives motivate, and the actions of managers are often motivated by self-interest, which may result in managers not acting in the best interests of the firm's owners. When this happens, the firm's owners will lose value.

KEY TERMS

Agency problem, page 46 Conflicts that arise out of the separation of management and ownership of the firm.

Opportunity cost, page 44 The value of the next best alternative that is foregone as a result of making a decision.

Concept Check | 1.4

1. What are the five principles of finance?
2. A fundamental guiding principle of investing is that higher risks require higher rewards or returns. Give two examples of the risk-return relationship.
3. What do we mean when we say that market prices reflect information?

Study Questions

1–1. In *Regardless of Your Major: Welcome to the World of Finance* on page 36, we discussed how the topic of Principle 1, the time value of money, is relevant to both your personal and your professional lives. Describe a decision you might face in the future that will require you to consider the future value of money received (or invested). For example, how might the time value of money enter into a decision to push back your graduation date by one year?

1–2. Explain the three types of business decisions that a financial manager faces.

1–3. According to Principle 2, how should investors decide where to invest their money?

1–4. Briefly discuss why the people who make financial decisions must focus on incremental cash flows when evaluating new projects.

1–5. List the three main forms of business organization, and describe their advantages and disadvantages. If you were to consider starting up a lawn-care business for the summer, what type of business organization might you use?

1–6. Who really owns a corporation, and how does that impact the goal of the firm?

1–7. What goal do the owners of a for-profit business generally strive for?

1–8. Briefly discuss the incentives for financial managers to conduct their business in an ethical manner.