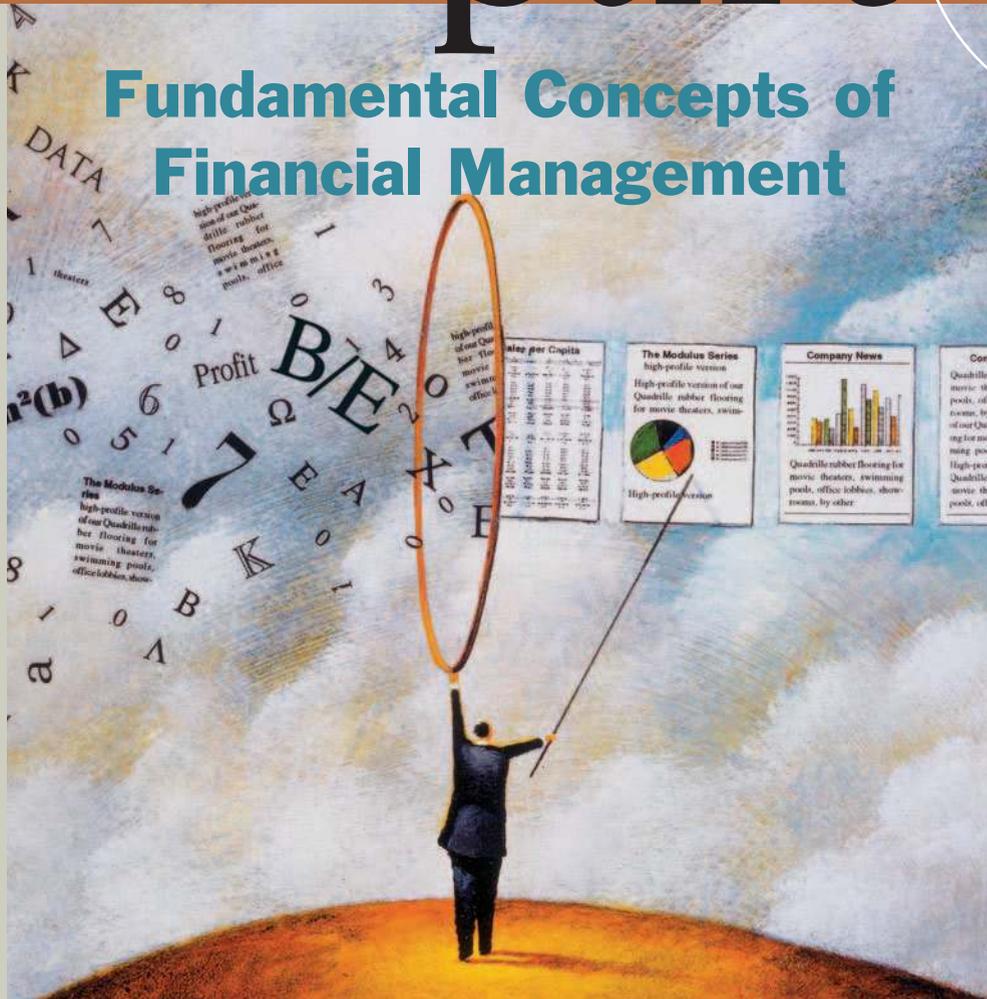


part 1

Fundamental Concepts of Financial Management

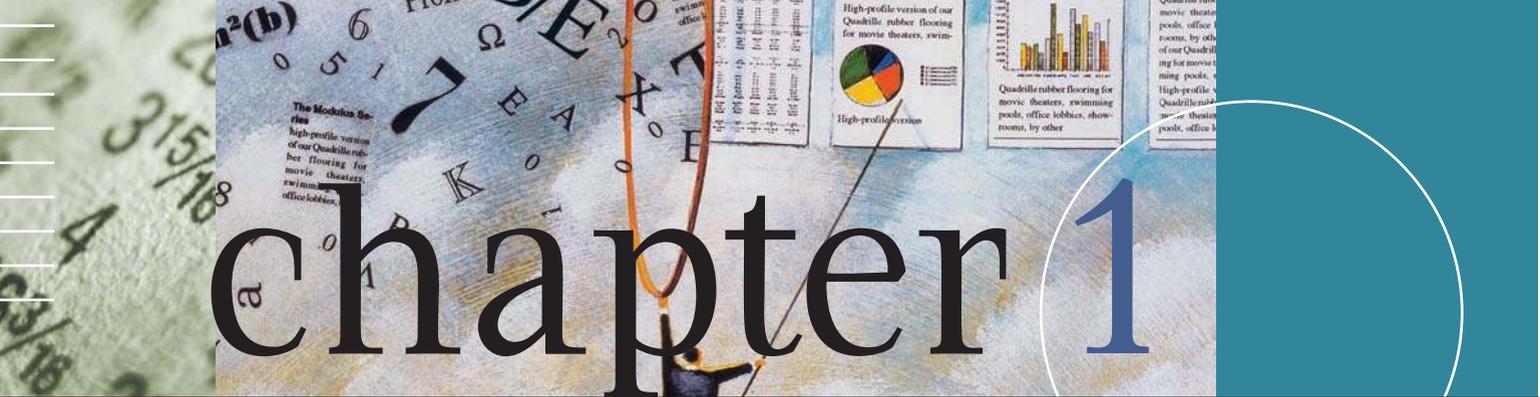


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chapter 1

An Overview of Financial Management and the Financial Environment

In a global beauty contest for companies, the winner is . . . General Electric. Or at least General Electric is the most admired company in the world, according to *Fortune* magazine's annual survey. The other top ten global finalists are FedEx, Southwest Airlines, Procter & Gamble, Starbucks, Johnson & Johnson, Berkshire Hathaway, Dell Computers, Toyota Motor, and Microsoft. What do these companies have that separates them from the rest of the pack?

According to more than 10,000 executives, directors, and security analysts, these companies have the highest average scores across nine attributes: (1) innovativeness, (2) quality of management, (3) long-term investment value, (4) social responsibility, (5) employee talent, (6) quality of products and services, (7) financial soundness, (8) use of corporate assets, and (9) effectiveness in doing business globally.

Many of these companies compete in commodity industries in which it is very difficult to differentiate their products from those of their competitors. How do they survive and thrive in such an environment? First, they have an incredible focus on using technology to understand their customers, reduce costs, reduce inventory, and speed up product delivery. Second, they continually innovate and invest in ways to differentiate their products. For example, GE is

investing in new technologies, such as nanometals, hydrogen power, and photovoltaics. CEO Jeff Immelt says that these are areas in which "very few can follow."

Many companies have a difficult time attracting employees. Not so for the most admired companies, which have many more applicants than job openings. In addition to their acumen with technology and customers, they are also on the leading edge when it comes to training employees and providing a workplace in which people can thrive.

In a nutshell, these companies reduce costs by having innovative production processes, they create value for customers by providing high-quality products and services, and they create value for employees through training and fostering an environment that allows employees to utilize all of their skills and talents.

Do investors benefit from this focus on processes, customers, and employees? During the most recent 5-year period, these ten companies posted an average annual stock return of 7.6%, which is quite impressive when compared with the 1.1% average annual decline in the S&P 500. These superior returns are due to superior cash flow generation. But, as you will see throughout this book, a company can generate cash flow only if it also creates value for its customers, employees, and suppliers.



See <http://money.cnn.com/magazines/fortune/> for updates on the ranking.

This chapter should give you an idea of what financial management is all about, including an overview of the financial markets in which corporations operate. Before getting into details, let's look at the big picture. You're probably back in school because you want an interesting, challenging, and rewarding career. To see where finance fits in, here's a five-minute MBA.

1.1 The Five-Minute MBA

Okay, we realize you can't get an MBA in five minutes. But just as an artist quickly sketches the outline of a picture before filling in the details, we can sketch the key elements of an MBA education. In a nutshell, the objective of an MBA is to provide managers with the knowledge and skills they need to run successful companies, so we start our sketch with some common characteristics of successful companies. In particular, all successful companies are able to accomplish two main goals:

1. They identify, create, and deliver products or services that are highly valued by customers—so highly valued that customers choose to purchase them from the company rather than from its competitors.
2. All successful companies sell their products/services at prices that are high enough to cover costs and to compensate owners and creditors for their exposure to risk.

It's easy to talk about satisfying customers and investors, but it's not so easy to accomplish these goals. If it were, then all companies would be successful, and you wouldn't need an MBA!

The Key Attributes of Successful Companies

First, *successful companies have skilled people* at all levels inside the company, including leaders, managers, and a capable workforce.

Second, *successful companies have strong relationships* with groups outside the company. For example, successful companies develop win-win relationships with suppliers and excel in customer relationship management.

Third, *successful companies have enough funding* to execute their plans and support their operations. Most companies need cash to purchase land, buildings, equipment, and materials. Companies can reinvest a portion of their earnings, but most growing companies must also raise additional funds externally, by some combination of selling stock and/or borrowing in the financial markets.

Just as a stool needs all three legs to stand, a successful company must have all three attributes: skilled people, strong external relationships, and sufficient capital.



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The MBA, Finance, and Your Career



Consult <http://www.careers-in-finance.com> for an excellent site containing information on a variety of business career areas, listings of current jobs, and other reference materials.

To be successful, a company must meet its first main goal: identifying, creating, and delivering highly valued products and services to its customers. This requires that it possess all three of the key attributes mentioned above. Therefore, it's not surprising that most of your MBA courses are directly related to these attributes. For example, courses in economics, communication, strategy, organizational behavior, and human resources should prepare you for a leadership role and enable you to effectively manage your company's workforce. Other courses, such as marketing, operations management, and information technology, increase your knowledge of specific disciplines, enabling you to develop the efficient business processes and strong external relationships your company needs. Portions of *this* finance course will address raising the capital your company needs to implement its plans. In short, your MBA courses will give you the skills you need to help a company achieve its first goal: producing goods and services that customers want.

Recall, though, that it's not enough just to have highly valued products and satisfied customers. Successful companies must also meet their second main goal, which is generating enough cash to compensate the investors who provided the necessary capital. To help your company accomplish this second goal, you must be able to evaluate any proposal, whether it relates to marketing, production, strategy, or any other area, and implement only the projects that add value for your investors. For this, you must have expertise in finance, no matter your major. Thus, finance is a critical part of an MBA education, and it will help you throughout your career.

SELF-TEST

What are the goals of successful companies?

What are the three key attributes common to all successful companies?

How does expertise in finance help a company become successful?

1.2 The Corporate Life Cycle

Many major corporations had humble origins, perhaps even in a garage or basement, including Apple Computer and Hewlett-Packard. How is it possible for such companies to grow into the giants we see today? No two companies develop in exactly the same way, but the following sections describe some typical stages in the corporate life cycle.

Starting Up as a Proprietorship

Many companies begin as a **proprietorship**, which is an unincorporated business owned by one individual. Starting a business as a proprietor is easy—one merely begins business operations after obtaining any required city or state business licenses. The proprietorship has three important advantages: (1) It is easily and inexpensively formed, (2) it is subject to few government regulations, and (3) its income is not subject to corporate taxation but is taxed only as a part of the proprietor's personal income.

However, the proprietorship also has three important limitations: (1) It is difficult for a proprietorship to obtain the capital needed for growth; (2) the pro-

prietor has unlimited personal liability for the business's debts, which can result in losses that exceed the money he or she invested in the company (creditors may even be able to seize a proprietor's house or other personal property!); and (3) the life of a proprietorship is limited to the life of its founder. For these three reasons, sole proprietorships are used primarily for small businesses. In fact, proprietorships account for only about 13% of all sales, based on dollar values, even though about 80% of all companies are proprietorships.

More Than One Owner: A Partnership

Some companies start with more than one owner, and some proprietors decide to add a partner as the business grows. A **partnership** exists whenever two or more persons or entities associate to conduct a noncorporate business for profit. Partnerships may operate under different degrees of formality, ranging from informal, oral understandings to formal agreements filed with the secretary of the state in which the partnership was formed. Partnership agreements define the ways any profits and losses are shared between partners. A partnership's advantages and disadvantages are similar to those of a proprietorship.

Regarding liability, the partners can potentially lose all of their personal assets, even assets not invested in the business, because under partnership law, each partner is liable for the business's debts. Therefore, in the event the partnership goes bankrupt, if any partner is unable to meet his or her pro rata liability, the remaining partners must make good on the unsatisfied claims, drawing on their personal assets to the extent necessary. To avoid this, it is possible to limit the liabilities of some of the partners by establishing a **limited partnership**, wherein certain partners are designated **general partners** and others **limited partners**. In a limited partnership, the limited partners are liable only for the amount of their investment in the partnership, while the general partners have unlimited liability. However, the limited partners typically have no control—it rests solely with the general partners—and their returns are likewise limited. Limited partnerships are common in real estate, oil, equipment leasing ventures, and venture capital. However, they are not widely used in general business situations because no one partner is usually willing to be the general partner and thus accept the majority of the business's risk, and none of the others are willing to be limited partners and give up all control.

In both regular and limited partnerships at least one partner is liable for the debts of the partnership. However, in a **limited liability partnership (LLP)**, sometimes called a **limited liability company (LLC)**, all partners enjoy limited liability with regard to the business's liabilities, and their potential losses are limited to their investment in the LLP. Of course, this arrangement increases the risk faced by an LLP's lenders, customers, and suppliers.

Many Owners: A Corporation

Most partnerships have difficulty attracting substantial amounts of capital. This is generally not a problem for a slow-growing business, but if a business's products or services really catch on, and if it needs to raise large sums of money to capitalize on its opportunities, the difficulty in attracting capital becomes a real drawback. Thus, many growth companies, such as Hewlett-Packard and Microsoft, began life as a proprietorship or partnership, but at some point their founders found it necessary to convert to a corporation. Some companies, in anticipation of growth,

actually begin as corporations. A **corporation** is a legal entity created by state laws, and it is separate and distinct from its owners and managers. This separation gives the corporation three major advantages: (1) *unlimited life*—a corporation can continue after its original owners and managers are deceased; (2) *easy transferability of ownership interest*—ownership interests can be divided into shares of stock, which can be transferred far more easily than can proprietorship or partnership interests; and (3) *limited liability*—losses are limited to the actual funds invested.

To illustrate limited liability, suppose you invested \$10,000 in a partnership that then went bankrupt and owed \$1 million. Because the owners are liable for the debts of a partnership, you could be assessed for a share of the company's debt, and you could be held liable for the entire \$1 million if your partners could not pay their shares. On the other hand, if you invested \$10,000 in the stock of a corporation that then went bankrupt, your potential loss on the investment would be limited to your \$10,000 investment.¹ Unlimited life, easy transferability of ownership interest, and limited liability make it much easier for corporations than for proprietorships or partnerships to raise money in the financial markets and grow into large companies.

The corporate form offers significant advantages over proprietorships and partnerships, but it also has two disadvantages: (1) Corporate earnings may be subject to double taxation—the earnings of the corporation are taxed at the corporate level, and then earnings paid out as dividends are taxed again as income to the stockholders.² (2) Setting up a corporation involves preparing a charter, writing a set of bylaws, and filing the many required state and federal reports, which is more complex and time-consuming than creating a proprietorship or a partnership.

The **charter** includes the following information: (1) name of the proposed corporation, (2) types of activities it will pursue, (3) amount of capital stock, (4) number of directors, and (5) names and addresses of directors. The charter is filed with the secretary of the state in which the firm will be incorporated, and when it is approved, the corporation is officially in existence.³ After the corporation begins operating, quarterly and annual employment, financial, and tax reports must be filed with state and federal authorities.

The **bylaws** are a set of rules drawn up by the founders of the corporation. Included are such points as (1) how directors are to be elected (all elected each year, or perhaps one-third each year for 3-year terms); (2) whether the existing stockholders will have the first right to buy any new shares the firm issues; and (3) procedures for changing the bylaws themselves, should conditions require it.

There are actually several different types of corporations. Professionals such as doctors, lawyers, and accountants often form a **professional corporation (PC)** or a **professional association (PA)**. These types of corporations do not relieve the participants of professional (malpractice) liability. Indeed, the primary motivation behind the professional corporation was to provide a way for groups of professionals to incorporate and thus avoid certain types of unlimited liability, yet still be held responsible for professional liability.

Finally, if requirements are met, particularly with regard to size and number of stockholders, owners can establish a corporation but elect to be taxed as if the busi-

¹In the case of very small corporations, the limited liability may be fiction because lenders frequently require personal guarantees from the stockholders.

²The 2003 tax act reduced, but did not eliminate, the taxation of dividends received by investors.

³More than 60% of major U.S. corporations are chartered in Delaware, which has, over the years, provided a favorable legal environment for corporations. It is not necessary for a firm to be headquartered, or even to conduct operations, in its state of incorporation, or even in its country of incorporation.

ness were a proprietorship or partnership. Such firms, which differ not in organizational form but only in how their owners are taxed, are called **S corporations**.

Growing and Managing a Corporation

Once a corporation has been established, how does it evolve? When entrepreneurs start a company, they usually provide all the financing from their personal resources, which may include savings, second mortgages, or even credit cards. As the corporation grows, it needs factories, equipment, inventory, and other resources to support its growth. In time, the entrepreneurs usually deplete their own resources and must turn to external financing. Many young companies are too risky for banks, so the founders must sell stock to outsiders, such as friends, family, private investors (often called angels), or venture capitalists. If the corporation continues to grow, it may become successful enough to attract lending from banks, or it may even raise additional funds through an **initial public offering (IPO)** by selling stock to the public at large. After an IPO, corporations support their growth by borrowing from banks, issuing debt, or selling additional shares of stock. In short, a corporation's ability to grow depends on its interactions with the financial markets, which we describe in much more detail later in this chapter.

For proprietorships, partnerships, and small corporations, the firm's owners are also its managers. This is usually not true for a large corporation, which means that large firms' stockholders, who are its owners, face a very serious problem. What is to prevent managers from acting in their own best interests, rather than in the best interests of the owners? This is called an **agency problem** because managers are hired as agents to act on behalf of the owners. Agency problems can be addressed by a company's **corporate governance**, which is the set of rules that control a company's behavior towards its directors, managers, employees, shareholders, creditors, customers, competitors, and community. We will have much more to say about agency problems and corporate governance throughout the book, especially in Chapters 15, 16, 21, and 25.⁴

SELF-TEST

What are the key differences between proprietorships, partnerships, and corporations?

Describe some special types of partnerships and corporations, and explain the differences among them.

1.3 The Primary Objective of the Corporation: Value Maximization

Shareholders are the owners of a corporation, and they purchase stocks because they want to earn a good return on their investment without undue risk exposure. In most cases, shareholders elect directors, who then hire managers to run the corporation on a day-to-day basis. Because managers are supposed to be working on

⁴The classic work on agency theory is Michael C. Jensen and William H. Meckling, "Theory of the Firm, Managerial Behavior, Agency Costs, and Ownership Structure," *Journal of Financial Economics*, October 1976, 305–360. Another article by Jensen specifically addresses these issues; see "Value Maximization, Stakeholder Theory, and the Corporate Objective Function," *Journal of Applied Corporate Finance*, Fall 2001, 8–21. For an overview of corporate governance, see Stuart Gillan, "Recent Developments in Corporate Governance: An Overview," *Journal of Corporate Finance*, June 2006, 381–402.

behalf of shareholders, they should pursue policies that enhance shareholder value. Consequently, throughout this book we operate on the assumption that management's primary objective should be **stockholder wealth maximization**.

The **market price** is the stock price that we observe in the financial markets. We later explain in detail how stock prices are determined, but for now it is enough to say that a company's market price incorporates the information available to investors. If the market price reflects all *relevant* information, then the observed price is also the **fundamental**, or **intrinsic**, **price**. However, investors rarely have all relevant information. For example, companies report most major decisions, but they sometimes withhold critical information to prevent competitors from gaining strategic advantages.

Unfortunately, some managers deliberately mislead investors by taking actions to make their companies appear more valuable than they truly are. Sometimes these actions are illegal, such as those taken by the senior managers at Enron. Sometimes the actions are legal, but they are taken to push the current market price above its fundamental price in the short term. For example, suppose a utility's stock price is equal to its fundamental price of \$50 per share. What would happen if the utility substantially reduced its tree-trimming program, but didn't tell investors? This would lower current costs and thus boost current earnings and current cash flow, but it would also lead to major expenditures in the future when breaking limbs damage the lines. If investors were told about the major repair costs facing the company, the market price would immediately drop to a new fundamental value of \$45. But if investors were kept in the dark, they might misinterpret the higher-than-expected current earnings, and the market price might go up to \$52. Investors would eventually understand the situation when the company later incurred large costs to repair the damaged lines; when that happened, the price would fall to its fundamental value of \$45.

Consider the hypothetical sequence of events. The company's managers deceived investors, and the price rose to \$52 when it would have fallen to \$45 if not for the deception. Of course, this benefited those who owned the stock at the time of the deception, including managers with stock options. But when the deception came to light, those stockholders who still owned the stock suffered a significant loss, ending up with stock worth less than its original fundamental value. If the managers cashed in their stock options prior to this, then only the stockholders were hurt by the deception. Because the managers were hired to act in the interests of stockholders, their deception was a breach of their fiduciary responsibility. In addition, the managers' deception damaged the company's credibility, making it harder to raise capital in the future.

Therefore, when we say management's objective should be to maximize stockholder wealth, we really mean it is to *maximize the fundamental price of the firm's common stock*, not just the current market price. Firms do, of course, have other objectives; in particular, the managers who make the actual decisions are interested in their own personal satisfaction, in their employees' welfare, and in the good of the community and of society at large. Still, for the reasons set forth in the following sections, *maximizing the fundamental stock price is the most important objective for most corporations*.

Stock Price Maximization and Social Welfare

If a firm attempts to maximize its fundamental stock price, is this good or bad for society? In general, it is good. Aside from such illegal actions as fraudulent

Ethics for Individuals and Businesses



Business ethics are a company's attitude and conduct toward its employees, customers, community, and stockholders. A firm's commitment to business ethics can be measured by the tendency of its employees, from the top down, to adhere to laws, regulations, and moral standards relating to product safety and quality, fair employment practices, fair marketing and selling practices, the use of confidential information for personal gain, community involvement, and illegal payments to obtain business.

Ethical Dilemmas

When conflicts arise between profits and ethics, sometimes legal and ethical considerations make the choice obvious. At other times the right choice isn't clear. For example, suppose Norfolk Southern's managers know that its coal trains are polluting the air, but the amount of pollution is within legal limits and further reduction would be costly, causing harm to their shareholders. Are the managers ethically bound to reduce pollution? Aren't they also ethically bound to act in their shareholders' best interests?

Merck's own research indicated that its Vioxx pain medicine might be causing heart attacks, but the evidence was not overwhelmingly strong and the product was clearly helping some patients. If the company released negative but still questionable information, this would hurt sales, possibly preventing its beneficial use by some patients. If it delayed release, more and more patients might suffer irreversible harm. At what point should Merck make the potential problem known to the public? There are no obvious answers to questions such as these, but companies must deal with them, and a failure to handle them properly can lead to severe consequences.

Ethical Responsibility

Over the past few years ethical lapses have led to a number of bankruptcies, which have raised the question: Were the *companies* unethical, or was it just some of their employees? That issue came up in the

case of Arthur Andersen, the accounting firm that audited Enron, WorldCom, and several other companies that committed accounting fraud. Evidence showed that some Andersen accountants helped perpetrate the frauds, but its top managers argued that while some rogue employees behaved unethically, the firm's 85,000 other employees, and the firm itself, were innocent. The U.S. Justice Department disagreed, concluding that the firm itself was guilty because it fostered a climate where unethical behavior was permitted, and it built an incentive system that made such behavior profitable to both the perpetrators and the firm itself. As a result, Andersen was put out of business, its partners lost millions of dollars, and its 85,000 employees lost their jobs. In most other cases, individuals rather than firms were tried, and while the firms survived, they suffered reputational damage that greatly lowered their future profit potential and value.

Protecting Ethical Employees

If employees discover questionable activities or are given questionable orders, should they obey their bosses' orders, refuse to obey those orders, or report the situation to a higher authority, such as the company's board of directors, its auditors, or a federal prosecutor? Employees who report improper actions are often fired or otherwise penalized, and this keeps many people from reporting situations that should be investigated. To help alleviate this problem, Congress in 2002 passed the Sarbanes-Oxley Act, with a provision designed to protect "whistle-blowers." If an employee reports corporate wrongdoing and is later penalized, he or she can ask the Occupational Safety and Health Administration to investigate the situation, and if the employee was improperly penalized, the company can be required to reinstate the person, along with back pay and a sizable penalty award. Several big awards have been handed out since the act was passed, and a National Whistle-blower Center has been established.

accounting, exploiting monopoly power, violating safety codes, and failing to meet environmental standards, *the same actions that maximize fundamental stock prices also benefit society*. Here are some of the reasons:

1. **To a large extent, the owners of stock are society.** Seventy-five years ago this was not true, because most stock ownership was concentrated in the hands of



The Security Industry Association's Web site, <http://www.sia.com>, is a great source of information. To find data on stock ownership, go to their Web page, click on Research/Statistics/Surveys, click on Securities Industry Fact Book, choose Surveys, then Equity Ownership in America. You can purchase the most recent data, or look at the prior year for free.

a relatively small segment of society, comprised of the wealthiest individuals. Since then, there has been explosive growth in pension funds, life insurance companies, and mutual funds. These institutions now own more than 61% of all stock, which means that most individuals have an indirect stake in the stock market. In addition, more than 50% of all U.S. households now own stock directly, as compared with only 32.5% in 1989. Thus, most members of society now have an important stake in the stock market, either directly or indirectly. Therefore, when a manager takes actions to maximize the stock price, this improves the quality of life for millions of ordinary citizens.

2. **Consumers benefit.** Stock price maximization requires efficient, low-cost businesses that produce high-quality goods and services at the lowest possible cost. This means that companies must develop products and services that consumers want and need, which leads to new technology and new products. Also, companies that maximize their stock price must generate growth in sales by creating value for customers in the form of efficient and courteous service, adequate stocks of merchandise, and well-located business establishments.

People sometimes argue that firms, in their efforts to raise profits and stock prices, increase product prices and gouge the public. In a reasonably competitive economy, which we have, prices are constrained by competition and consumer resistance. If a firm raises its prices beyond reasonable levels, it will simply lose its market share. Even giant firms such as General Motors lose business to Japanese and German firms, as well as to Ford and Chrysler, if they set prices above the level necessary to cover production costs plus a "normal" profit. Of course, firms *want* to earn more, and they constantly try to cut costs, develop new products, and so on, and thereby earn above-normal profits. Note, though, that if they are indeed successful and do earn above-normal profits, those very profits will attract competition, which will eventually drive prices down. So again, the main long-term beneficiary is the consumer.

3. **Employees benefit.** There are cases in which a stock increases when a company announces a plan to lay off employees, but viewed over time this is the exception rather than the rule. In general, companies that successfully increase stock prices also grow and add more employees, thus benefiting society. Note too that many governments across the world, including U.S. federal and state governments, are privatizing some of their state-owned activities by selling these operations to investors. Perhaps not surprisingly, the sales and cash flows of recently privatized companies generally improve. Moreover, studies show that these newly privatized companies tend to grow and thus require more employees when they are managed with the goal of stock price maximization.

One of *Fortune* magazine's key criteria in determining their list of most admired companies is a company's ability to attract, develop, and retain talented people. Their results consistently show high correlations among admiration for a company, its ability to satisfy employees, and its creation of value for shareholders. Employees find that it is both fun and financially rewarding to work for successful companies. Thus, successful companies get the cream of the employee crop, and skilled, motivated employees are one of the keys to corporate success.

Corporate Scandals and Maximizing Stock Price

The list of corporate scandals seems to go on forever: Sunbeam, Enron, ImClone, WorldCom, Tyco, Adelphia At first glance, it's tempting to say, "Look what happens when managers care only about maximizing stock price." But a closer look reveals a much different story. In fact, if these managers were trying to maximize stock price, given the resulting values of these companies, they failed dismally.

Although details vary from company to company, a few common themes emerge. First, managerial compensation was linked to the short-term performance of the stock price via poorly designed stock option and stock grant programs. This provided managers with a powerful incentive to drive up the stock price at the option vesting date without worrying about the future. Second, it is virtually impossible to take *legal* actions that drive up the stock price in the short term but harm it in the long term because the value of a company is based on all of its future free cash flows and not just cash flows in the immediate future. Because legal actions to quickly drive up the stock price didn't exist (other than the old-fashioned

ones, such as increasing sales, cutting costs, or reducing capital requirements), these managers began bending a few rules. Third, as they initially got away with bending rules, their egos and hubris grew to such an extent that they felt they were above all rules, and so they began breaking even more rules.

Stock prices did go up, at least temporarily, but as Abraham Lincoln said, "You can't fool all of the people all of the time." As the scandals became public, the stocks' prices plummeted, and in some cases the companies were ruined.

There are several important lessons to be learned from these examples. First, people respond to incentives, and poorly designed incentives can cause disastrous results. Second, ethical violations usually begin with small steps; if stockholders want managers to avoid large ethical violations, then they shouldn't let them make the small ones. Third, there is no shortcut to creating lasting value. It takes hard work to increase sales, cut costs, and reduce capital requirements, but this is the formula for success.

Managerial Actions to Maximize Shareholder Wealth

What types of actions can managers take to maximize shareholder wealth? To answer this question, we first need to ask, "What determines a firm's value?" In a nutshell, it is *a company's ability to generate cash flows now and in the future*.

We address different aspects of this in detail throughout the book, but we can lay out three basic facts now: (1) Any financial asset, including a company's stock, is valuable only to the extent that it generates cash flows; (2) the timing of cash flows matters—cash received sooner is better; and (3) investors are averse to risk, so all else equal, they will pay more for a stock whose cash flows are relatively certain than for one whose cash flows are more risky. Because of these three facts, managers can enhance their firm's value by increasing the size of the expected cash flows, by speeding up their receipt, and by reducing their risk.

The cash flows that matter are called **free cash flows (FCFs)**, not because they are free, but because they are available (or free) for distribution to all of the company's investors, including creditors and stockholders. You will learn how to calculate free cash flows in Chapter 3, but for now you should know that free cash flows depend on three factors: (1) sales revenues, (2) operating costs and taxes, and (3) required investments in operating capital. In particular, free cash flow is equal to

$$\begin{aligned} \text{FCF} = & \text{Sales revenues} - \text{Operating costs} - \text{Operating taxes} \\ & - \text{Required investments in operating capital.} \end{aligned}$$

Brand managers and marketing managers can increase sales (and prices) by truly understanding their customers and then designing goods and services that customers want. Human resource managers can improve productivity through training and employee retention. Production and logistics managers can improve profit margins, reduce inventory, and improve throughput at factories by implementing supply chain management, just-in-time inventory management, and lean manufacturing. In fact, all managers make decisions that can increase free cash flows.

One of the financial manager's roles is to help others see how their actions affect the company's ability to generate cash flow and, hence, its fundamental value. Financial managers also must decide *how to finance the firm*. In particular, they must choose what mix of debt and equity should be used, and what specific types of debt and equity securities should be issued. They must also decide what percentage of current earnings should be retained and reinvested rather than paid out as dividends. Along with these financing decisions, the general level of interest rates in the economy, the risk of the firm's operations, and stock market investors' overall attitude toward risk determine the rate of return that is required to satisfy a firm's investors. This rate of return from investors' perspectives is a cost from the company's point of view. Therefore, the rate of return required by investors is called the **weighted average cost of capital (WACC)**.

The relationship between a firm's fundamental value, its free cash flows, and its cost of capital is defined by the following equation:

$$\begin{aligned} \text{Value} = & \frac{\text{FCF}_1}{(1 + \text{WACC})^1} + \frac{\text{FCF}_2}{(1 + \text{WACC})^2} \\ & + \frac{\text{FCF}_3}{(1 + \text{WACC})^3} + \dots + \frac{\text{FCF}_\infty}{(1 + \text{WACC})^\infty} \end{aligned} \quad (1-1)$$

We will explain this equation and how to use it in detail later, beginning with Chapter 2. But for now, recall that growing firms often need to raise external funds, so the rest of this chapter focuses upon financial markets.

SELF-TEST

What should be management's primary objective?

How does maximizing the fundamental stock price benefit society?

What are the three primary determinants of free cash flows?

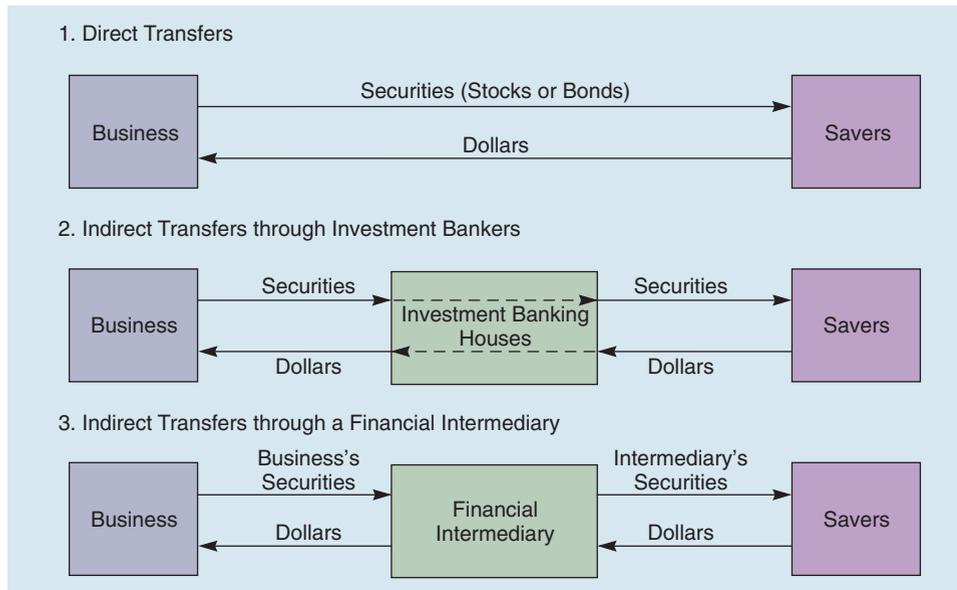
How is a firm's fundamental value related to its free cash flows and its cost of capital?

1.4 An Overview of the Capital Allocation Process

Businesses often need capital to implement growth plans; governments require funds to finance building projects; and individuals frequently want loans to purchase cars, homes, and education. Where can they get this money? Fortunately, there are other individuals and firms with incomes greater than their expenditures. In contrast to William Shakespeare's advice, most individuals and firms are both borrowers and lenders. For example, an individual might borrow money with a car loan or a home mortgage, but might also lend money through a bank savings account. In aggregate, individual households are net savers and provide most of the funds ultimately used by nonfinancial corporations. Although most

Figure 1-1

Diagram of the Capital Allocation Process



nonfinancial corporations own some financial securities, such as short-term Treasury bills, nonfinancial corporations are net borrowers in aggregate. It should be no surprise to you that federal, state, and local governments are also net borrowers in aggregate. Banks and other financial corporations raise money with one hand and invest it with the other. For example, a bank might raise money from individuals in the form of a savings account, but then lend most of that money to a business customer. In aggregate, financial corporations borrow slightly more than they lend.

Transfers of capital between savers and those who need capital take place in the three different ways. Direct transfers of money and securities, as shown in the top section of Figure 1-1, occur when a business sells its stocks or bonds directly to savers, without going through any type of financial institution. The business delivers its securities to savers, who in turn give the firm the money it needs.

As shown in the middle section, indirect transfers may go through an **investment banking house** such as Merrill Lynch, which *underwrites* the issue. An underwriter serves as a middleman and facilitates the issuance of securities. The company sells its stocks or bonds to the investment bank, which in turn sells these same securities to savers. Because new securities are involved and the corporation receives the proceeds of the sale, this is a primary market transaction.

Transfers can also be made through a **financial intermediary** such as a bank or mutual fund. Here the intermediary obtains funds from savers in exchange for its own securities. The intermediary then uses this money to purchase and then hold businesses' securities. For example, a saver might give dollars to a bank, receiving from it a certificate of deposit, and then the bank might lend the money to a small business in the form of a mortgage loan. Thus, intermediaries literally create new forms of capital.

There are three important characteristics of the capital allocation process. First, new financial securities are created. Second, financial institutions are often



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See **Web Extension 1A** at the textbook's Web site for more discussion of the ways that financial intermediaries in the home mortgage industry create new financial securities.

involved. Third, allocation between providers and users of funds occurs in financial markets. The following sections discuss each of these characteristics.

SELF-TEST

Identify three ways capital is transferred between savers and borrowers.

Distinguish between the roles played by investment banking houses and financial intermediaries.



You can access current and historical interest rates and economic data as well as regional economic data for the states of Arkansas, Illinois, Indiana, Kentucky, Mississippi, Missouri, and Tennessee from the Federal Reserve Economic Data (FRED) site at <http://www.stls.frb.org/fred/>.



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For an overview of derivatives, see **Web Extension 1B** at the text-book's Web site.

1.5 Financial Securities and the Cost of Money

The variety of financial securities is limited only by human creativity and ingenuity, which isn't much of a limit. At the risk of oversimplification, we can classify most financial securities along two dimensions: (1) time until maturity and (2) debt, equity, or derivatives.

In general, short-term securities are those that mature in less than a year; these are called money market securities. Those that mature in more than a year are called capital market securities.

Financial securities are simply pieces of paper with contractual provisions that entitle their owners to specific rights and claims on specific cash flows or values. Debt instruments typically have specified payments and a specified maturity. For example, an IBM bond might promise to pay 10% interest for 30 years, at which time it makes a \$1,000 principal payment. Equity instruments are a claim upon a residual value. For example, IBM's stockholders are entitled to IBM's cash flows after its bondholders, creditors, and other claimants have been satisfied. Notice that debt and equity represent claims upon the cash flows generated by real assets, such as the cash flows generated by IBM. In contrast, **derivatives** are securities whose values depend on, or are *derived* from, the values of some other traded assets. For example, futures and options are two important types of derivatives, and their values depend on the prices of other assets, such as IBM stock, Japanese yen, or pork bellies.

Most conventional securities are forms of debt or equity, and most derivatives are forms of options, futures, forward contracts, or swaps. However, there are hybrid securities for which these distinctions blur. For example, preferred stock has some features like debt and some like equity, while convertible debt has debt-like features and option-like features. We discuss many financial securities in detail later in the book, but Table 1-1 (on pages 16 and 17) provides a summary of the most important conventional financial securities. See **Web Extension 1B** for an overview of derivatives and see Chapter 23 for a more detailed discussion within the context of risk management.

In a free economy, capital from providers with available funds is allocated through the price system to users that have a demand for funds. The interaction of the providers' supply and the users' demand determines the cost (or price) of money, which is the rate users pay to providers. For debt, we call this price the **interest rate**. For equity, we call this price the **cost of equity**, and it consists of the dividends and capital gains stockholders expect. Keep in mind that the cost of money from a user's perspective is a return from the provider's point of view, so we often use those terms interchangeably.

Notice in Table 1-1 that a financial security's rate of return generally increases as its maturity and risk increase. We will have much more to say about the relationships

among an individual security's features, risk, and return later in the book, but there are some fundamental factors and economic conditions that affect all securities.

Fundamental Factors That Affect the Cost of Money

The four most fundamental factors affecting the cost of money are (1) **production opportunities**, (2) **time preferences for consumption**, (3) **risk**, and (4) **inflation**. By production opportunities, we mean the ability to turn capital into benefits. If a business raises capital, the benefits are determined by the expected rates of return on its production opportunities. If a student borrows to finance education, the benefits are higher expected future salaries (and, of course, the sheer joy of learning!). If a homeowner borrows, the benefits are the pleasure from living in his or her own home, plus any expected appreciation in the value of the home. Notice that the expected rates of return on these "production opportunities" put an upper limit on how much users can pay to providers.

Providers can use their current funds for consumption or saving. By saving, they give up consumption now in the expectation of having more consumption in the future. If providers have a strong preference for consumption now, then it takes high interest rates to induce them to trade current consumption for future consumption. Therefore, the time preference for consumption has a major impact on the cost of money. Notice that the time preference for consumption varies for different individuals, for different age groups, and for different cultures. For example, people in Japan have a lower time preference for consumption than those in the United States, which partially explains why Japanese families tend to save more than U.S. families even though interest rates are lower in Japan.

If the expected rate of return on an investment is risky, then providers require a higher expected return to induce them to take the extra risk, which drives up the cost of money. As you will see later in this book, the risk of a security is determined by market conditions and the security's particular features.

Inflation also leads to a higher cost of money. For example, suppose you earned 10% one year on your investment, but inflation caused prices to increase by 20%. This means you can't consume as much at the end of the year as when you originally invested your money. Obviously, if you had expected 20% inflation, you would have required a higher rate of return than 10%.

Economic Conditions and Policies That Affect the Cost of Money

Economic conditions and policies also affect the cost of money. These include: (1) Federal Reserve policy; (2) the federal budget deficit or surplus; (3) the level of business activity; and (4) international factors, including the foreign trade balance, the international business climate, and exchange rates.

Federal Reserve Policy As you probably learned in your economics courses, (1) the money supply has a major effect on both the level of economic activity and the inflation rate, and (2) in the United States, the Federal Reserve Board controls the money supply. If the Fed wants to stimulate the economy, it increases growth in the money supply. The initial effect would be to cause interest rates to decline. However, a larger money supply may also lead to an increase in expected inflation, which would push interest rates up. The reverse holds if the Fed tightens the money supply.



The home page for the Board of Governors of the Federal Reserve System can be found at <http://www.federalreserve.gov>. You can access general information about the Federal Reserve, including press releases, speeches, and monetary policy.

Table 1-1

Summary of Major Financial Securities

Instrument	Major Participants	Risk	Original Maturity	Rates of return on 4/25/06 ^a
U.S. Treasury bills	Sold by U.S. Treasury	Default-free	91 days to 1 year	4.79%
Banker's acceptances	A firm's promise to pay, guaranteed by a bank	Low if strong bank guarantees	Up to 180 days	5.11%
Commercial paper	Issued by financially secure firms to large investors	Low default risk	Up to 270 days	4.97%
Negotiable certificates of deposit (CDs)	Issued by major banks to large investors	Depends on strength of issuer	Up to 1 year	5.07%
Money market mutual funds	Invest in short-term debt; held by individuals and businesses	Low degree of risk	No specific maturity (instant liquidity)	4.09%
Eurodollar market time deposits	Issued by banks outside United States	Depends on strength of issuer	Up to 1 year	5.10%
Consumer credit loans	Loans by banks/credit unions/finance companies	Risk is variable	Variable	Variable
Commercial loans	Loans by banks to corporations	Depends on borrower	Up to 7 years	Tied to prime rate (7.75%) or LIBOR (5.13%) ^b

^aData are from *The Wall Street Journal* (<http://online.wsj.com>) or the *Federal Reserve Statistical Release* (<http://www.federalreserve.gov/releases/H15/update>). Banker's acceptances assume a 3-month maturity. Money market rates are for the Merrill Lynch Ready Assets Trust. The corporate bond rate is for AAA-rated bonds.

^bThe prime rate is the rate U.S. banks charge to good customers. LIBOR (London Interbank Offered Rate) is the rate that U.K. banks charge one another.

Budget Deficits or Surpluses If the federal government spends more than it takes in from tax revenues, it runs a deficit, and that deficit must be covered either by borrowing or by printing money (increasing the money supply). If the government borrows, this added demand for funds pushes up interest rates. If it prints money, this increases expectations for future inflation, which also drives up interest rates. Thus, the larger the federal deficit, other things held constant, the higher the level of interest rates.

Business Activity Figure 1-2 shows business conditions, interest rates, and inflation. The shaded areas in the graph represent recessions. Consumer demand slows during a recession, keeping companies from increasing prices, which reduces price inflation. Companies also cut back on hiring, which reduces wage inflation. Less disposable income causes consumers to reduce their purchases of homes and automobiles, reducing consumer demand for loans. Companies reduce investments in new operations, which reduces their demand for funds. The cumulative effect is downward pressure on inflation and interest rates. The Federal Reserve is also active during recessions, trying to stimulate the economy.

Table 1-1

Summary of Major Financial Securities—*Continued*

Instrument	Major Participants	Risk	Original Maturity	Rates of return on 4/25/06 ^a
U.S. Treasury notes and bonds	Issued by U.S. government	No default risk, but price falls if interest rates rise	2 to 30 years	5.04%
Mortgages	Loans secured by property	Risk is variable	Up to 30 years	6.15%
Municipal bonds	Issued by state and local governments to individuals and institutions	Riskier than U.S. government bonds, but exempt from most taxes	Up to 30 years	4.66%
Corporate bonds	Issued by corporations to individuals and institutions	Riskier than U.S. government debt; depends on strength of issuer	Up to 40 years ^c	5.93%
Leases	Similar to debt; firms lease assets rather than borrow	Risk similar to corporate bonds	Generally 3 to 20 years	Similar to bond yields
Preferred stocks	Issued by corporations to individuals and institutions	Riskier than corporate bonds	Unlimited	6% to 9%
Common stocks ^d	Issued by corporations to individuals and institutions	Riskier than preferred stocks	Unlimited	9% to 15%

^aA few corporations have issued 100-year bonds; however, most have issued bonds with maturities less than 40 years.

^dCommon stocks are expected to provide a "return" in the form of dividends and capital gains rather than interest. Of course, if you buy a stock, your *actual* return may be considerably higher or lower than your *expected* return.

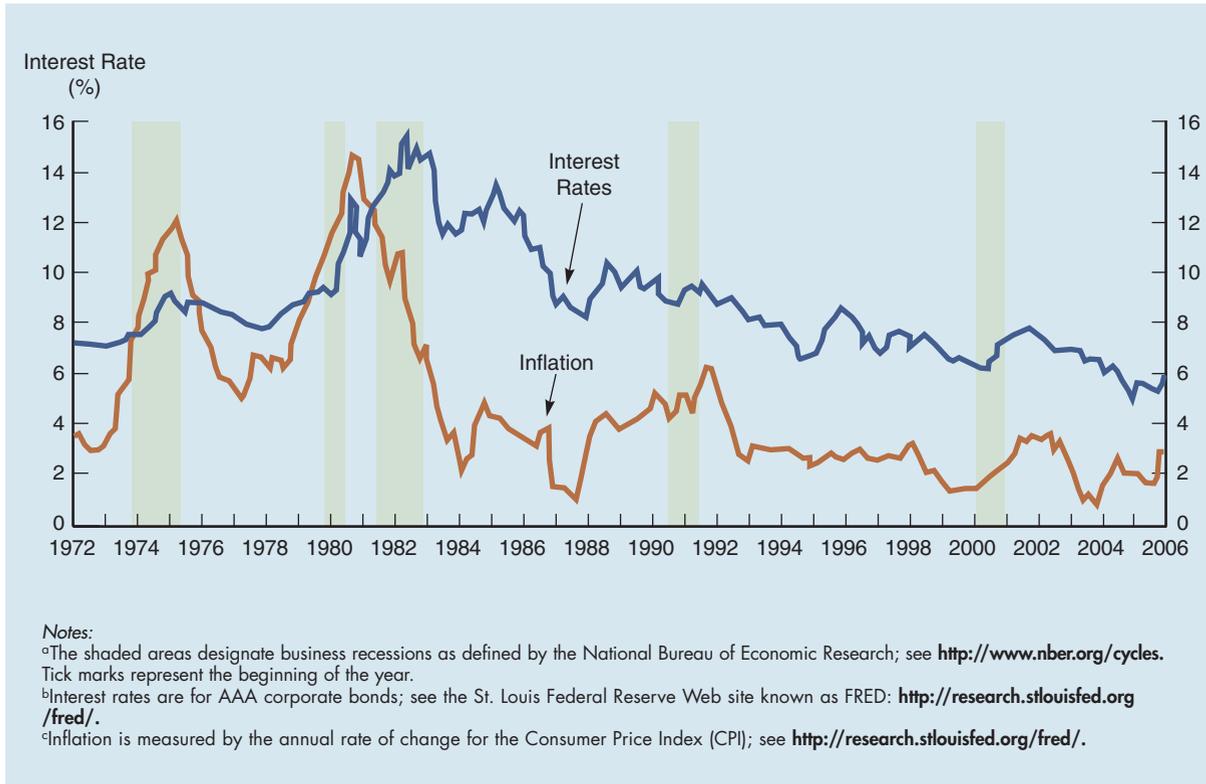
One way it does this is by purchasing Treasury bonds that are held by banks. This has two effects. Because they sell some of their bonds, the banks have more cash, which increases their supply of loanable funds, which in turn makes them willing to lend at lower interest rates. Also, the Fed's bond purchases drive up bond prices, which drives down bond interest rates. The combined effect of the Fed's activities is to reduce interest rates.

International Trade Deficits or Surpluses Businesses and individuals in the United States buy from and sell to people and firms in other countries. If we buy more than we sell (that is, if we import more than we export), we are said to be running a *foreign trade deficit*. When trade deficits occur, they must be financed, and the main source of financing is debt. In other words, if we import \$200 billion of goods but export only \$90 billion, we run a trade deficit of \$110 billion, and we will probably borrow the \$110 billion.⁵ Therefore, the larger our trade deficit, the more we

⁵The deficit could also be financed by selling assets, including gold, corporate stocks, entire companies, and real estate. The United States has financed its massive trade deficits by all of these means in recent years, but the primary method has been by borrowing from foreigners.

Figure 1-2

Business Activity, Interest Rates, and Inflation



must borrow, and as we increase our borrowing, this drives up interest rates. Also, international investors are willing to hold U.S. debt if and only if the rate paid on this debt is competitive with interest rates in other countries. Therefore, if the Federal Reserve attempts to lower interest rates in the United States, causing our rates to fall below rates abroad (after adjustments for expected changes in the exchange rate), then international investors will sell U.S. bonds, which will depress bond prices and result in higher U.S. rates. Thus, if the trade deficit is large relative to the size of the overall economy, it will hinder the Fed's ability to combat a recession by lowering interest rates.

The United States has been running annual trade deficits since the mid-1970s, and the cumulative effect of these deficits is that the United States has become the largest debtor nation of all time. As a result, our interest rates are very much influenced by interest rates in other countries around the world: Higher rates abroad lead to higher U.S. rates, and vice versa. Because of all this, U.S. corporate treasurers—and anyone else who is affected by interest rates—must keep up with developments in the world economy.

International Country Risk International risk factors may increase the cost of money that is invested abroad. **Country risk** is the risk that arises from investing

or doing business in a particular country. This risk depends on the country's economic, political, and social environment. Countries with stable economic, social, political, and regulatory systems provide a safer climate for investment, and therefore have less country risk than less stable nations. Examples of country risk include the risk associated with changes in tax rates, regulations, currency conversion, and exchange rates. Country risk also includes the risk that property will be expropriated without adequate compensation, as well as new host country stipulations about local production, sourcing or hiring practices, and damage or destruction of facilities due to internal strife.

International Exchange Rate Risk International securities usually are denominated in a currency other than the dollar, which means that the value of your investment depends on what happens to exchange rates. This is known as **exchange rate risk**. For example, if a U.S. investor purchases a Japanese bond, interest will probably be paid in Japanese yen, which must then be converted into dollars if the investor wants to spend his or her money in the United States. If the yen weakens relative to the dollar, then it will buy fewer dollars; hence the investor will receive fewer dollars when it comes time to convert. Alternatively, if the yen strengthens relative to the dollar, the investor will earn higher dollar returns. It therefore follows that the effective rate of return on a foreign investment will depend on both the performance of the foreign security and on what happens to exchange rates over the life of the investment. We will discuss exchange rates in detail in Chapter 26.



Transparency International provides a ranking of countries based on their levels of perceived corruption. See http://www.transparency.org/policy_research/surveys_indices/cpi/2005. The U.S. Department of State provides thorough descriptions of countries' business climates at <http://www.state.gov/e/eb/ifa/2005/>.

SELF-TEST

What four fundamental factors affect the cost of money?

Name some economic conditions that influence interest rates, and explain their effects.

1.6 Financial Institutions

Direct funds transfers are more common among individuals and small businesses, and in economies where financial markets and institutions are less developed. While businesses in more developed economies do occasionally rely on direct transfers, they generally find it more efficient to enlist the services of one or more financial institutions when it comes time to raise capital. Here are the major categories of financial institutions:

1. **Investment banking houses** such as Merrill Lynch, Morgan Stanley, Goldman Sachs, or Credit Suisse Group provide a number of services to both investors and companies planning to raise capital. Such organizations (1) help corporations design securities with features that are currently attractive to investors, (2) then buy these securities from the corporation, and (3) resell them to savers. Although the securities are sold twice, this process is really one primary market transaction, with the investment banker acting as a facilitator to help transfer capital from savers to businesses.
2. **Commercial banks**, such as Bank of America, Wells Fargo, Wachovia, and JPMorgan Chase, are the traditional "department stores of finance" because

they serve a variety of savers and borrowers. Historically, commercial banks were the major institutions that handled checking accounts and through which the Federal Reserve System expanded or contracted the money supply. Today, however, several other institutions also provide checking services and significantly influence the money supply. Conversely, commercial banks are providing an ever-widening range of services, including stock brokerage services and insurance.

3. **Financial services corporations** are large conglomerates that combine many different financial institutions within a single corporation. Examples of financial services corporations, most of which started in one area but have now diversified to cover most of the financial spectrum, include Citigroup, American Express, Fidelity, and Prudential.
4. **Savings and loan associations (S&Ls)**, which have traditionally served individual savers and residential and commercial mortgage borrowers, take the funds of many small savers and then lend this money to home buyers and other types of borrowers. Because the savers obtain a degree of liquidity that would be absent if they made the mortgage loans directly, perhaps the most significant economic function of the S&Ls is to “create liquidity” that would otherwise be lacking. Also, the S&Ls have more expertise in analyzing credit, setting up loans, and making collections than individual savers, so S&Ls can reduce the costs of processing loans, thereby increasing the availability of real estate loans. Finally, the S&Ls hold large, diversified portfolios of loans and other assets and thus spread risks in a manner that would be impossible if small savers were making mortgage loans directly. Because of these factors, savers benefit by being able to invest in more liquid, better managed, and less risky assets, whereas borrowers benefit by being able to obtain more capital, and at a lower cost, than would otherwise be possible.
5. **Mutual savings banks** are similar to S&Ls, but they operate primarily in the northeastern states.
6. **Credit unions** are cooperative associations whose members are supposed to have a common bond, such as being employees of the same firm. Members’ savings are loaned only to other members, generally for auto purchases, home improvement loans, and home mortgages. Credit unions are often the cheapest source of funds available to individual borrowers.
7. **Life insurance companies** take savings in the form of premiums; invest these funds in stocks, bonds, real estate, and mortgages; and make payments to beneficiaries. Life insurance companies also offer a variety of tax-deferred savings plans designed to provide retirement benefits.
8. **Mutual funds** are corporations that accept money from savers and then use these funds to buy financial instruments. These organizations pool funds and thus reduce risks by diversification. They also achieve economies of scale in analyzing securities, managing portfolios, and buying and selling securities. Different funds are designed to meet the objectives of different types of savers. Hence, there are bond funds for those who desire safety, stock funds for savers who are willing to accept significant risks in the hope of higher returns, and still other funds that are used as interest-bearing checking accounts (the **money market funds**). There are literally thousands of different mutual funds with dozens of different goals and purposes. Some funds are actively managed, with their managers trying to find undervalued securities, while other funds are passively managed and simply try to minimize expenses by replicating a particular market index. Most traditional mutual funds allow investors to redeem their share of the fund only at the close of business. A new

type of mutual fund, the **exchange traded fund (ETF)**, allows investors to sell their share at any time during normal trading hours. ETFs usually have very low management expenses and are rapidly gaining in popularity.

9. Traditional **pension funds** are retirement plans funded by corporations or government agencies for their workers and usually administered by the trust departments of commercial banks or by life insurance companies. Pension funds invest primarily in bonds, stocks, mortgages, and real estate. Many companies now offer self-directed retirement plans, such as 401(k) plans, as an addition to or substitute for traditional pension plans. In traditional plans, the plan administrators determine how to invest the funds; in self-directed plans, all individual participants must decide how to invest their own funds.
10. **Hedge funds** raise money from investors and engage in a variety of investment activities. Unlike typical mutual funds, which can have thousands of investors, hedge funds are limited to a relatively small number of high-wealth individuals or institutional investors. As such, hedge funds are much less regulated than mutual funds. The first hedge funds literally tried to hedge their bets by forming portfolios of conventional securities and derivatives in such a way that they limited their potential losses without sacrificing too much of their potential gains. Most hedge funds also levered their positions by borrowing heavily. During the early and mid-1990s many hedge funds had spectacular rates of return. This success attracted more investors and more hedge funds were created. Much of the low-hanging fruit had already been picked, so many hedge funds began pursuing much riskier (and unhedged) strategies. Perhaps not surprisingly (at least in retrospect!), some funds have produced spectacular losses. For example, many hedge fund investors suffered large losses in 1998 when the Russian economy collapsed. That same year, the Federal Reserve had to step in to help rescue Long Term Capital Management, a high-profile hedge fund whose managers included several well-respected practitioners as well as two Nobel Prize-winning professors who were experts in investment theory.⁶

With the notable exception of hedge funds, financial institutions have been heavily regulated to ensure the safety of these institutions and thus to protect investors. Historically, many of these regulations—which have included a prohibition on nationwide branch banking, restrictions on the types of assets the institutions could buy, ceilings on the interest rates they could pay, and limitations on the types of services they could provide—tended to impede the free flow of capital and thus hurt the efficiency of our capital markets. Recognizing this fact, policymakers took several steps during the 1980s and 1990s to deregulate financial services companies. For example, the barriers that restricted banks from expanding nationwide were eliminated. Likewise, regulations that once forced a strict separation of commercial and investment banking have been relaxed.

The result of the ongoing regulatory changes has been a blurring of the distinctions between the different types of institutions. Indeed, the trend in the United States today is toward huge financial services corporations, which own banks, S&Ls, investment banking houses, insurance companies, pension plan operations, and mutual funds, and which have branches across the country and around the world. For example, Citigroup combines one of the world's largest

⁶See Franklin Edwards, "Hedge Funds and the Collapse of Long Term Capital Management," *Journal of Economic Perspectives*, Spring 1999, 189–210 for a thoughtful review of the implications of Long Term Capital Management's collapse.

commercial banks (Citibank), a huge insurance company (Travelers), and a major investment bank (Smith Barney), along with numerous other subsidiaries that operate throughout the world. Citigroup's structure is similar to that of major institutions in Europe, Japan, and elsewhere around the globe.

Among the world's largest world banking companies, only one (Citigroup) is based in the United States. While U.S. banks have grown dramatically as a result of recent mergers, they are still relatively small by global standards.

SELF-TEST

What is the difference between a pure commercial bank and a pure investment bank?

List the major types of financial institutions and briefly describe the primary function of each.

What are some important differences between mutual and hedge funds? How are they similar?

1.7 Types of Financial Markets

Financial markets bring together people and organizations needing money with those having surplus funds. There are many different financial markets in a developed economy. Each market deals with a somewhat different type of instrument, customer, or geographic location. Here are some of the major types of markets:

1. **Physical asset markets** (also called "tangible" or "real" asset markets) are those for such products as wheat, autos, real estate, computers, and machinery. **Financial asset markets**, on the other hand, deal with stocks, bonds, notes, mortgages, and other **financial instruments**.
2. **Spot markets** and **futures markets** are markets where assets are being bought or sold for "on-the-spot" delivery (literally, within a few days) or for delivery at some future date, such as 6 months or a year into the future.
3. **Money markets** are the markets for short-term, highly liquid debt securities. **Capital markets** are the markets for intermediate- or long-term debt and corporate stocks. The New York Stock Exchange is an example of a capital market. When describing debt markets, "short term" generally means less than 1 year, "intermediate term" means 1 to 5 years, and "long term" means more than 5 years.
4. **Mortgage markets** deal with loans on residential, agricultural, commercial, and industrial real estate, while **consumer credit markets** involve loans for autos, appliances, education, vacations, and so on.
5. **World, national, regional, and local markets** also exist. Thus, depending on an organization's size and scope of operations, it may be able to borrow all around the world, or it may be confined to a strictly local, even neighborhood, market.
6. **Primary markets** are the markets in which corporations raise new capital. If Microsoft were to sell a new issue of common stock to raise capital, this would be a primary market transaction. The corporation selling the newly created stock receives the proceeds from the sale in a primary market transaction. The **initial public offering (IPO) market** is a subset of the primary market. Here firms "go public" by offering shares to the public for the first time. Microsoft had its IPO in 1986. Previously, Bill Gates and other insiders owned all the shares. In many IPOs, the insiders sell some of their shares plus the company sells newly created shares to raise additional capital. **Secondary markets** are markets in which existing, already outstanding securities are traded among

investors. Thus, if you decided to buy 1,000 shares of AT&T stock, the purchase would occur in the secondary market. The New York Stock Exchange is a secondary market, since it deals in outstanding, as opposed to newly issued, stocks. Secondary markets also exist for bonds, mortgages, and other financial assets. The corporation whose securities are being traded is not involved in a secondary market transaction and, thus, does not receive any funds from such a sale.

7. **Private markets**, where transactions are worked out directly between two parties, are differentiated from **public markets**, where standardized contracts are traded on organized exchanges. Bank loans and private placements of debt with insurance companies are examples of private market transactions. Since these transactions are private, they may be structured in any manner that appeals to the two parties. By contrast, securities that are issued in public markets (for example, common stock and corporate bonds) are ultimately held by a large number of individuals. Public securities must have fairly standardized contractual features, to appeal to a broad range of investors and also because public investors cannot afford the time to study unique, nonstandardized contracts. Private market securities are, therefore, more tailor-made but less liquid, whereas public market securities are more liquid but subject to greater standardization.

The distinctions among markets are often blurred. For example, it makes little difference if a firm borrows for 11, 12, or 13 months, hence, whether such a transaction is a “money” or “capital” market transaction. You should recognize the big differences among types of markets, but don’t get hung up trying to distinguish them at the boundaries.

SELF-TEST

Distinguish between (1) physical asset markets and financial asset markets, (2) spot and futures markets, (3) money and capital markets, (4) primary and secondary markets, and (5) private and public markets.

1.8 Trading Procedures in Financial Markets

The vast majority of trading occurs in the secondary markets. Although there are many secondary markets for a wide variety of securities, we can classify their trading procedures along two dimensions: location and method of matching orders.

A secondary market can be either a **physical location exchange** or a **computer/telephone network**. For example, the New York Stock Exchange, the American Stock Exchange (AMEX), the Chicago Board of Trade (the CBOT trades futures and options), and the Tokyo Stock Exchange are all physical location exchanges. In other words, the traders actually meet and trade in a specific part of a specific building. In contrast, Nasdaq, which trades U.S. stocks, is a network of linked computers. Other examples are the markets for U.S. Treasury bonds and foreign exchange, which are conducted via telephone and/or computer networks. In these electronic markets, the traders never see one another.

The second dimension is the way orders from sellers and buyers are matched. This can occur through an open outcry **auction** system, through dealers, or by automated order matching. An example of an outcry auction is the CBOT, where traders actually meet in a pit and sellers and buyers communicate with one another through shouts and hand signals.

In a **dealer market**, there are “market makers” who keep an inventory of the stock (or other financial instrument) in much the same way that any merchant keeps an inventory. These dealers list bid and asked quotes, which are the prices at which they are willing to buy or sell. Computerized quotation systems keep track of all bid and asked prices, but they don’t actually match buyers and sellers. Instead, traders must contact a specific dealer to complete the transaction. Nasdaq (U.S. stocks) is one such market, as are the London SEAQ (U.K. stocks) and the Neuer Market (stocks of small German companies).

The third method of matching orders is through an **electronic communications network (ECN)**. Participants in an ECN post their orders to buy and sell, and the ECN automatically matches orders. For example, someone might place an order to buy 1,000 shares of IBM stock (this is called a “market order” since it is to buy the stock at the current market price). Suppose another participant had placed an order to sell 1,000 shares of IBM at a price of \$91 per share, and this was the lowest price of any “sell” order. The ECN would automatically match these two orders, execute the trade, and notify both participants that the trade has occurred. Participants can also post “limit orders,” which might state that the participant is willing to buy 1,000 shares of IBM at \$90 per share if the price falls that low during the next two hours. In other words, there are limits on the price and/or the duration of the order. The ECN will execute the limit order if the conditions are met, that is, if someone offers to sell IBM at a price of \$90 or less during the next two hours. Two of the largest ECNs for trading U.S. stocks are Instinet (now owned by Nasdaq) and Archipelago (now owned by the NYSE). Other large ECNs include Eurex, a Swiss-German ECN that trades futures contracts, and SETS, a U.K. ECN that trades stocks.

SELF-TEST

What are the major differences between physical location exchanges and computer/telephone networks? What are the differences among open outcry auctions, dealer markets, and ECNs?

1.9 Types of Stock Market Transactions

Because the primary objective of financial management is to maximize the firm’s stock price, knowledge of the stock market is important to anyone involved in managing a business. We can classify stock market transactions into three distinct types.

Whenever stock is offered to the public for the first time, the company is said to be going public. This primary market transaction is called the initial public offering (IPO) market. If a company decides to sell (or issue) additional shares to raise new equity capital, this is still a primary market, but it is called a **seasoned equity offering**. Trading in the outstanding shares of established, publicly owned companies is a secondary market transaction. For example, if the owner of 100 shares of publicly held stock sells his or her stock, the trade is said to have occurred in the secondary market. Thus, the market for outstanding shares, or used shares, is the secondary market. The company receives no new money when sales occur in this market.

Following is a brief description of the recent IPO market; a more complete discussion of IPOs is in Chapter 19. Out of the 1,279 global IPOs in 2005, there were 237 U.S. IPOs that brought in a total of \$36.1 billion. Although some U.S. IPOs were large, such as the \$1.59 billion raised by Huntsman, no U.S. offerings were



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For more on investment banking, see **Web Extension 1C** at the text-book’s Web site, or see Chapter 19.

Rational Exuberance



The Daily Planet Ltd. made history on May 1, 2003, by becoming the world's first publicly traded brothel. Technically, the Daily Planet only owns property, including a hotel with 18 rooms, each with a different theme, but all having multiperson showers and very large beds. The Daily Planet charges guests a room fee of A\$115 per hour; clients also pay a fee of A\$115 directly to individual members of the staff.

The IPO was for 7.5 million shares of stock, initially priced at A\$0.50. However, the price ended the first day of trading at A\$1.09, for a first-day return of 118%. The price closed the second day at

A\$1.56, for a 2-day return of 212%, one of the largest returns since the days of the dot-com boom. Institutional investors normally buy about 60% to 70% of IPO stock, but they didn't participate in this offering. The Daily Planet plans to use some of the proceeds to pay down debt and the rest for expansion, possibly through franchising.

The company is named after the fictitious newspaper where comic strip character Clark Kent was a reporter. All receptionists have "Lois Lane" nametags, and there is a telephone box in the lobby. What would Superman think!

in the global top ten largest (the biggest was the China Construction Bank Corp.'s IPO of \$9.2 billion). In the United States the average first-day return was 9%, although some firms had spectacular first-day price run-ups. For example, Baidu.com was up 327.8% on its first day of trading, and Citi Trends gained 204.9% for the year. However, not all companies fared so well—Nuvim was down 88% its first day, and Refco lost a total of 98% for the year. Even if you are able to identify a "hot" issue, it is often difficult to purchase shares in the initial offering. These deals are generally oversubscribed, which means that the demand for shares at the offering price exceeds the number of shares issued. In such instances, investment bankers favor large institutional investors (who are their best customers), and small investors find it hard, if not impossible, to get in on the ground floor. They can buy the stock in the aftermarket, but evidence suggests that if you do not get in on the ground floor, the average IPO underperforms the overall market over the long run.⁷

Before you conclude that it isn't fair to let only the best customers have the stock in an initial offering, think about what it takes to become a best customer. Best customers are usually investors who have done lots of business in the past with the investment banking firm's brokerage department. In other words, they have paid large sums as commissions in the past, and they are expected to continue doing so in the future. As is so often true, there is no free lunch—most of the investors who get in on the ground floor of an IPO have in fact paid for this privilege.

SELF-TEST

Differentiate between an IPO, a seasoned equity offering, and a secondary transaction. Why is it often difficult for the average investor to make money during an IPO?



For updates on IPO activity, see <http://www.ipomonitor.com> or <http://www.hoovers.com/global/ipoc/index.xhtml>. The Wall Street Journal also provides IPO data in its Year End Review of Markets & Finance at <http://online.wsj.com>.

1.10 The Secondary Stock Markets

The two leading U.S. stock markets today are the New York Stock Exchange and the Nasdaq stock market.

⁷See Jay R. Ritter, "The Long-Run Performance of Initial Public Offerings," *Journal of Finance*, March 1991, 3–27.



You can access the home pages of the major U.S. stock markets at <http://www.nyse.com> or <http://www.nasdaq.com>. These sites provide background information as well as the opportunity to obtain individual stock quotes.



e-resource

For more on stock markets, see **Web Extension 1C** at the textbook's Web site.

The New York Stock Exchange

Before March of 2006, the **New York Stock Exchange (NYSE)** was a privately held firm owned by its members. It then merged with Archipelago, a publicly traded company that was one of the world's largest ECNs. NYSE members received approximately 70% of the shares in the combined firm, with Archipelago shareholders receiving the remainder. The combined firm, which also owns the Pacific Exchange, is now known as The NYSE Group, Inc. and is traded publicly under the ticker symbol NYX. It continues to operate the New York Stock Exchange (a physical location exchange located on Wall Street) and Arca (composed of the Pacific Exchange and the ECN formerly known as Archipelago).

The NYSE still has over 300 member organizations, which are corporations, partnerships, or LLCs. Membership prices were as high as \$3.15 million in 2005. Member organizations are registered broker-dealers but may not conduct trading on the floor of the exchange unless they also hold a trading license issued by the NYSE. Before going public, the equivalent to a trading license was called a seat (although there is very little sitting on the floor of the exchange) and sold for up to \$4 million in 2005. Trading licenses are now leased by member organizations from the exchange, with an annual fee of \$54,219 in 2006. In early 2006, there were 1,274 licenses that had been leased.

Most of the larger investment banking houses operate *brokerage departments* and are members of the NYSE with leased trading rights. The NYSE is open on all normal working days, with the members meeting in large rooms equipped with electronic equipment that enables each member to communicate with his or her firm's offices throughout the country. For example, Merrill Lynch (the largest brokerage firm) might receive an order in its Atlanta office from a customer who wants to buy shares of AT&T stock. Simultaneously, Morgan Stanley's Denver office might receive an order from a customer wishing to sell shares of AT&T. Each broker communicates electronically with the firm's representative on the NYSE. Other brokers throughout the country are also communicating with their own exchange members. The exchange members with *sell orders* offer the shares for sale, and they are bid for by the members with *buy orders*. Thus, the NYSE operates as an *auction market*.⁸

⁸The NYSE is actually a modified auction market, wherein people (through their brokers) bid for stocks. Originally—about 200 years ago—brokers would literally shout, "I have 100 shares of Erie for sale; how much am I offered?" and then sell to the highest bidder. If a broker had a buy order, he or she would shout, "I want to buy 100 shares of Erie; who'll sell at the best price?" The same general situation still exists, although the exchanges now have members known as *specialists* who facilitate the trading process by keeping an inventory of shares of the stocks in which they specialize. If a buy order comes in at a time when no sell order arrives, the specialist will sell off some inventory. Similarly, if a sell order comes in, the specialist will buy and add to inventory. The specialist sets a *bid price* (the price the specialist will pay for the stock) and an *asked price* (the price at which shares will be sold out of inventory). The bid and asked prices are set at levels designed to keep the inventory in balance. If many buy orders start coming in because of favorable developments or sell orders come in because of unfavorable events, the specialist will raise or lower prices to keep supply and demand in balance. Bid prices are somewhat lower than asked prices, with the difference, or *spread*, representing the specialist's profit margin.

Special facilities are available to help institutional investors such as mutual funds or pension funds sell large blocks of stock without depressing their prices. In essence, brokerage houses that cater to institutional clients will purchase blocks (defined as 10,000 or more shares) and then resell the stock to other institutions or individuals. Also, when a firm has a major announcement that is likely to cause its stock price to change sharply, it will ask the exchanges to halt trading in its stock until the announcement has been made and digested by investors.



e-resource

See **Web Extension 1C** at the textbook's Web site for more on specialists and trading off the exchange floor.

Measuring the Market



A *stock index* is designed to show the performance of the stock market. Here are some leading indexes:

Dow Jones Industrial Average

Unveiled in 1896 by Charles H. Dow, the Dow Jones Industrial Average (DJIA) provided a benchmark for comparing individual stocks with the overall market and for comparing the market with other economic indicators. The industrial average began with just 10 stocks, was expanded in 1916 to 20 stocks, and then to 30 in 1928. Also, in 1928 *The Wall Street Journal* editors began adjusting it for stock splits and making substitutions. Today, the DJIA still includes 30 companies. They represent almost a fifth of the market value of all U.S. stocks, and all are both leading companies in their industries and widely held by individual and institutional investors. See <http://www.dowjones.com> for more information.

S&P 500 Index

Created in 1926, the S&P 500 Index is widely regarded as the standard for measuring large-cap U.S. stock market performance. The stocks in the S&P 500 are selected by the Standard & Poor's Index Committee for being the leading companies in the leading industries and for accurately reflecting the U.S. stock market. It is value weighted, so the largest companies (in terms of value) have the greatest influence. The S&P 500 Index is used as a comparison benchmark by 97% of all U.S. money managers and pension plan sponsors, and approximately \$700 billion is managed so as to obtain the same performance as this index (that is, in indexed funds). See <http://www2.standardandpoors.com> for more information.

Nasdaq Composite Index

The Nasdaq Composite Index measures the performance of all common stocks listed on the Nasdaq stock market. Currently, it includes more than 5,000 companies, and because many of the technology-sector companies are traded on the computer-based Nasdaq exchange, this index is generally regarded

as an economic indicator of the high-tech industry. Microsoft, Intel, and Cisco Systems are the three largest Nasdaq companies, and they comprise a high percentage of the index's value-weighted market capitalization. For this reason, substantial movements in the same direction by these three companies can move the entire index. See <http://www.nasdaq.com> for more information.

NYSE Composite Index

The NYSE Composite Index measures the performance of all common stocks listed on the NYSE. It is a value-weighted index composed of just over 2,000 stocks representing 77% of the total market capitalization of all publicly traded companies in the United States. See <http://www.nyse.com> for more information.

Trading the Market

Through the use of exchange traded funds (ETFs), it is now possible to buy and sell the market in much the same way as an individual stock. For example, the Standard & Poor's depository receipt (SPDR) is a share of a fund composed of the stocks in the S&P 500. SPDRs trade during regular market hours, making it possible to buy or sell the S&P 500 any time during the day. There are hundreds of other ETFs, including ones for the Nasdaq and Dow Jones Industrial Average.

Recent Performance

Go to the Web site <http://finance.yahoo.com/>. Enter the symbol for any of the indexes (^DJ for the Dow Jones, ^SPC for the S&P 500, ^IXIC for the Nasdaq, and ^NYA for the NYSE) and click GO. This will bring up the current value of the index, shown in a table. Click Basic Chart in the panel on the left, and it will bring up a chart showing the historical performance of the index. Directly above the chart is a series of buttons that allows you to choose the number of years and to plot the relative performance of several indexes on the same chart. You can even download the historical data in spreadsheet form by clicking Historical Prices in the left panel.

The Nasdaq Stock Market

The **National Association of Securities Dealers (NASD)** is a self-regulatory body that licenses brokers and oversees trading practices. The computerized network used by the NASD is known as the NASD Automated Quotation System, or Nasdaq. Nasdaq started as just a quotation system, but it has grown to become an organized securities market with its own listing requirements. Nasdaq lists about 5,000 stocks, although not all trade through the same Nasdaq system. For example, the Nasdaq National Market lists the larger Nasdaq stocks, such as Microsoft and Intel, while the Nasdaq SmallCap Market lists smaller companies with the potential for high growth. Nasdaq also operates the Nasdaq OTC Bulletin Board, which lists quotes for stock that is registered with the Securities Exchange Commission (SEC) but that is not listed on any exchange, usually because the company is too small or too unprofitable.⁹ Finally, Nasdaq operates the Pink Sheets, which provide quotes on companies that are not registered with the SEC.

“Liquidity” is the ability to trade quickly at a net price (that is, after any commissions) that is very close to the security’s recent market value. In a dealer market, such as Nasdaq, a stock’s liquidity depends on the number and quality of the dealers who make a market in the stock. Nasdaq has more than 400 dealers, most making markets in a large number of stocks. The typical stock has about 10 market makers, but some stocks have more than 50 market makers. Obviously, there are more market makers, and liquidity, for the Nasdaq National Market than for the SmallCap Market. There is very little liquidity for stocks on the OTC Bulletin Board or the Pink Sheets.

Competition in the Secondary Markets

There is intense competition between the NYSE and Nasdaq. Since most of the largest companies trade on the NYSE, the market capitalization of NYSE-traded stocks is much higher than for stocks traded on Nasdaq (about \$13.3 trillion compared with \$3.6 trillion in 2005). However, reported volume (number of shares traded) is often larger on Nasdaq, and more companies are listed on Nasdaq.¹⁰ For comparison, the market capitalizations for global exchanges are \$4.6 trillion in Tokyo, \$3.1 trillion in London, and \$1.2 trillion in Germany.

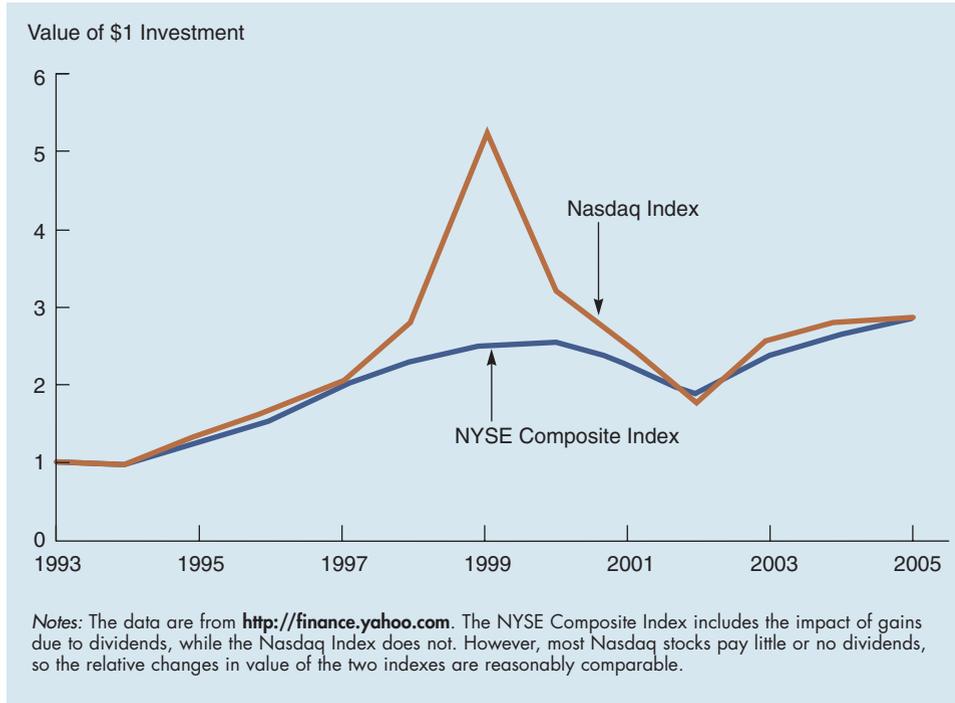
Interestingly, many high-tech companies such as Microsoft and Intel have remained on Nasdaq even though they easily meet the listing requirements of the NYSE. At the same time, however, other high-tech companies such as Gateway 2000, America Online, and Iomega have left Nasdaq for the NYSE. Despite these defections, Nasdaq’s growth over the past decade has been impressive. In an effort to become even more competitive with the NYSE and with international markets, Nasdaq acquired one of the leading stock ECNs, Instinet, in 2005. In April of 2006, Nasdaq was finalizing its plans to become a publicly traded company. It made an offer to acquire the London Stock Exchange (LSE), withdrew the

⁹OTC stands for over-the-counter. Before Nasdaq, the quickest way to trade a stock that was not listed at a physical location exchange was to find a brokerage firm that kept shares of that stock in inventory. The stock certificates were actually kept in a safe and were literally passed over the counter when bought or sold. Nowadays the certificates for almost all listed stocks and bonds in the United States are stored in a vault beneath Manhattan, operated by the Depository Trust and Clearing Corporation (DTCC). Most brokerage firms have an account with the DTCC, and most investors leave their stocks with their brokers. Thus, when stocks are sold, the DTCC simply adjusts the accounts of the brokerage firms that are involved, and no stock certificates are actually moved.

¹⁰One transaction on Nasdaq generally shows up as two separate trades (the buy and the sell). This “double counting” makes it difficult to compare the volume between stock markets.

Figure 1-3

Relative Changes in Value for the NYSE and Nasdaq Stock Indexes



offer, but retained the right to make a subsequent offer and was busily acquiring additional shares of stock in the LSE. No matter how the LSE situation is resolved, one thing is clear—there will be a continued consolidation in the securities exchange industry, with a blurring of the lines between physical location exchanges and electronic exchanges.

Figure 1-3 shows the relative gains in value made by composite stock indexes of the two markets during the past 13 years. Although an investor would have ended up with roughly the same wealth, the Nasdaq Composite Index was much more affected by the technology boom and bust around the turn of the century.

SELF-TEST

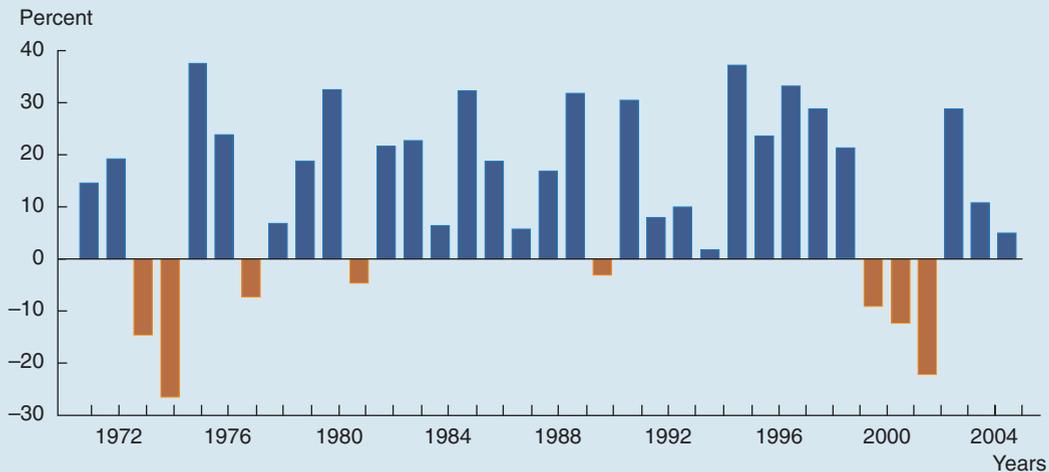
What are some major differences between the NYSE and the Nasdaq stock market?

1.11 Stock Market Returns

Figure 1-3 shows the cumulative changes in wealth due to investing in the stock market, but it doesn't highlight the year-to-year risk. Figure 1-4 shows the annual returns of the S&P 500 Index. Notice that stocks have had positive returns in most years, but there have been several years with large losses. Stocks lost a total of over 40% of their value during the 1973–1974 period, and again during 2000–2002.

Figure 1-4

S&P 500 Index, Total Returns: Dividend Yield + Capital Gain or Loss



Source: Data taken from various issues of *The Wall Street Journal*, "Investment Scoreboard" section.

We will examine risk in more detail later in the book, but a cursory glance at Figure 1-4 shows just how risky stocks can be.

The U.S. stock market amounts to only about 40% of the world stock market, and this is prompting many U.S. investors to also hold foreign stocks. Analysts have long touted the benefits of investing overseas, arguing that foreign stocks improve diversification and provide good growth opportunities. Table 1-2 shows how stocks in different countries performed in 2005. The numbers on the right indicate how stocks in each country performed in terms of its local currency, while the numbers on the left show how the country's stocks performed in terms of the U.S. dollar. For example, in 2005 Swiss stocks rose by 33.18%, but the Swiss franc fell by about 18.27% versus the U.S. dollar. Therefore, if U.S. investors had bought Swiss stocks, they would have made 33.18% in Swiss franc terms, but those Swiss francs would have bought 18.27% fewer U.S. dollars, so the effective return in dollars would have been 14.91%. As this example shows, the results of foreign investments depend in part on what happens to the exchange rate. Indeed, when you invest overseas, you are making two bets: (1) that foreign stocks will increase in their local markets and (2) that the currencies in which you will be paid will rise relative to the dollar.

Even though foreign stocks have exchange rate risk, this by no means suggests that investors should avoid foreign stocks. Foreign investments improve diversification, and it is inevitable that there will be years when foreign stocks outperform domestic stocks. When this occurs, U.S. investors will be glad they put some of their money in overseas markets.

SELF-TEST

Explain how exchange rates affect the rate of return on international investments.

Table 1-2

2005 Performance of Selected Dow Jones Global Stock Indexes

Country	U.S. Dollars	Local Currency	Country	U.S. Dollars	Local Currency
Latvia	91.99%	120.95%	France	9.11%	25.73%
South Korea	58.41	54.69	Indonesia	8.93	15.47
Cyprus	53.70	75.18	Germany	8.46	24.99
Brazil	47.98	30.12	Sweden	8.43	29.86
Mexico	39.97	33.57	Hong Kong	6.94	6.68
Canada	25.48	22.34	U.K.	4.97	17.39
Japan	25.32	44.35	United States	4.49	4.49
South Africa	23.48	39.01	Taiwan	3.93	7.71
Austria	20.89	39.31	Belgium	3.33	19.08
Hungary	15.36	36.62	Spain	3.19	18.92
Switzerland	14.91	33.18	Malaysia	-1.02	-1.56
Australia	11.33	18.97	Italy	-1.96	12.98
Singapore	11.12	13.19	New Zealand	-3.32	2.54
Chile	10.88	2.17	Portugal	-4.38	10.18
Netherlands	10.82	27.70	Venezuela	-19.33	-19.09

Source: Adapted from *The Wall Street Journal Online*, <http://online.wsj.com/documents/ye05-djglobalindexes.htm>.

1.12 A Preview of What Is Ahead

A manager's primary job is to increase the fundamental value of his or her company. Equation 1-1 shows that a firm's fundamental value is the present value of its expected free cash flows when discounted at the weighted average cost of capital. This single valuation equation provides a good preview for the rest of the book. Chapter 2 shows how to determine the value today of a future cash flow, a topic called the time value of money. Chapter 3 explains financial statements and how to calculate free cash flows, along with taxation and its role in valuation. Chapter 4 shows how to use financial statements to identify a firm's strengths and risks. In Part 2, Chapters 5–8 discuss bonds, the risk–return relationship, and stocks. Chapter 9 discusses financial options, which often play an important role in managerial compensation, agency costs, and valuation. In Part 3, Chapter 10 ties these concepts together in estimating the weighted average cost of capital. Chapters 11–13 apply the valuation concepts of Equation 1-1 to individual projects, including extensive risk analysis and real options.

Part 4 explicitly addresses corporate valuation. Chapter 14 develops techniques for forecasting future financial statements and free cash flows. Chapter 15 directly uses the concepts in Equation 1-1 to determine a corporation's value, including the value of its stock. Chapter 15 also discusses corporate

governance, which has a direct effect on how much value companies create for their shareholders.

Part 5 discusses basic corporate financing decisions, including capital structure choices (decision of how much debt versus equity the firm should use) and distribution policy (how much free cash flow should be paid out to shareholders, either as dividends or share repurchases). In Part 6, we address special topics that draw on the earlier chapters, including working capital management, risk management, bankruptcies, mergers, and multinational financial management.

e-Resources

The textbook's Web site contains several types of files:

1. It contains *Excel* files, called Tool Kits, that provide well-documented models for almost all of the text's calculations. Not only will these Tool Kits help you with this finance course, but they will serve as tool kits for you in other courses and in your career.
2. There are problems at the end of the chapters that require spreadsheets, and the Web site contains the models you will need to begin work on these problems.

When we think it might be helpful for you to look at one of the Web site's files, we'll show an icon in the margin like the one that is shown here.



Other resources are also on the Web site, including Cyberproblems and problems that use the ThomsonONE—Business School Edition Web site. The textbook's Web site also contains an electronic library which contains Adobe PDF files for “extensions” to many chapters that cover additional useful material related to the chapter. This electronic library also has several additional complete chapters, as shown in the table of contents. In addition, the ThomsonNOW Web site also has a Learning Path that allows you to assess your level of understanding and to identify specific material that will help you address any areas of weakness. Your instructor may also choose to use the homework/quizzing feature at ThomsonNOW.

Summary

This chapter provided an overview of financial management and the financial environment. It explained the fundamental determinants of a firm's value and provided an overview of financial securities, financial institutions, and financial markets, with an emphasis on stock markets. The key concepts covered are listed below:

- The three main forms of business organization are the **proprietorship**, the **partnership**, and the **corporation**.
- Although each form of organization offers advantages and disadvantages, **corporations conduct much more business than the other forms**.
- The primary objective of management should be to **maximize stockholders' wealth**, and this means **maximizing the company's fundamental**, or

intrinsic, stock price. Legal actions that maximize stock prices usually increase social welfare.

- Firms increase cash flows by creating value for **customers, suppliers, and employees.**
- **Free cash flows (FCFs)** are the cash flows available for distribution to all of a firm's investors (shareholders and creditors) after the firm has paid all expenses (including taxes) and made the required investments in operations to support growth.
- The **value of a firm** depends on the **size of the firm's free cash flows**, the **timing of those flows**, and **their risk.**
- The **weighted average cost of capital (WACC)** is the average return required by all of the firm's investors. It is determined by the firm's **capital structure** (the firm's relative amounts of debt and equity), **interest rates**, the firm's **risk**, and the **market's attitude toward risk.**
- A firm's **fundamental, or intrinsic, value** is defined by:

$$\text{Value} = \frac{\text{FCF}_1}{(1 + \text{WACC})^1} + \frac{\text{FCF}_2}{(1 + \text{WACC})^2} + \frac{\text{FCF}_3}{(1 + \text{WACC})^3} + \dots + \frac{\text{FCF}_\infty}{(1 + \text{WACC})^\infty}.$$

- Transfers of capital between borrowers and savers take place (1) by **direct transfers** of money and securities; (2) by transfers through **investment banking houses**, which act as middlemen; and (3) by transfers through **financial intermediaries**, which create new securities.
- Capital is allocated through the price system—a price must be paid to “rent” money. Lenders charge **interest** on funds they lend, while equity investors receive **dividends** and **capital gains** in return for letting firms use their money.
- Four fundamental factors affect the cost of money: (1) **production opportunities**, (2) **time preferences for consumption**, (3) **risk**, and (4) **inflation.**
- There are many different types of **financial securities.** Primitive securities represent claims on cash flows, such as stocks and bonds. **Derivatives** are claims on other traded securities, such as options.
- Major financial institutions include **commercial banks, savings and loan associations, mutual savings banks, credit unions, pension funds, life insurance companies, and mutual funds.**
- One result of ongoing regulatory changes has been a blurring of the distinctions between the different financial institutions. The trend in the United States has been toward **financial service corporations** that offer a wide range of financial services, including investment banking, brokerage operations, insurance, and commercial banking.
- There are many different types of **financial markets.** Each market serves a different region or deals with a different type of security.
- **Physical asset markets**, also called tangible or real asset markets, are those for such products as wheat, autos, and real estate. **Financial asset markets** are for primitive securities and derivative securities.
- **Spot markets** and **futures markets** are terms that refer to whether the assets are bought or sold for “on-the-spot” delivery or for delivery at some future date.

- **Money markets** are the markets for debt securities with maturities of less than 1 year. **Capital markets** are the markets for long-term debt and corporate stocks.
- **Primary markets** are the markets in which corporations raise new capital. **Secondary markets** are markets in which existing, already outstanding securities are traded among investors.
- Orders from buyers and sellers can be matched in one of three ways: (1) in an open outcry **auction**, (2) through **dealers**, and (3) automatically through an **electronic communications network (ECN)**.
- There are two basic types of markets—the physical location exchanges (such as the NYSE) and computer/telephone networks (such as Nasdaq).

Questions

- (1-1) Define each of the following terms:
- Proprietorship; partnership; corporation
 - Limited partnership; limited liability partnership; professional corporation
 - Stockholder wealth maximization
 - Money market; capital market; primary market; secondary market
 - Private markets; public markets; derivatives
 - Investment banker; financial service corporation; financial intermediary
 - Mutual fund; money market fund
 - Physical location exchanges; computer/telephone network
 - Open outcry auction; dealer market; electronic communications network (ECN)
 - Production opportunities; time preferences for consumption
 - Foreign trade deficit
- (1-2) What are the three principal forms of business organization? What are the advantages and disadvantages of each?
- (1-3) What is a firm's fundamental, or intrinsic, value? What might cause a firm's intrinsic value to be different than its actual market value?
- (1-4) The president of Eastern Semiconductor Corporation (ESC) made this statement in the company's annual report: "ESC's primary goal is to increase the value of our common stockholders' equity." Later in the report, the following announcements were made:
- The company contributed \$1.5 million to the symphony orchestra in Bridgeport, Connecticut, its headquarters' city.
 - The company is spending \$500 million to open a new plant and expand operations in China. No profits will be produced by the Chinese operation for 4 years, so earnings will be depressed during this period versus what they would have been had the decision not been made to expand in that market.

Discuss how ESC's stockholders might view each of these actions, and how the actions might affect the stock price.

- (1-5) Edmund Enterprises recently made a large investment to upgrade its technology. While these improvements won't have much of an impact on performance in the short run, they are expected to reduce future costs significantly. What impact will this investment have on Edmund Enterprises' earnings per share this year? What impact might this investment have on the company's intrinsic value and stock price?
- (1-6) Describe the different ways in which capital can be transferred from suppliers of capital to those who are demanding capital.
- (1-7) What are financial intermediaries, and what economic functions do they perform?
- (1-8) Suppose the population of Area Y is relatively young while that of Area O is relatively old, but everything else about the two areas is equal.
- Would interest rates likely be the same or different in the two areas? Explain.
 - Would a trend toward nationwide branching by banks and savings and loans, and the development of nationwide diversified financial corporations affect your answer to part a?
- (1-9) Suppose a new and much more liberal Congress and administration were elected, and their first order of business was to take away the independence of the Federal Reserve System and to force the Fed to greatly expand the money supply. What effect would this have on the level of interest rates immediately after the announcement?
- (1-10) Is an initial public offering an example of a primary or a secondary market transaction?
- (1-11) Differentiate between dealer markets and stock markets that have a physical location.
- (1-12) Identify and briefly compare the two leading stock exchanges in the United States today.



Cyberproblem

Please go to the textbook's Web site to access any Cyberproblems.

Mini Case



Assume that you recently graduated and have just reported to work as an investment advisor at the brokerage firm of Balik and Kiefer Inc. One of the firm's clients is Michelle DellaTorre, a professional tennis player who has just come to the United States from Chile. DellaTorre is a highly ranked tennis player who would like to start a company to produce and market apparel that she designs. She also expects to invest substantial amounts of money through Balik and Kiefer. DellaTorre is very bright, and, therefore, she would like to understand in general terms what will happen to her money. Your boss has developed the following set of questions that you must ask and answer to explain the U.S. financial system to DellaTorre.

- a. Why is corporate finance important to all managers?
 - b. Describe the organizational forms a company might have as it evolves from a start-up to a major corporation. List the advantages and disadvantages of each form.
 - c. How do corporations go public and continue to grow? What are agency problems? What is corporate governance?
 - d. What should be the primary objective of managers?
 - (1) Do firms have any responsibilities to society at large?
 - (2) Is stock price maximization good or bad for society?
 - (3) Should firms behave ethically?
 - e. What three aspects of cash flows affect the value of any investment?
 - f. What are free cash flows?
 - g. What is the weighted average cost of capital?
 - h. How do free cash flows and the weighted average cost of capital interact to determine a firm's value?
 - i. Who are the providers (savers) and users (borrowers) of capital? How is capital transferred between savers and borrowers?
 - j. What do we call the price that a borrower must pay for debt capital? What is the price of equity capital? What are the four most fundamental factors that affect the cost of money, or the general level of interest rates, in the economy?
 - k. What are some economic conditions (including international aspects) that affect the cost of money?
 - l. What are financial securities? Describe some financial instruments.
 - m. List some financial institutions.
 - n. What are some different types of markets?
 - o. How are secondary markets organized?
 - (1) List some physical location markets and some computer/telephone networks.
 - (2) Explain the differences between open outcry auctions, dealer markets, and electronic communications networks (ECNs).
-