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Introduction to Financial Management

Learning Objectives

Upon completion of Chapter 1, you will be able to:

- Know the financial goals of a for-profit business.
- Understand the important role that valuation plays in meeting business goals.
- Know the four factors that have a fundamental influence on value.
- Understand the concept of market efficiency and the value of its lessons when investing.
- Be aware of the agency problem and some common examples of agency costs.
- Be familiar with the basic types of business organization and some of their strengths and weaknesses.
- Be familiar with the social responsibility concerns that businesses must take into consideration.

You are beginning your study of finance, a topic of dramatic importance for everyone from an entrepreneur starting a business to the Chief Executive Officer (CEO) of a multinational corporation competing in the global marketplace. Like medicine or engineering, finance can create wonderful benefits for us all when practiced properly, but like surgery when poorly done, or like a bridge that is badly designed, finance can contribute to big problems when it is misused or misunderstood. The global economic crisis we have recently endured (and continue to endure) has led to some sharp criticism of the finance discipline. Understanding finance, therefore, is important whether you make business your life's work, or whether you are an ordinary citizen who must make everyday economic decisions. For example, we all make choices about how to invest our retirement funds, how to finance a home purchase, or whether to support laws that regulate financial institutions. To make the best choices, you should understand financial principles, and, even better, you should be able to apply financial analysis to these decisions. This course focuses on the financial management of companies, but it will also provide the foundation for specialized courses in banking and investment for those who choose to continue their study of finance. Nevertheless, even elementary financial knowledge can help all of us make better economic choices.

How important is understanding basic finance? Consider this: Before you have finished reading this chapter, you will have enough information to avoid making the same mistake that many millionaires made when they invested in Bernie Madoff's billion-dollar Ponzi scheme. For now, though, we are getting ahead of ourselves. (We will return to Mr. Madoff later in the chapter.) First, let's describe the most fundamental skill in finance: *valuation*.

If you scan through virtually any introductory finance textbook, you will find that the stated goal of finance is the *maximization of the owner's wealth*. If finance is viewed in the context of a corporation, then you'll see the financial goal stated as the *maximization of shareholders' wealth*. Maximizing wealth is done by increasing the value of the assets one owns. And how is this wealth creation accomplished? We argue that wealth is created by finding *good deals* to invest in. And what is a good deal? It is a deal whose *value is greater than its cost*. It follows that in order to identify good deals to pursue the financial goal of wealth maximization, one must be able to estimate value.

1.1 Valuation

By **valuation**, we mean the ability to accurately estimate what an asset is worth in "economic terms." This approach to valuation contrasts with estimating what an asset is worth in "personal terms." To determine the economic value of an asset, one must estimate the amount of money that a rational person would pay based on the economic benefits that the asset is expected to produce. For example, I would willingly pay at least $100 today for an asset that I was certain would pay me $200 tomorrow, and so would any rational person. On the other hand, the personal value of an asset may have almost nothing to do with the economic benefit it produces. For example, I might willingly pay $2 for a finger painting done by my daughter, never expecting to collect anything but the enjoyment of looking at it on my office wall. This is a personal benefit that probably no one else would be willing to pay for. Needless to say, it is hopeless (or at least beyond the scope of this course), to attempt to estimate the personal benefits that individuals might

assign to assets because these are a matter of taste and other subjective criteria. Economic benefits are still difficult to assess, but they are more objective than personal benefits. Furthermore, the factors that contribute to economic value are generally agreed upon.

Cash Flow

Expected cash flow is the most obvious contributor to economic value. Note that we emphasize ***cash flow*** rather than the *income* that an asset is expected to produce. This is because net income, as you learned to calculate it in your accounting courses, is less useful for valuation than cash flow. As you may recall from accounting, cash flow may differ from net income for several reasons, the most important of which is *depreciation*. Depreciation lowers net income but actually tends to increase cash flow by protecting funds from taxation. Table 1.1 gives a simple example of the effect depreciation has on cash flows. In this example we look at a firm with $100,000 in taxable income with no depreciation; we compare this to the firm's after-tax cash flow, assuming it had $30,000 in depreciation expense. The example helps us focus on the impact depreciation has on cash flow versus its effect on net income. As you look at the example, remember that because depreciation is a non-cash-flow expense, it must be added back into net income in order to get an estimate of after-tax cash flow.

Table 1.1: Effect of depreciation on cash flows

	No Depreciation	With Depreciation
Before-Tax Income	$100,000	$100,000
Depreciation Expense	$0	−$30,000
Taxable Income	$100,000	$70,000
Taxes (20% Assumed Rate)	−$20,000	−$14,000
Net Income	$80,000	$56,000
Add Noncash Depreciation Expense	$0	$30,000
After-Tax Cash Flow	$80,000	$86,000

This simple example demonstrates that cash flow is different from net income. If this were your company, you might prefer to have the result on your right. Although the firm has $14,000 less accounting income, it actually puts $6,000 more money in its owner's pocket. Because cash flow is a better measure of the amount of available funds that the firm generates, it is a more reliable indicator than net income of the firm's ability to pay its bills, make its interest payments on debt, and pay **dividends** to its stockholders. Those are exactly the attributes that business owners value.

It is pretty obvious that the economic value of an asset will be higher as its ability to generate cash flows increases. However, the next factor—risk—has the opposite effect on value.

Risk

Risk is another name for uncertainty. In finance we believe that, holding other factors constant, economic value is negatively related to risk. Another way of saying this is that we assume investors are *risk averse*—meaning they dislike risk and try to avoid it. We can see risk aversion demonstrated every time someone voluntarily buys insurance or whenever an investor accepts a lower interest rate by choosing a government-guaranteed bank account rather than loaning money at a higher rate to a relative. Notice that we are not saying that in some circumstances the *personal value* one places on an activity is always negatively related to risk: Skydivers will pay a high price for the thrill they experience performing this risky sport. But skydiving is a form of entertainment, and its value is based on personal taste rather than on an economic or investment criterion.

In valuation for financial purposes, riskier investments have a lower value than their less risky counterparts. So, if someone were to offer to sell me an **IOU** (an "I owe you," or promissory note) that promised to pay its holder $100 in 1 year, I would pay more for that IOU if it was signed by Bill Gates than if it was signed by one of the coauthors of this book. I would place the higher value on Gates's IOU because I am pretty confident that he would have the ability to pay the $100 next year. On the other hand, this book's authors are in a much more uncertain financial condition than Gates, so an IOU signed by them would have significantly less value because of this risk.

A Closer Look: Bonds

When a business or an individual borrows money, the loan carries with it terms that spell out the payments that must be made in order to service the debt, leading to eventually paying off the loan. Banks and other financial institutions, such as pension funds or insurance companies, routinely lend money to businesses. In these cases, the business will owe a large sum to a single lender or a small group of lenders who are participating in the loan. Other times, businesses, governments, and other organizations will raise money by issuing a large number of relatively small promissory notes called *bonds* and selling these to a variety of investors. The typical amount of these individual bonds (called the *face value* or *maturity value*) is $1,000, and firms may issue millions of dollars of these bonds at a time. Bonds provide to investors a yield (a return) that depends on their **default** risk (the risk that the business will be unable to make its scheduled payments to bondholders). Most investors have neither the time nor the expertise to estimate the riskiness of these bonds, so organizations called *rating agencies* are in business to provide that service. The best known of these rating agencies are Moody's, Standard & Poor's, and Fitch. They rate the bonds from AAA (Fitch's system) for the lowest risk of default to C and even D (meaning the bonds are actually already in default). On May 25, 2012, the average annual yield on corporate bonds rated AAA by Fitch was 1.20%, while bonds whose ratings were AA yielded 1.74%, and A bonds yielded 2.18%. Meanwhile, Spanish government bonds, rated C, were yielding over 6%. You may want to graph yield versus rating for a visual illustration of risk.

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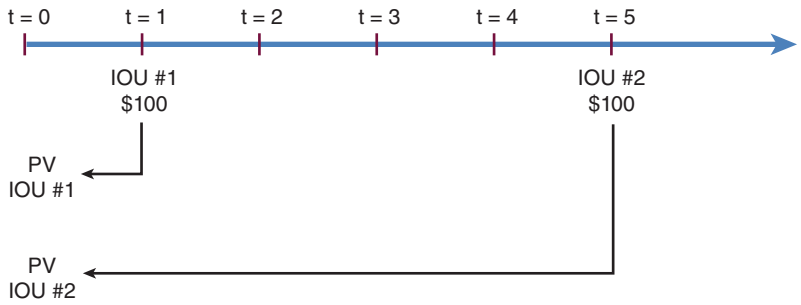
A war bond is an example of a bond issued by a government in order to raise money.

Time

A third factor that affects value is *time*, specifically the time we have to wait to receive an expected cash flow. The longer we wait to receive a given cash flow, the less we would be willing to pay for the right to receive it in the future. For example, suppose I had two IOUs from Mr. Gates, so we will assume they are basically free of the risk of nonpayment (that is, they are free of *default risk*). Both contain his promise to pay the holder $100; but for one the payment will take place in 1 year, and for the other the payment will take place in 5 years. If I were to offer to sell you either of these IOUs, which would you prefer to have? Undoubtedly it would be the IOU that is due next year. After all, even if you think you won't need the funds for 5 years, by receiving the money earlier, you can invest it for 4 years, and you will eventually have more funds available in year 5. In Figure 1.1, we illustrate the choice using a timeline. When doing problems that involve valuation and time, the use of timelines can be extremely helpful. Drawing timelines, therefore, is a very good habit to develop if you want to do well in this course (and if you want to become an astute business person!).

Figure 1.1: Timeline



Which IOU is preferred today? Using time value of money mathematics, the value of the two IOUs can each be expressed as today's equivalent value. Then the choice would become easy.

The key to making this choice and many other valuation problems is to estimate how much each payment is worth in *today's* terms. Once they are both expressed in today's terms, then the comparison of the two cash flows becomes easy. In order to find what IOUs are worth today, we need to calculate the *present value* of these two cash flows. This part of the valuation process represents a big chunk of finance and is a skill that you will find very useful. Once you master *time value of money mathematics* (covered in Chapters 4 and 5), you can use this skill to solve a variety of everyday problems. For example, you will be able to easily calculate the payment on a car loan before you visit the dealership, or estimate how much money you need to save each month in order to fund your child's college education.

A Closer Look: Lottery Jackpots and the Time Value of Money

The Mega-Millions Jackpot offers its winners a choice between a single cash payout or a series of annual payments over 26 years. For example, a jackpot advertised as having a $12 million grand prize gives the winner the choice between $461,538 a year for 26 years—totaling $12 million, or a single payment of $7,047,000. This is a classic illustration of the relationship between time and value. The $7 million lump sum figure was undoubtedly determined by the lottery sponsor using time value mathematics (also known as discounted cash flow). Which would you prefer?

*Leo Cullum/The New Yorker Collection/*www.cartoonbank.com

Opportunity Cost

The fourth factor that affects the value of an asset is the opportunity cost you face if you choose to make a purchase. Recall from economics that the opportunity cost is the foregone use of the money that you spend. One opportunity cost that we all face whenever we make a purchase is the interest we could earn by placing that money in a bank account. As this book was being written in 2012, interest rates are very low, so the opportunity cost represented by a bank deposit is very small, maybe about 1% annually. The opportunity cost represented by alternative investments is constantly changing. For example, in 1980 banks were offering guaranteed deposits with rates around 16% because of the high inflation during that time.

In the example presented in Table 1.2, we use those 2 years (1980 and 2012) to illustrate the effect of opportunity costs on value. Suppose we are offered an IOU that will pay $100 at the end of 1 year. The seller is asking $90 for the IOU.

Table 1.2: Effect of opportunity cost on value

	Bank Deposit at 1%	Bank Deposit at 16%	Gates IOU
Beginning of Year	$90.00	$90.00	$90.00
Increase in Value	1% of $90 = $0.90	16% of $90 = $14.40	$10.00
End of Year	$90.90	$104.40	$100.00

Let's also assume that the IOU is signed by Bill Gates, so it is essentially default-risk free. As you can see, this investment is attractive today (in 2012) because if you keep your money in the bank, it will only be worth $90.90 in 1 year given the interest rate of 1%.

Therefore, we can safely say that the Gates IOU is worth at least the $90 asking price because it will be worth $100, well above the $90.90 that the deposit will be worth. So the IOU is a good deal when the opportunity cost is 1%. But if rates rise again to the 16% level that they were in 1980, things are different. You would be giving up a deposit that would grow to be worth $104.40 if you took money out of the bank and paid $90 for the IOU. In this case, the Gates IOU is worth less than $90 because just leaving the money in the bank yields the higher value of $104.40 at the end of the year.

A Closer Look: Four Factors of Value

Factors Affecting Value	Their Effect on Value
1. The expected level of cash flows	1. The higher the expected cash flows, the higher the value of the investment, all else being the same.
2. The riskiness of cash flows	2. The more uncertain are the expected cash flows, the lower the value of the investment, all else being the same.
3. The timing of cash flows	3. The longer it takes to receive the cash flows, the lower the value of the investment, all else being the same.
4. The returns available on alternative, similar investments	4. If other similar investments offer higher returns, the less valuable is the investment, all else being the same.

1.2 Markets

So these are the four characteristics—cash flows, time, risk, and opportunity costs—that contribute to the valuation of an asset, a skill that is fundamental to making sound financial decisions. Business managers, financial analysts, investors, government officials, and consumers are continually engaged in assessing these four factors in order to estimate the value of a wide range of business and personal investment opportunities. If these assets are traded in competitive markets, where buyers and sellers transact, then the *market prices* reflected in those transactions are likely to be a good indicator of the asset's value. That is why, for example, if a court of law is attempting to estimate the value of a company whose stock is traded on an exchange, the court will accept the selling price of the stock reported by the exchange rather than going to the trouble and the expense of hiring an expert to appraise the company's value. It would seem strange if the court hired a finance professor to value IBM, and the professor simply reported the latest price from the New York Stock Exchange and then charged the court a fat consulting fee! But in many cases, that is exactly what the professor might do. The reason is that competitive markets, like the stock market, are often said to be *efficient markets* when it comes to assessing value.

Market Efficiency

Market efficiency refers to the ability of a market to adjust to relevant information. Markets are said to be *efficient* if they quickly and accurately assess relevant information and translate that information into prices. Prices from efficient markets are generally considered the best available indicator of the underlying economic value of an asset. As we already mentioned, the New York Stock Exchange (NYSE) is usually considered a very efficient market. Perhaps the NYSE is not perfectly efficient, but most investors agree that it is tremendously difficult to consistently identify stocks that are over- or underpriced by the millions of investors competing in that market. Note that if you could identify these mispriced stocks, you could make an extraordinary amount of money—well above the normal rate of return earned by NYSE investors. By the way, the rate return of NYSE stocks over the past 50 years has averaged around 12% annually, with annual returns being as high as 30% in some years and as low as −30% in other years. If you outperform the NYSE average, without taking on a lot of risk, you would be able to *beat the market*. But as we just said, it is quite difficult to beat the NYSE because of its high degree of efficiency.

A Closer Look: Market Anomalies

Spencer Platt/Getty Images

The New York Stock Exchange is usually considered to be a very efficient market.

Markets that are very competitive are very efficient. This casual conclusion is supported even by common terminology, which calls apparent violations of market efficiency *anomalies*. An anomaly is an abnormality, meaning it is unusual. There are a number of *market anomalies* that have been discovered over the past 40 years or so, which is the length of time that computers and electronic data sets have existed and been available to test the efficient market hypothesis. These tests of market efficiency have primarily been statistical measures of whether a researcher or analyst can identify a trading rule or a valuation technique that can outperform the market often enough to conclude that the superior performance is not simply due to luck. You might enjoy looking up some of these anomalies using your favorite search engine. Here are a few of the best known: the Small Firm Effect, the January Effect, Market Overreaction, and the Value Line Enigma. Some researchers have made noteworthy contributions by identifying these and other stock market anomalies; they include Robert Shiller, Warner de Bondt working with Richard Thaler, Robert Haugen, and Eugene Fama working with Kenneth French. Before you run out and invest your life's savings using one of these trading strategies, keep in mind that there are literally thousands of scholars and investors looking for these anomalies, and it is not surprising that a few have been discovered. Professor Andrew Lo from MIT has done some theoretical work attempting to show that some apparent market anomalies are actually consistent with investors reacting rationally to the changing economic environment of the markets. He calls his theory the Adaptive Markets Hypothesis.

One way to think about an efficient market is the saying, "the price is right"—meaning we should be cautious when we second-guess or don't trust a market price. Another implication of market efficiency is that the only way to consistently earn a high return in such a market is to expose oneself to more risk. We will call this ramification of efficient markets

the "there is no free lunch" effect—that is, you should not expect to earn a high return unless you accept a high level of risk.

At the beginning of the chapter, we mentioned that you would learn a financial concept that would have protected millionaires from Bernie Madoff's Ponzi scheme. If these otherwise sophisticated investors had only reminded themselves that *there is no free lunch* when investing, it may have saved them from Mr. Madoff's fraud. One of the lessons of market efficiency is to be a bit on the skeptical side when confronted with the proverbial deal that is *too good to be true*. Madoff's scam cost investors tens of billions of dollars and went on for years. Yet, looking back, it was clear the Madoff was selling his clients a "free lunch." Basically, he promised investors steady 10% to 14% returns year in and year out, with no risk. This is quite different from promising an *average* return of 10% to 14%. In fact, the stock market does return an average of about the same rate as what Madoff promised (12% or so), but the market achieves this average by returning 20% one year, losing 5% the next year, and so on: in other words, an average of 12% with a great deal of year-to-year variability.

Madoff was enticing clients by promising something like, "Your return will equal the typical stock market return but with little or no uncertainty." A believer in market efficiency would have smelled a rat: How could Madoff match the stock market return but avoid the risk? The answer is that he could not! He was running what is known as a *Ponzi scheme*, in which earlier investors receive the promised returns, but the source of returns is not from the productivity of the investment strategy; instead they are being illegally paid from the funds that later investors have contributed. Ponzi schemes can fool people for a while, but they collapse when the scheme's requirement for an ever-increasing number of new investors eventually cannot be met. Once this happens, everyone loses—including the scheme's founder who, like Madoff, hopefully ends up in prison.

"It was at this point, gentlemen, that reality intruded."

Jack Ziegler/www.cartoonbank.com

One common argument against market efficiency is the existence of price "bubbles," like the seemingly unending increase in real estate prices that contributed to the financial crisis in 2008 or the "dotcom" bubble that led to a large market decline at the turn of this century. To be sure, there were those who warned of the market's mispricing in both of these cases, but there were also plenty of experts who did not see the bubble at the time.

Our response to the bubble argument against market efficiency has two parts: First, these "mispricing" bubbles are easy to identify looking backward and much easier to see after they have burst. Let's use the racehorse Seabiscuit from the 1920s as an analogy. Looking back, it is obvious that this was a great horse, but when she was young, almost none of the experts placed a high value on her. Does this mean that the market for racehorses lacked

efficiency? Not necessarily. It does mean that given the information available at the time, the selling price for the filly was probably fair, but as more information became available, it was clear that the price turned out to be a bargain. Here, like those financial bubbles, things can seem very clear in retrospect, but at the time valuation was much more challenging. Our second point is that many investors in dotcoms and later in real estate made extraordinarily high rates of return in the time leading up to these bubbles bursting. These high returns could have served as a warning that they were probably linked to extraordinarily high risk in those markets. Eventually, the "bill" for the "free lunch" became all too clear, and the lessons of market efficiency were relearned by many investors.

A Closer Look: Nick Leeson and Market Efficiency

Nick Leeson was a derivatives trader for the oldest investment bank headquartered in the United Kingdom, Barings Bank. His unauthorized trades lost over $1.3 billion, and he single-handedly brought the bank to ruin in 1995. What is ironic is that just a few years prior to the collapse of the bank, Leeson made substantial profits through trading, which amounted to about 10% of the firm's total income. For this, he was awarded a bonus of £150,000, about triple his salary at the time. The question is: Did Leeson's superiors believe in derivatives market efficiency? If the markets were efficient, then the only way that Leeson could make such profits was either through luck, through taking excessive risk, through illegal activities, or through some combination of these three. If the markets were not efficient, then Leeson could have made the profits for which he was rewarded through exceptional skill. We may assume that Barings's management did not believe in market efficiency, since presumably they felt they were rewarding his skill and not his luck, not his risk-taking, and certainly not fraud. Like the Madoff scam discussed in this chapter, a bit of skepticism when it comes to competitive market inefficiency would have served Barings Bank management well when dealing with Mr. Leeson. He, like Madoff, went to prison.

Competition

We have used the NYSE as an example of a market that is very efficient. Recall that prices in efficient markets are a very good estimate of value. It may occur to you that the business goal of maximizing wealth is difficult to achieve in efficient markets because *good deals*—where price is below value—are very hard to find in such markets. Therefore, to create value a business must look to inefficient markets to find these wealth-producing projects—in other words, to find these good deals. So what is it that makes a market efficient or inefficient?

To answer that, we return to the NYSE. If you could predict good days (or bad days) for the stock market, you would become very rich. In fact, one reason it is so hard to *time the market* (predict good days and bad days) is precisely because it would be *so* profitable. Every investor knows how profitable successfully predicting the market's direction would be, which makes it almost impossible to do. For example, consider what would happen on the NYSE if there was a clear signal that the values would rise on a Wednesday. Thousands of investors, who are keen observers of news affecting stock values, would recognize this potential upswing in value. In order to participate in Wednesday's gains, investors would purchase stocks on Tuesday. But Tuesday's surge in demand for stocks would send the price up in *anticipation* of Wednesday's upswing. The nature of this active market would lead to an often self-defeating pursuit of good deals. This brings us to the

primary characteristic of efficient markets: *competition*. The NYSE is very efficient because it is very competitive. Millions of investors are looking for bargains or overpriced stocks every day. Millions of investors are also trying to figure out which direction the market is likely to move—every single day—even every single minute during the day! This competition ensures that the NYSE is efficient.

So businesses in pursuit of wealth-creating opportunities should look to a market where there is little competition. In situations of **perfect competition** there are so many competitors and similar products that prices are driven to their minimum level. Recall from economics that profit is highest in monopolistic markets and lowest when markets are perfectly competitive. Consequently, businesses probably stand a better chance of creating value if they face few competitors. This may be why some manufacturers attempt to distinguish their products with special features, or why retail stores and fast food restaurants expend considerable effort to find the best possible location. These efforts can be viewed as establishing niche monopolies that limit their direct competition in an effort to maximize business owners' wealth.

1.3 The Agency Problem

There are a variety of strategies that businesses employ to increase the wealth of their owners. In this section, however, we discuss an impediment to wealth maximization known as the *agency problem*. We begin by pointing out that some businesses are characterized by the *separation of ownership from control*. In corporations, stockholders own the business, but managers make the day-to-day decisions. This separation creates what is known as *the principal–agent problem*. Managers are acting as the *agents* of the firm's *principals* or owners. Managers are hired to act on the owners' behalf, maximizing shareholders' wealth. In the process they should theoretically satisfy the requirements of the owners as well as other *stakeholders*, such as their customers and employees, in addition to paying suppliers and debt holders on time. After all, if the business does not pay its bills, does not produce sought-after products, and does not treat its employees well, then it will have a challenging time trying to maximize the wealth of the stockholders who receive their dividends only after other stakeholders are paid. However, managers are also concerned with their own welfare and act in their own self-interest. At times managers, acting to satisfy their own desires, may take actions that are costly to owners yet produce no increase in wealth. Such actions may be characterized as investments whose value is less than their cost and are, therefore, in direct conflict with the goal of creating wealth. For example, some expenditures on **perquisites** may be in conflict with the business goal.

Perquisites (or *perks*) are benefits to employees beyond their compensation packages and are often cost-effective investments. Many executives, for example, are supplied a company-owned car. Owners may benefit from such an investment—it may be less costly to supply the CEO with a vehicle than to offer reimbursement for mileage. The company-owned car also provides assurance that the corporate reputation for being a quality institution is enhanced by having clients met in a clean, comfortable mode of transportation. On the other hand, what if the CEO is supplied with a $300,000 Rolls Royce rather than an $80,000 Lincoln? Will the decision to supply the Rolls produce additional value greater than the cost differential of $220,000? The Rolls seems to be a questionable investment. This is an example of an *excessive perquisite*, an expense that

benefits an executive while producing no increase in owners' wealth. On whose judgment does the authorization of such expenses fall? Ordinarily management makes these decisions. This is an example of an **agency cost**, a cost that arises because of the separation of ownership from control of the business assets.

Another source of agency cost is *shirking* by top management. A corporation's top managers are selected and highly compensated because they have the talent and will expend the effort to seek out value-creating investment projects. But only the managers know precisely how much effort they are directing to their job. Since managerial effort is difficult to monitor, managers can reduce their efforts (i.e., shirk) and thereby generate costs for owners. Agency costs, such as excessive perks and shirking, lower firm value as they waste cash with no offsetting benefits.

1.4 Forms of Business Organization

Even with the agency problem inherent in the **corporation** when ownership is separated from control, the modern corporation dominates the economic landscape. The bulk of sales (approximately 80%) and net income (approximately 60%) are generated by the corporation form of business organization.

To be sure, **sole proprietorships** and **partnerships** are also important—they perhaps best embody the entrepreneurial spirit and often are the spawning ground for major corporate entities. Proprietorships and partnerships also have less significant agency problems than do widely held corporations. These organizational forms are also attractive because of their relatively low organizational costs, and their owners may benefit from lower taxes. (See *A Closer Look: The Tax Advantage of Partnerships and Proprietorships*.) Corporate cash flows to shareholders (dividends) are subject to double taxation—once at the corporate level and again at the individual level—while proprietorship and partnership income is taxed only once as part of the owner's personal tax return.

A Closer Look: The Tax Advantage of Partnerships and Proprietorships

Assuming a corporate tax rate of 20% and a personal tax rate of 25%, it is clear that corporations' owners are at a disadvantage tax-wise because their income is subject to double taxation.

	Partnerships and Proprietorships	Corporations
Income before business-level taxes	$1000	$1000
Income tax rate at the business level	0%	20%
Income tax payable at the business level	$0	$200
Income to owners before personal income taxes	$1000	$800
Personal income tax rate	25%	25%
Personal income taxes owed	$250	$200
After-tax cash flow to owners	$750	$600

But the corporation has attributes that offset the advantages of proprietorships and partnerships. These attributes are particularly important for large firms requiring large amounts of capital. To raise the huge sums necessary to finance large-scale businesses, entities must accept the difficulties inherent in the separation of ownership and control because there are few individual investors with sufficient personal wealth, the expertise, and the willingness to both own and manage a corporate giant. Thus, to finance big businesses it is often necessary to have many owners (stockholders) who are willing to relinquish control to hired managers. Now let's consider the characteristics of the corporate form of organization that enable it to be such a vital organizational structure.

First, through the issuance of **common stock**, a highly transferable security is used as the medium for exchanging ownership interests in the business. The ability of stockholders to sell their shares easily is important if individuals are to be persuaded to take an ownership interest in a firm over which they have limited control. Such security holders can "vote with their feet," selling their shares when they wish. Moreover, if many stockholders become dissatisfied, then selling pressure, behaving in accordance with the law of supply and demand, will drive down share prices. The supply of such a corporation's stock available for sale on the market will increase while demand for the securities decreases. This decline in the price of the corporation's securities indicates to its **board of directors** that action needs to be taken. By contrast, partnership and proprietorship ownership interests are less transferable and marketable. For example, partnerships often require the approval of remaining partners before a dissident partner can sell his or her interest to a third party. In the end, many partners are stuck with their investment and are powerless to change it. Thus, the ease with which stock may be bought and sold (its *marketability*) is a strong advantage of the corporation, aiding its ability to raise capital when compared to alternative business forms.

A second contrasting characteristic is the liability of owners. Sole proprietors and partners (with the exception of limited partners—see *A Closer Look: Comparison of Corporations, Partnerships, Proprietorships, and LLCs*) not only risk their original investments in a business but must also stand ready to use their personal resources to offset any shortfall the enterprise experiences in meeting its fixed obligations. For example, a large legal judgment against a proprietorship or partnership may lead to the personal bankruptcy of its owners. This is not the case with the corporate form of organization. Stockholders have **limited liability**, meaning that they can lose no more than the amount they have invested in the stock. In a corporation, stockholders cannot be forced to make up shortfalls in paying bills once corporate assets have been fully liquidated. Again, this corporate attribute is especially critical in larger firms with diffuse ownership. Few individuals would be willing to expose their resources to risk without direct control over how those capital contributions are utilized if their liability is unlimited.

A Closer Look: Comparison of Corporations, Partnerships, Proprietorships, and LLCs

	Corporations[1, 2]	**Partnerships[3]**	**Proprietorships**	**Limited Liability Corporation (LLC)**
Taxation	Twice: once at the business level, once at the individual level	Once at the individual level	Once at the individual level	Flexible: corporate or partnership
Liability	Limited to the amount invested	Unlimited	Unlimited	Limited to the amount invested
Ownership and control	Separated, majority of stockholders are not usually managers	Partners own and control the enterprise	By definition, ownership and control are in the hands of a single individual	Flexible: partners own enterprise; partners may control enterprise or hire professional managers
Transferability of ownership	Relatively easy through sale of stock	Potentially difficult	Potentially difficult	Relatively easy
Access to capital	Best	Moderate	Most restrictive	Moderate
Information asymmetry and agency costs	Potentially high	Relatively low if all partners are equal and active	Very little, because there is no separation of ownership and control	Flexible: depends on ownership structure; professional management leads to high information asymmetry; partner management leads to low information asymmetry

[1] S corporations differ in that they are treated much like partnerships. S corporations' business-level income flows to the individual tax returns without business-level taxation.

[2] Closely held corporations are similar to partnerships except in the area of taxation and liability.

[3] Limited partnerships are managed by a *general partner*, and *limited partners* have limited liability. In limited partnerships, there can be high agency costs because the general partner is acting as the limited partners' agent. Thus, limited partners are much like stockholders except in the areas of taxation, transferability, and access to capital.

The last advantage of the corporate form is its conceptually unlimited life. Partnerships depend on a team acting as both owners and managers. Like any team, the loss of a key player or players can destroy its effectiveness. In proprietorships this difficulty is exacerbated because the team consists of one player, the loss of whom completely changes the character of the entity. To replace players in partnerships or proprietorships, an individual must be sought who has the wealth, expertise, and willingness to be both a manager and an owner. If such an individual cannot be located, the business must be liquidated. Corporations, on the other hand, are faced with less critical problems of this nature. Replacing lost owners is relatively simple because of marketability of the stock, as already discussed. Loss of key management personnel, although potentially difficult, is less of a problem than in other organizational forms because the replacement does not necessarily also need to become a major owner, as a proprietorship or partnership requires.

A relatively recently developed form of organization is the **limited liability company (LLC)**. Its popularity can be explained by the combination of corporate-like limited liability with flexibility. For example, an LLC may elect to be taxed as a corporation or as a partnership, and it can be managed by its owners or by professional managers.

Over the past century advances in technology, more cost-effective means of transportation and distribution, communications advances, a rising standard of living, and the globalization of markets have provided many investment opportunities for corporations, requiring large amounts of capital to finance their growth. Organizations have sought the most efficient means of meeting these needs. Many would argue that the advantages of corporate organizational forms outweigh the disadvantages as firms become large. Witness their dominance.

1.5 Social Responsibility

The relative efficiency of the corporate form of organization has led to its being the structure of choice for firms foreseeing attractive growth opportunities. The efficiency of corporations has led to criticism as well. Corporations are often portrayed as cold-hearted in their pursuit of economic gains. They are charged with ignoring the communities in which they operate, lacking concern for the welfare of their customers, and even ignoring the planet in their relentless pursuit of profits.

Some critics of corporations charge that the goal of shareholder wealth maximization is too narrow for the good of society. These critics contend that corporations should act in a socially responsible manner. Although social responsibility has different meanings to different people, circumstances exist in which the good of society is at odds with the welfare of corporate shareholders. For example, in its manufacturing endeavors a firm may produce **externalities**, such as air pollution, while the cost of cleaning up this dirty air may be borne not by the corporation but by society. Thus, shareholders receive higher returns as society bears some of the costs of producing the product. Other critics point to abuse by executives, who, while being richly rewarded, sowed the seeds of the financial crisis of 2008. Banks, for example, became extremely large—too big to fail, many believed—and took greater and

greater risks which were largely successful in producing fabulous profits, until the price of homes (upon which the business strategies depended) stopped rising, and the banking system nearly tumbled into ruin.

These charges of abuse are often true on a case-by-case basis and must be taken seriously by all corporations, even nonoffenders, because corporations as legal entities exist at the pleasure of society. Should society see pervasive abuses, it will restrict the freedom of corporations to act.

Businesses, and corporations in particular, are remarkably resilient. Abuses of labor, unethical securities practices, and consumer fraud have led to major legislative initiatives that restrict the freedom of firms. Yet the competitive drive toward shareholder wealth maximization allows corporations to meet society's legal mandates and continue to thrive. It is this goal, combined with marketplace competition, which has allowed businesses in our society to produce ever-higher standards of living. Compare our economy with those in which other goals have supplanted shareholder wealth maximization. Alternative goals, such as the former Soviet Union's objectives of universal employment and equal distribution of wealth, have proven to be socially irresponsible in the sense that resources (inputs for production) were not put to their best use. Resulting inefficiencies in such societies have not been beneficial to their members. Therefore, the competitive nature of the financial goal, while sometimes producing socially irresponsible corporate behavior, is also largely responsible for the economic well-being that our society enjoys.

Summary and Overview of the Book

In this chapter, we have laid out some of the fundamental concepts of finance. Mastering the skills and ideas that underlie valuation is the key to successfully meeting the goal of wealth maximization of business owners and is the focus of the rest of the book. As you glance at the table of contents, you will see that each unit focuses on the valuation themes introduced here in Chapter 1.

Chapters 2 and 3 review accounting and financial forecasting, skills that enable managers to estimate cash flows that are the lifeblood of business and fundamental to financial analysis. In this section, you will learn to estimate, for example, the amount of cash flow a new delivery truck is expected to generate for a gravel-hauling business. This information is vital, as the business decides whether the investment in the truck is a "good deal," generating value in excess of its cost.

Chapters 4 and 5 will develop your skills at time value mathematics so that cash flows occurring at different points in time may be restated as equivalent cash flows at the present or in a future time period. In the delivery truck example, these math skills will enable managers to take the *stream* of cash flows that you learned to forecast in Chapter 2 and directly compare their value to the cost of the truck. As we discuss in the chapter, the company should proceed with the new truck purchase if the value of the new business that the truck generates exceeds it cost. If it does, then the business will create wealth for its owners.

Chapters 6 and 7 introduce the method for determining which proposed investments will create value for owners of the company. In Chapter 6 we discuss the cash flows used to evaluate investment proposals. These are *incremental after-tax cash flows*. These are the cash flows generated by the investment that are available to shareholders. In Chapter 7 we introduce *net present value (NPV)* as the best method for choosing good investments. The NET present value is the present value of cash flows from the proposed investment minus its initial cost. The NPV shows how much shareholder wealth will increase if the project is accepted. This is a powerful tool and one that you will almost certainly apply over your career.

Risk and its relationship to returns is the focus of Chapters 8, 9, and 10. We all know, for example, that we need a higher return on our investments than the opportunity cost available in the nearly riskless interest we can earn in a government-guaranteed bank account. We also instinctively know that we require a higher rate of expected return if we invest in a really risky venture (such as a pizza parlor in Afghanistan) than we do if we invest in a Pizza Hut franchise in Malibu. But in order to make informed decisions, we need a way to measure how much riskier the Afghanistan venture is than the one in Malibu. Furthermore, once we are able to measure risk, we need to know how to estimate how much higher the return should be for the riskier venture. In other words, if one has twice the risk than the other, does that mean investors should require twice the return, or four times the return, or ten times the return to compensate for taking on double the risk? The ability to measure risk and then to estimate the appropriate return requirement given that risk are the topics covered in these chapters.

Finally, the last section of the book looks at ways of assessing the performance of the firm's financial management through techniques such as ratio analysis, the appropriate use of leverage, and how a firm's short-term assets and liabilities (known as the firm's *working capital*) are managed. The final chapter reviews the entire book. We hope you enjoy learning about finance and that after successfully completing the class you will feel empowered to tackle financial decisions with confidence as you move through your career.

Key Terms

agency cost A cost that occurs when control of corporate assets is held by management and is separated from the ownership of those assets. The cost is considered a waste of investors' money because it is being used to benefit the management but not to create wealth for shareholders. An example could be excessive managerial perquisites like luxury condominiums supplied to CEOs at the firm's expense. Sole proprietorships have no agency costs because the owner of the business has direct control of the business assets, and by definition, you can do what you like with your own money.

board of directors A panel of individuals, elected by the stockholders, who act as the owners' representatives. The board's duties include directing the strategic activities of the corporation, the hiring and firing and compensation of top management, and ratifying major corporate decisions, such as the payment of dividends.

common stock A security that represents a residual claim on the firm's earnings and an ownership share of the company.

corporation The form of business organization in which ownership is held by the common stockholders who own a proportional share of the business depending on the percentage of outstanding shares that they own. They exercise control over the company through their elected representatives, the board of directors.

default Missing a scheduled payment to a fixed claimant, such as a coupon payment on a bond, or a loan payment on an equipment loan. This can lead to bankruptcy.

dividends Payments made to stockholders by the corporations. Regular cash dividends are typically paid quarterly. An increase in the regular cash dividend is generally considered a signal of the company's improving profitability. Stock dividends are additional shares of stock issued to current shareholders on a proportional basis.

externalities Negative externalities are unwanted byproducts of production, the costs of which are not borne by the business but by other parties. For example, a factory burning fossil fuels may be creating health problems for people living downwind from the factory who must pay for their added medical costs and the indirect costs of irritated eyes and lungs. There are positive externalities in some cases as well, in which a third party benefits from another's activity but does not pay for the benefit, such as an instance in which an unsightly building is torn down across the street from your house, causing your property value to increase.

IOU A common but informal term used for a promissory note, usually from one individual who has borrowed money to another who was the lender of the money. It would usually include the amount, the interest rate, and the repayment schedule. It stands for "I owe you."

limited liability A characteristic of the corporate, limited partnership, and LLC forms of business organization, which limits the maximum loss one can take in a business to the amount one contributes.

limited liability company A flexible form of business organization that can combine the features of limited liability and professional management but avoid the double taxation of income that plagues the corporate form of organization.

market efficiency The characteristic of a market when the prices quickly and accurately adjust to new information. Prices produced by an efficient market are an unbiased and accurate reflection of the underlying value of an asset.

partnership An association of two or more persons engaged in a business enterprise in which the profits and losses are shared proportionally.

perfect competition A situation in which there are so many competitors and similar products that prices are driven to their minimum level. These prices just cover the cost of production and the least amount of profit that will sustain businesses. Commodity markets are considered to be nearly perfectly competitive because there is no differentiation between products, so consumers make their purchases based solely on who sells for the lowest price.

perquisites Benefits beyond salary that are provided to employees. Typically these include sick leave, vacation time, and sometimes a company car, onsite daycare, health club memberships, use of the company jet for business trips, and so on. When excessive (when their costs exceed any benefit) these may be excessive perks, a type of agency cost.

risk The chance that the actual return from an investment may differ from what is expected.

sole proprietorship The form of business organization in which the owner is also the manager. Characterized by low information asymmetry, there is no agency problem between owners and managers in a sole proprietorship (since they are the same), but there can be a limited organizational life and a difficult time raising funding from outside sources.

valuation The process for estimating the value of an asset, which could be anything ranging from an intangible asset like the copyright for a book to an entire company. Values may be subjective values in which ownership is sought in order to increase one's expected utility (happiness). There are personal values, which might include the value, for example, of an opera ticket. Economic values, on the other hand, are more objective and derive from the future economic benefits of ownership. Economic value is a function of the expected cash flows, the risk, the timing of the cash flows, and the opportunity costs faced by the purchaser.

Web Resources

To learn more about the NYSE (www.nyse.com) and NASDAQ (www.nasdaq.com) exchanges, visit their websites.

To learn more about bankruptcy visit the American Bankruptcy Institute (ABI) website (www.abiworld.org). The ABI is the largest multidisciplinary, nonpartisan organization dedicated to research and education on matters related to insolvency.

You can research corporate social responsibility at www.csrhub.com.

Critical Thinking and Discussion Questions

1. Suppose a large corporation, such as Ford, for example, donates millions of dollars to a charity.
   a. Explain why this may be consistent with the goal of shareholder wealth maximization.
   b. Explain why this could be an agency cost instead of a wealth-creating investment.
2. Consider the four factors that contribute to value of a fictitious project: the development of a gold mine in a promising discovery in South Africa. Rank the four factors in the order of difficulty to estimate; then briefly explain why you think it is hard (or easy) to assess these factors for the mining project. (Hint: The opportunity cost might be the easiest to estimate.)
3. Fine art is often considered an investment. Explain why its economic value is linked ultimately to its personal value.
4. In finance, what is meant by the saying "There is no free lunch"?

5. Develop a brief argument that we use too much gasoline because of the externalities associated with that product. (Hint: Explain what the externalities are, who bears their cost, how that affects the price of gas, and how that price affects demand for gas compared to the demand for gas if the externality was paid for by the producer.)
6. If you were forming a company in order to manufacture fireworks, which forms of organization would you avoid? Why?
7. If a project is expected to produce a series of cash flows in the future that total $4 million, is the project necessarily a "good deal" if its cost is only $1 million? Why or why not?
8. Suppose that Mutual Fund A has averaged a 15% return over the past 5 years, and Mutual Fund B has averaged only 10% during the same period. What other information would you like to have in order to decide which fund had the better performance? (Hint: A mutual fund invests in a variety of stocks, and investors buy shares in the mutual fund. It is a good way for investors to easily diversify their stock and bond investments and to take advantage of professional investment managers' expertise).
9. Assume that the U.S. government takes action that increases interest rates on government-issued bonds. U.S. government bonds are considered very nearly risk free. What will happen to the value of stocks, real estate, and many other investment projects as a result of this action? Explain your reasoning.
10. Provide an example of a perquisite and explain why it might be a wealth-increasing investment for the business owners. Now, take the same perquisite and explain a different scenario where it is an excessive "perk" and becomes an example of an agency cost.