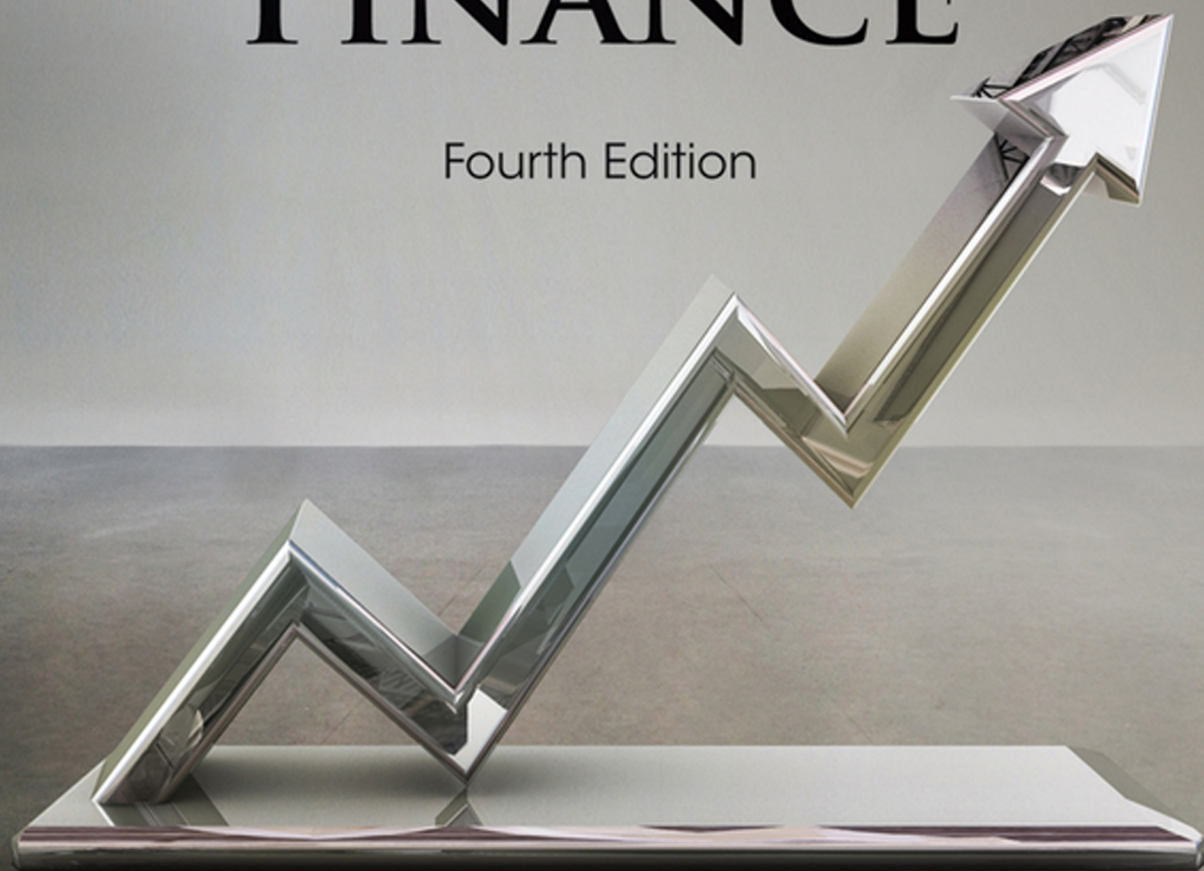


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**ASWATH DAMODARAN**

# APPLIED CORPORATE FINANCE

Fourth Edition



**WILEY**



# CHAPTER 1

## THE FOUNDATIONS

*It's all corporate finance.*

MY UNBIASED VIEW OF THE WORLD

### Learning Objectives

- 1.1. Define *firm*, *assets*, *debt*, and *equity*.
- 1.2. Identify the three fundamental principles that underlie corporate finance.
- 1.3. Link the maximization of firm value to investment, financing, and dividend decisions.
- 1.4. Recognize the real-world businesses, visual devices, and fundamental propositions that will be used throughout the text.

Every decision made in a business has financial implications, and any decision that involves the use of money is a corporate financial decision. Defined broadly, everything that a business does fits under the rubric of corporate finance. It is, in fact, unfortunate that we even call the subject corporate finance, because it suggests to many observers a focus on how large corporations make financial decisions and seems to exclude small and private businesses from its purview. A more appropriate title for this book would be *Business Finance*, because the basic principles remain the same, whether one looks at large, publicly traded firms or small, privately run businesses. All businesses have to invest their resources wisely, find the right kind and mix of financing to fund these investments, and return cash to the owners if there are not enough good investments.

In this chapter, we will lay the foundation for the rest of the book by listing the three fundamental principles that underlie corporate finance—the investment, financing, and dividend principles—and the objective of firm value maximization that is at the heart of corporate financial theory.

### THE FIRM: STRUCTURAL SETUP

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In the chapters that follow, we will use **firm** generically to refer to any business, large or small, manufacturing or service, private or public. Thus, a corner grocery store and Microsoft are both firms.

The firm's investments are generically termed **assets**. Although assets are often categorized in accounting statements into fixed assets, which are long-lived, and current assets, which are short-term, we prefer a different categorization. The investments that a firm has already made are called **assets in place**, whereas investments that the firm is expected to invest in the future are called **growth assets**. Although it may seem strange that a firm can get value from investments it has not made yet, high-growth firms get the bulk of their value from these yet-to-be-made investments.

To finance these assets, the firm can obtain its capital from two sources. It can raise funds from investors or financial institutions by promising investors a fixed claim (interest payments) on the cash

flows generated by the assets, with a limited or no role in the day-to-day running of the business. We categorize this type of financing to be **debt**. Alternatively, it can offer a residual claim on the cash flows (i.e., investors can get what is left over after the interest payments have been made) and a much greater role in the operation of the business. We call this **equity**. Note that these definitions are general enough to cover both private firms, where debt may take the form of bank loans and equity is the owner’s own money, as well as publicly traded companies, where the firm may issue bonds (to raise debt) and common stock (to raise equity).

Thus, at this stage, we can lay out the financial balance sheet of a firm as follows:

Assets			Liabilities
<div>Existing investments Generate cash flows today Includes long-lived (fixed) and short-lived (working capital) assets</div>	Assets in Place	Debt	<div>Fixed claim on cash flows Little or no role in management <i>Fixed maturity</i> <i>Tax-deductible</i></div>
<div>Expected value that will be created by future investments</div>	Growth Assets	Equity	<div>Residual claim on cash flows Significant role in management <i>Perpetual lives</i></div>

We will return to this framework repeatedly through this book.

FIRST PRINCIPLES

Every discipline has first principles that govern and guide everything that gets done within it. All of corporate finance is built on three principles, which we will call, rather unimaginatively, the investment principle, the financing principle, and the dividend principle. The investment principle determines where businesses invest their resources, the financing principle governs the mix of funding used to fund these investments, and the dividend principle answers the question of how much earnings should be reinvested back into the business and how much should be returned to the owners of the business. These core corporate finance principles can be stated as follows:

- **The Investment Principle:** Invest in assets and projects that *yield a return greater than the minimum acceptable hurdle rate*. The hurdle rate should be *higher for riskier projects* and should reflect the *financing mix* used—owners’ funds (equity) or borrowed money (debt). Returns on projects should be measured based on *cash flows* generated and the *timing* of these cash flows; they should also consider both *positive and negative side effects* of these projects.
- **The Financing Principle:** Choose a *financing mix (debt and equity)* that maximizes the value of the investments made and *match the financing to the nature of the assets* being financed.
- **The Dividend Principle:** If there are not enough investments that earn the hurdle rate, *return the cash* to the owners of the business. In the case of a publicly traded firm, the *form of the return*—dividends or stock buybacks—will depend on what stockholders prefer.

When making investment, financing, and dividend decisions, corporate finance is single-minded about the ultimate objective, which is assumed to be maximizing the value of the business to its owners. These first principles provide the basis from which we will extract the numerous models and



theories that comprise modern corporate finance, but they are also commonsense principles. It is incredible conceit on our part to assume that until corporate finance was developed as a coherent discipline starting just a few decades ago, people who ran businesses made decisions randomly with no principles to govern their thinking. Good businesspeople through the ages have always recognized the importance of these first principles and adhered to them, albeit in intuitive ways. In fact, one of the ironies of recent times is that many managers at large and presumably sophisticated firms and their consultants and bankers, with access to the latest corporate finance technology, have lost sight of these basic principles.

### **The Objective of the Firm**

No discipline can develop cohesively over time without a unifying objective. The growth of corporate financial theory can be traced to its choice of a single objective and the development of models built around this objective. The objective in conventional corporate financial theory when making decisions is to maximize the value of the business or firm. Consequently, any decision (investment, financial, or dividend) that increases the value of a business is considered good, whereas one that reduces the firm value is considered poor. Although the choice of a singular objective has provided corporate finance with a unifying theme and internal consistency, it comes at a cost. To the degree that one buys into this objective, much of what corporate financial theory posits makes sense. To the degree that this objective is flawed, however, it can be argued that the theory built on it is flawed as well. Many of the disagreements between corporate financial theorists and others (academics as well as practitioners) can be traced to fundamentally different views about the correct objective for a business. For instance, there are some critics of corporate finance who argue that firms should have multiple objectives where a variety of interests (e.g., stockholders, labor, and customers) are met, and there are others who would have firms focus on what they view as simpler and more direct objectives, such as market share or profitability.

Given the significance of this objective for both the development and the applicability of corporate financial theory, it is important that we examine it much more carefully and address some of the very real concerns and criticisms it has garnered: it assumes that what stockholders do in their own self-interest is also in the best interests of the firm, it is sometimes dependent on the existence of efficient markets, and it is often blind to the social costs associated with value maximization. In Chapter 2, we consider these and other issues and compare firm value maximization to alternative objectives.

### **The Investment Principle**

Firms have scarce resources that must be allocated among competing needs. The first and foremost function of corporate financial theory is to provide a framework for firms to make this decision wisely. Accordingly, we define *investment decisions* to include not only those that create revenues and profits (such as introducing a new product line or expanding into a new market) but also those that save money (such as building a new and more efficient distribution system). Furthermore, we argue that decisions about how much and what inventory to maintain and whether and how much credit to grant to customers that are traditionally categorized as working capital decisions are ultimately investment decisions as well. At the other end of the spectrum, broad strategic decisions regarding which markets to enter and the acquisitions of other companies can also be considered investment decisions.

Corporate finance attempts to measure the return on a proposed investment decision and compare it to a minimum acceptable hurdle rate to decide whether the project is acceptable. The hurdle rate has to be set higher for riskier projects and has to reflect the financing mix used, i.e., the owner's funds (equity) or borrowed money (debt). In Chapter 3, we begin this process by defining risk and developing a procedure for measuring risk. In Chapter 4, we go about converting this risk measure into a hurdle rate, i.e., a minimum acceptable rate of return, for both entire businesses and individual investments.

Having established the hurdle rate, we turn our attention to measuring the returns on an investment. In Chapter 5, we evaluate three alternative ways of measuring returns—conventional accounting earnings, cash flows, and time-weighted cash flows (where we consider both how large the cash flows are and when they are anticipated to come in). In Chapter 6, we consider some of the potential side costs that might not be captured in any of these measures, including costs that may be created for existing investments by taking a new investment, and side benefits, such as options to enter new markets and to expand product lines that may be embedded in new investments, and synergies, especially when the new investment is the acquisition of another firm.

### **The Financing Principle**

Every business, no matter how large and complex, is ultimately funded with a mix of borrowed money (debt) and owner's funds (equity). With a publicly traded firm, debt may take the form of bonds and equity is usually common stock. In a private business, debt is more likely to be bank loans and an owner's savings represent equity. Although we consider the existing mix of debt and equity and its implications for the minimum acceptable hurdle rate as part of the investment principle, we throw open the question of whether the existing mix is the right one in the financing principle section. There might be regulatory and other real-world constraints on the financing mix that a business can use, but there is ample room for flexibility within these constraints. We begin this section in Chapter 7, by looking at the range of choices that exist for both private businesses and publicly traded firms between debt and equity. We then turn to the question of whether the existing mix of financing used by a business is optimal, given the objective function of maximizing firm value, in Chapter 8. Although the tradeoff between the benefits and costs of borrowing are established in qualitative terms first, we also look at quantitative approaches to arriving at the optimal mix in this chapter.

When the optimal financing mix is different from the existing one, we map out the best ways of getting from where we are (the current mix) to where we would like to be (the optimal) in Chapter 9, keeping in mind the investment opportunities that the firm has and the need for timely responses, either because the firm is a takeover target or under the threat of bankruptcy. Having outlined the optimal financing mix, we turn our attention to the type of financing a business should use, such as whether it should be long-term or short-term, whether the payments on the financing should be fixed or variable, and if variable, what it should be a function of. Using a basic proposition that a firm will minimize its risk from financing and maximize its capacity to use borrowed funds if it can match up the cash flows on the debt to the cash flows on the assets being financed, we design the right financing instruments for a firm. We then add additional considerations relating to taxes and external monitors (equity research analysts and ratings agencies) and arrive at conclusions about the design of the financing.

### **The Dividend Principle**

Most businesses would undoubtedly like to have unlimited investment opportunities that yield returns exceeding their hurdle rates, but all businesses grow and mature. As a consequence, every business that thrives reaches a stage in its life when the cash flows generated by existing investments is greater than the funds needed to take on good investments. At that point, this business has to figure out ways to return the excess cash to owners. In private businesses, this may just involve the owner withdrawing a portion of his or her funds from the business. In a publicly traded corporation, this will involve either paying dividends or buying back stock. Note that firms that choose not to return cash to owners will accumulate cash balances that grow over time. Thus, analyzing whether and how much cash should be returned to the owners of a firm is the equivalent of asking (and answering) the question of how much cash accumulated in a firm is too much cash.

In Chapter 10, we introduce the basic tradeoff that determines whether cash should be left in a business or taken out of it. For stockholders in publicly traded firms, we note that this decision is fundamentally one of whether they trust the managers of the firms with their cash, and much of

this trust is based on how well these managers have invested funds in the past. In Chapter 11, we consider the options available to a firm to return assets to its owners—dividends, stock buybacks, and spin-offs—and investigate how to pick between these options.

## CORPORATE FINANCIAL DECISIONS, FIRM VALUE, AND EQUITY VALUE

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If the objective function in corporate finance is to maximize firm value, it follows that firm value must be linked to the three corporate finance decisions outlined—investment, financing, and dividend decisions. The link between these decisions and firm value can be made by recognizing that *the value of a firm is the present value of its expected cash flows, discounted back at a rate that reflects both the riskiness of the projects of the firm and the financing mix used to finance them*. Investors form expectations about future cash flows based on observed current cash flows and expected future growth, which in turn depend on the quality of the firm's projects (its investment decisions) and the amount reinvested back into the business (its dividend decisions). The financing decisions affect the value of a firm through both the discount rate and potentially through the expected cash flows.

This neat formulation of value is put to the test by the interactions among the investment, financing, and dividend decisions and the conflicts of interest that arise among the different players in the game – managers, stockholders, and lenders who do not always read from the same script. We introduce the basic models available to value a firm and its equity in Chapter 12, and relate them back to management decisions on investment, financial, and dividend policies. In the process, we examine the determinants of value and how firms can increase their value.

## A REAL-WORLD FOCUS

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The proliferation of news and information on real-world businesses making decisions every day suggests that we do not need to use hypothetical examples to illustrate the principles of corporate finance. We will use six businesses through this book to make our points about corporate financial policy:

1. **Disney:** Disney is a publicly traded firm with wide holdings in entertainment and media. People around the world recognize the Mickey Mouse logo and have heard about or visited a Disney theme park or seen some or all of the Disney animated classic movies, but it is a much more diversified corporation than most people realize. Disney's holdings include cruise ships, real estate (in the form of time shares and rental properties), television (Disney Cable, ABC, A&E, and ESPN), publications, movie studios (Lucasfilm, Marvel, Pixar, and Disney), and consumer products. Disney will help illustrate the decisions that large multibusiness and multinational corporations have to make as they are faced with the conventional corporate financial decisions.
2. **Bookscape Books:** This company is a privately owned independent bookstore in New York City, one of the few left after the invasion of the bookstore chains and online retailers (and, in particular, Amazon). We will take Bookscape Books through the corporate financial decision-making process to illustrate some of the issues that come up when looking at small businesses with private owners.
3. **Vale:** Vale is a global metals and mining company that was founded and is still incorporated in Brazil. Although it has mining operations around the world, we use it to illustrate some of the questions that have to be dealt with when analyzing a company that is highly dependent upon commodity prices (iron ore in the case of Vale), and that operates in an emerging market, where political risk and economic uncertainty can become key drivers of both profitability and value.
4. **Baidu:** Baidu is a web services company built around a Chinese-language search engine that was founded in 2000 by Robin Li, then a graduate student at the State University of Buffalo. Its

reach in China made it the fifth ranked online site globally in late 2012 and it derives its revenues primarily from online advertising. Its primary stock listing, on the NASDAQ, is for a holding (shell) company with its operating counterpart in China structured as a “variable interest entity”. This structure is designed to get around a Chinese ban on foreign investment in some sectors (including online businesses). Baidu will allow us to look at the corporate finance decisions faced by a young technology company as well as the challenges of being an investor in an environment where legal protections for stockholder rights are weak or diffuse.

5. **Deutsche Bank:** Deutsche Bank is the leading commercial bank in Germany and is also a leading player in investment banking. We will use Deutsche Bank to illustrate some of the issues that come up when a financial service firm has to make investment, financing, and dividend decisions. As banks are highly regulated institutions, it will also serve to illustrate the constraints and opportunities created by the regulatory framework.
6. **Tata Motors:** Tata Motors is an automobile company and is part of one of the largest Indian family group companies, the Tata Group. In addition to allowing us to look at issues specific to manufacturing firms, Tata Motors will also give us an opportunity to examine how firms that are part of larger groups make corporate finance decisions and the potential conflicts of interest that arise in this setting.

We will look at every aspect of finance through the eyes of all six companies, sometimes to draw contrasts between the companies, but more often to show how much they share in common.

## A RESOURCE GUIDE

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To make the learning in this book as interactive and current as possible, we employ a variety of devices.



This icon indicates that spreadsheet programs can be used to do some of the analysis that will be presented. For instance, there are spreadsheets that calculate the optimal financing mix for a firm as well as valuation spreadsheets.



This symbol marks the second supporting device: updated data on some of the inputs that we need and use in our analysis that is available online for this book. Thus, when we estimate the risk parameters for firms, we will draw attention to the data set that is maintained online that reports average risk parameters by industry.



At regular intervals, we will also ask readers to answer questions relating to a topic. These questions, which will generally be framed using real-world examples, will help emphasize the key points made in a chapter and will be marked with this icon.



In each chapter, we will introduce a series of boxes titled “In Practice,” which will look at issues that are likely to come up in practice and ways of addressing these issues.



We examine how firms behave when it comes to assessing risk, evaluating investments and determining the mix of debt and equity, and dividend policy. To make this assessment, we will look at both surveys of decision makers (which chronicle behavior at firms) as well as the findings from studies in behavioral finance that try to explain patterns of management behavior.



## SOME FUNDAMENTAL PROPOSITIONS ABOUT CORPORATE FINANCE

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There are several fundamental arguments we will make repeatedly throughout this book.

1. ***Corporate finance has an internal consistency*** that flows from its choice of maximizing firm value as the only objective function and its dependence on a few bedrock principles: Risk has to be rewarded, cash flows matter more than accounting income, markets are not easily fooled, and every decision a firm makes has an effect on its value.
2. ***Corporate finance must be viewed as an integrated whole*** rather than a collection of decisions. Investment decisions generally affect financing decisions and vice versa; financing decisions often influence dividend decisions and vice versa. Although there are circumstances under which these decisions may be independent of each other, this is seldom the case in practice. Accordingly, it is unlikely that firms that deal with their problems on a piecemeal basis will ever resolve these problems. For instance, a firm that takes poor investments may soon find itself with a dividend problem (with insufficient funds to pay dividends) and a financing problem (because the drop in earnings may make it difficult for them to meet interest expenses).
3. ***Corporate finance matters to everybody*** There is a corporate financial aspect to almost every decision made by a business; although not everyone will find a use for all the components of corporate finance, everyone will find a use for at least some *part* of it. Entrepreneurs, marketing managers, corporate strategists, human resource managers, and information technology managers all make corporate finance decisions every day and often do not realize it. An understanding of corporate finance will help them make better decisions.
4. ***Corporate finance is fun*** This may seem to be the tallest claim of all. After all, most people associate corporate finance with numbers, accounting statements, and hardheaded analyses. Although corporate finance is quantitative in its focus, there is a significant component of creative thinking involved in coming up with solutions to the financial problems businesses do encounter. It is no coincidence that financial markets remain breeding grounds for innovation and change.
5. ***The best way to learn corporate finance is by applying its models and theories to real-world problems*** Although the theory that has been developed over the past few decades is impressive, the ultimate test of any theory is application. As we show in this book, much (if not all) of the theory can be applied to real companies and not just to abstract examples, although we have to compromise and make assumptions in the process.

## CONCLUSION

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This chapter establishes the first principles that govern corporate finance. The investment principle specifies that businesses invest only in projects that yield a return that exceeds the hurdle rate. The financing principle suggests that the right financing mix for a firm is one that maximizes the value of the investments made. The dividend principle requires that cash generated in excess of good project needs be returned to the owners. These principles are the core for what follows in this book.

## LIVE CASE STUDY

### I. Company Choice/Background

**Objective:** To pick a company to analyze, collect background information and start thinking about the narrative for the company.

#### Key Steps

1. Choose a company that you want to work at, understand, or own, rather than one that you think will be easy to analyze or widely followed. Consequently, the company can be of any size, in any sector, or any market. In fact, it can be a privately owned (by you, your family, or a friend) business.
2. Collect information, both financial and nonfinancial, about your company and the sector that it operates in. While you may have to return to this step later in the analysis, it is good to get the basic information.
3. Establish your prior views of this company. Put differently, given what you know now about the company (which may be based on limited information or even hearsay), evaluate whether you think that this company is a well-managed, good company or a poorly managed mess.

#### Framework for Analysis

1. **Collect information about the company**
  - a. Start with the annual reports (three to five years), if it is a publicly traded company. You can usually get them from the company's own website. If it is a young company, you may have only a year or two of financial statements.
  - b. Look for filings made by the company with regulatory agencies. For instance, in the United States, publicly traded companies have to file annual (10-K) and quarterly (10-Q) reports, among a whole array of filings. You can access these reports from the agency websites. If you are assessing a company that is not in the United States, look for the equivalent of the SEC in the country of incorporation and see if you have access to any filings. If you do not, it is not the end of the world. You will still be able to complete your analysis.
  - c. If you are analyzing a private business, you will need access to the financial reports. Again, those filings may be less detailed and credible than public company reports, but remember that you can directly ask the owner for information, if you need it.
2. **Sector information**
  - a. Try to get basic operating metrics for the peer group (competitors) for your company. For the moment, focus on revenues and profitability at these companies. You will be returning to look for more information on these companies, later in your analysis. If you have access to one of the larger, paid databases (e.g., Capital IQ, Factset, and Compustat), this will be easy to do. If not, you will have to use a free online data source such as Yahoo! Finance or Google Finance.
  - b. Find out more about the overall market that all of your companies are trying to access. (Thus, if you are looking at online advertising companies, you would like to see how big the market is, how fast it is growing, and what parts of the world are growing the most). You can check for trade groups (every business generally has a trade group) but you will be amazed at how much you can find online, with a few hours and a good search engine.
3. **Company narrative**  
This will be entirely subjective, but based on what you know about the company you have picked (as this choice is usually not random), what do you think about this company's products, its operations, its management, and its business model?

# CHAPTER 2

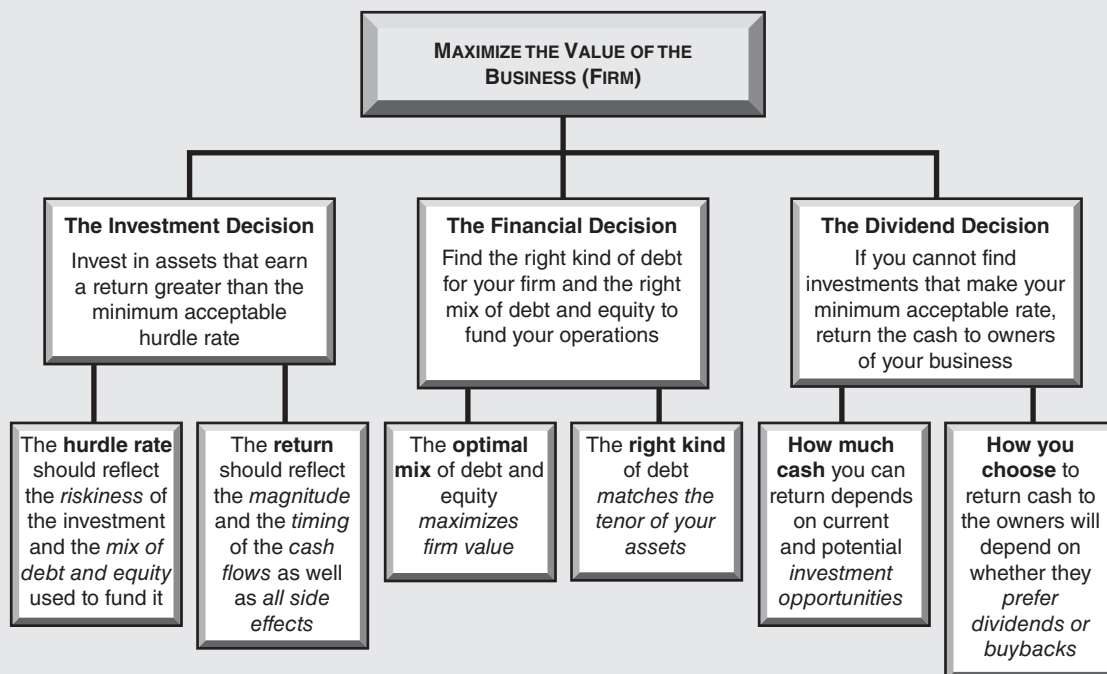
## THE OBJECTIVE IN DECISION MAKING

*If you do not know where you are going, it does not matter how you get there.*

ANONYMOUS

### Learning Objectives

- 2.1. Identify the characteristics of a good decision-making objective.
- 2.2. Explain why corporate finance theory tends to focus on the decision-making objective of stock price maximization.
- 2.3. List the assumptions that must hold true in order for stock price maximization to impose no side costs.
- 2.4. Describe some of the ways in which real-world conflicts of interest complicate the use of stock price maximization as a decision-making objective.
- 2.5. Evaluate potential alternatives to stock price maximization.
- 2.6. Discuss how the market's capacity for self-correction can reduce the problems associated with stock price maximization.
- 2.7. Summarize the conflict between wealth maximization and social welfare and the role of corporate finance in that conflict.



Corporate finance's greatest strength and greatest weakness is its focus on value maximization. By maintaining that focus, corporate finance preserves internal consistency and coherence and develops powerful models and theory about the right way to make investment, financing, and dividend decisions. It can be argued, however, that all of these conclusions are conditional on the acceptance of value maximization as the only objective in decision making.

In this chapter, we consider why we focus so strongly on value maximization and why, in practice, the focus shifts to stock price maximization. We also look at the assumptions needed for stock price maximization to be the right objective, what can go wrong with firms that focus on it, and at least partial fixes to some of these problems. We will argue strongly that even though stock price maximization is a flawed objective, it offers far more promise than alternative objectives because it is self-correcting.

## CHOOSING THE RIGHT OBJECTIVE

An objective specifies what a decision maker is trying to accomplish and by so doing provides measures that can be used to choose between alternatives. In most publicly traded firms, the managers of the firm, rather than the owners (stockholders), make the decisions about where to invest or how to raise funds for an investment. Thus, if stock price maximization is the objective, a manager choosing between two alternatives will choose the one that increases stock price more. In most cases, the objective is stated in terms of maximizing some function or variable, such as profits or growth, or minimizing some function or variable, such as risk or costs.

So why do we need an objective, and if we do need one, why cannot we have several? Let us start with the first question. If an objective is not chosen, there is no systematic way to make the decisions that every business will be confronted with at some point in time. For instance, without an objective, how can Disney's managers decide whether the investment in a new theme park is a good investment? There would be a menu of approaches for picking projects, ranging from reasonable ones like maximizing return on investment to obscure ones like maximizing the size of the firm, and no statements could be made about their relative value. Consequently, three managers looking at the same investment may come to three separate conclusions.

If we choose multiple objectives, we are faced with a different problem. A theory developed around multiple objectives of equal weight will create quandaries when it comes to making decisions. For example, assume that a firm chooses as its objectives maximizing market share and maximizing current earnings. If a project increases market share and current earnings, the firm will face no problems, but what if the project under analysis increases market share while reducing current earnings? The firm should not invest in the project if the current earnings objective is considered, but it should invest in it based on the market share objective. If objectives are prioritized, we are faced with the same stark choices as in the choice of a single objective. Should the top priority be the maximization of current earnings or should it be maximizing market share? Because there is no gain, therefore, from having multiple objectives, and making decisions becomes much more difficult, we argue that there should be only one objective.

There are a number of different objectives that a firm can choose between when it comes to decision making. How will we know whether the objective that we have chosen is the right objective? A good objective should have the following characteristics.

- a. *It is clear and unambiguous.* An ambiguous objective will lead to decision rules that vary from case to case and from decision maker to decision maker. Consider, for instance, a firm that specifies its objective to be increasing growth in the long term. This is an ambiguous objective because it does

not answer at least two questions. The first is growth in what variable: Is it in revenue, operating earnings, net income, or earnings per share? The second is in the definition of the long term: Is it three years, five years, or a longer period?

- b. It comes with a *timely measure* that can be used to evaluate the success or failure of decisions. Objectives that sound good but do not come with a measurement mechanism are likely to fail. For instance, consider a retail firm that defines its objective as maximizing customer satisfaction. How exactly is customer satisfaction defined, and how is it to be measured? If no good mechanism exists for measuring how satisfied customers are with their purchases, not only will managers be unable to make decisions based on this objective but we will also have no way of holding them accountable for any decision they make.
- c. It *does not create costs for other entities or groups* that erase firm-specific benefits and leave society worse off overall. As an example, assume that a tobacco company defines its objective to be revenue growth. Managers of this firm would then be inclined to increase advertising to teenagers, because it will increase sales. Doing so may create significant costs for society that overwhelm any benefit arising from the objective. Some may disagree with the inclusion of social costs and benefits and argue that a business only has a responsibility to its stockholders, not to society. This strikes us as shortsighted because the people who own and operate businesses are part of society.

## THE CLASSICAL OBJECTIVE

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*There is general agreement, at least among corporate finance theorists, that the objective when making decisions in a business is to maximize value.* There is some disagreement on whether the objective is to maximize the value of the stockholder's stake in the business or the value of the entire business (firm), which besides stockholders includes the other financial claim holders (e.g., debt holders and preferred stockholders). Furthermore, even among those who argue for stockholder wealth maximization, there is a question about whether this translates into maximizing the stock price. As we will see in this chapter, these objectives vary in terms of the assumptions needed to justify them. The least restrictive of the three objectives, in terms of assumptions needed, is to maximize the firm value, and the most restrictive is to maximize the stock price.

### Multiple Stakeholders and Conflicts of Interest

In the modern corporation, stockholders hire managers to run the firm for them; these managers then borrow from banks and bondholders to finance the firm's operations. Investors in financial markets respond to information about the firm revealed to them often by the managers, and firms have to operate in the context of a larger society. By focusing on maximizing the stock price, corporate finance exposes itself to several risks. Each of these stakeholders has different objectives and there is the distinct possibility that there will be conflicts of interests among them. What is good for managers may not necessarily be good for stockholders, and what is good for stockholders may not be in the best interests of bondholders and what is beneficial to a firm may create large costs for society.

These conflicts of interests are exacerbated further when we bring in two additional stakeholders in the firm. First, the employees of the firm may have little or no interest in stockholder wealth maximization and may have a much larger stake in improving wages, benefits, and job security. In some cases, these interests may be in direct conflict with stockholder wealth maximization. Second, the customers of the business will probably prefer that products and services be priced lower to maximize their utility, but again this may conflict with what stockholders would prefer.

### Potential Side Costs of Value Maximization

As we noted at the beginning of this section, the objective in corporate finance can be stated broadly as maximizing the value of the entire business, more narrowly as maximizing the value of the equity



stake in the business, or even more narrowly as maximizing the stock price for a publicly traded firm. The potential side costs increase as the objective is narrowed.

If the objective when making decisions is to maximize the firm value, there is a possibility that what is good for the firm may not be good for society. In other words, decisions that are good for the firm, insofar as they increase value, may create social costs. If these costs are large, we can see society paying a high price for value maximization, and the objective will have to be modified to allow for these costs. To be fair, however, this is a problem that is likely to persist in any system of private enterprise and is not peculiar to value maximization. The objective of value maximization may also face obstacles when there is separation of ownership and management, as found in most large public corporations. When managers act as agents for the owners (stockholders), there is the potential for a conflict of interest between stockholder and managerial interests, which in turn can lead to decisions that make managers better off at the expense of stockholders.

When the objective is stated in terms of stockholder wealth, the conflicting interests of stockholders and bondholders have to be reconciled. As stockholders are the decision makers and bondholders are often not completely protected from the side effects of these decisions, one way of maximizing stockholder wealth is to take actions that expropriate wealth from the bondholders, even though such actions may reduce the wealth of the firm.

Finally, when the objective is narrowed further to one of maximizing stock price, inefficiencies in the financial markets may lead to misallocation of resources and to bad decisions. For instance, if stock prices do not reflect the long-term consequences of decisions, but respond, as some critics say, to short-term earnings effects, a decision that increases stockholder wealth (which reflects long-term earnings potential) may reduce the stock price. Conversely, a decision that reduces stockholder wealth but increases earnings in the near term may increase the stock price.

### **Why Corporate Finance Focuses on Stock Price Maximization**

Much of corporate financial theory is centered on stock price maximization as the sole objective when making decisions. This may seem surprising given the potential side costs just discussed, but there are three reasons for the focus on stock price maximization in traditional corporate finance.

- Stock prices are the *most observable* of all measures that can be used to judge the performance of a publicly traded firm. Unlike earnings or sales, which are updated once every quarter or once every year, stock prices are updated constantly to reflect new information coming out about the firm. Thus, managers receive instantaneous feedback from investors on every action that they take. A good illustration is the response of markets to a firm announcing that it plans to acquire another firm. Although managers consistently paint a rosy picture of every acquisition that they plan, the stock price of the acquiring firm drops at the time of the announcement of the deal in roughly half of all acquisitions, suggesting that markets are much more skeptical about managerial claims.
- If investors are rational and markets are efficient, stock prices will reflect the long-term effects of decisions made by the firm. Unlike accounting measures like earnings or sales measures, such as market share, which look at the effects on current operations of decisions made by a firm, the value of a stock is a function of the long-term health and prospects of the firm. In a rational market, the stock price is an attempt on the part of investors to measure this value. Even if they err in their estimates, it can be argued that an erroneous estimate of long-term value is better than a precise estimate of current earnings.
- Finally, choosing stock price maximization as an objective allows us to make categorical statements about the best way to pick projects and finance them and to test these statements with empirical observation.



## 2.1 ASSUMPTIONS FOR STOCK PRICE MAXIMIZATION

Which of the following assumptions would you need for stock price maximization to be the “right” objective for a business to adopt?

- a. Managers act in the best interests of stockholders.
- b. Lenders to the firm are fully protected from expropriation.
- c. Financial markets are efficient.
- d. There are no social costs.
- e. All of the above.
- f. None of the above.



### IN PRACTICE: OBJECTIVE IN PRIVATE FIRMS AND NONPROFITS

The objective of maximizing stock prices is a relevant objective only for firms that are publicly traded. How, then, can corporate finance principles be adapted for private firms? For firms that are not publicly traded, the objective in decision making is still to maximize the firm value. The investment, financing, and dividend principles we will develop in the chapters to come apply for both publicly traded firms, which focus on stock prices, and private businesses, which maximize the firm value. Because the firm value is not observable and has to be estimated, what private businesses will lack is the feedback—sometimes unwelcome—that publicly traded firms get from financial markets when they make major decisions.

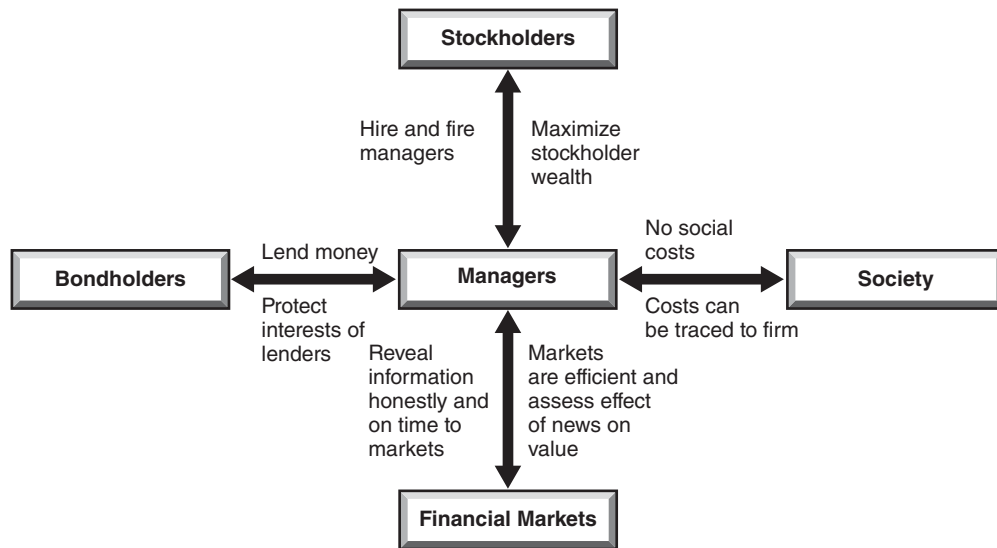
It is, however, much more difficult to adapt corporate finance principles to a not-for-profit organization, because its objective is often to deliver a service in the most efficient way possible, rather than make profits. For instance, the objective of a hospital may be stated as delivering quality health care at the least cost. The problem, though, is that someone has to define the acceptable level of care, and the conflict between cost and quality will underlie all decisions made by the hospital. A nonprofit entity that lacks a clear focus in its decision making will find itself facing the same difficulties in prioritizing and making choices that a for-profit business with diffuse objectives encounters. ■

## MAXIMIZE STOCK PRICES: THE BEST-CASE SCENARIO

If corporate financial theory is based on the objective of maximizing stock prices, it is worth asking when it is reasonable to ask managers to focus on this objective to the exclusion of all others. There is a scenario in which managers can concentrate on maximizing stock prices to the exclusion of all other considerations and not worry about side costs. For this scenario to unfold, the following assumptions have to hold.

1. ***The managers of the firm put aside their own interests and focus on maximizing stockholder wealth.*** This might occur either because they are terrified of the power stockholders have to replace them (through the annual meeting or via the board of directors) or because they own enough stock in the firm that maximizing stockholder wealth becomes their objective as well.
2. ***The lenders to the firm are fully protected from expropriation by stockholders.*** This can occur for one of two reasons. The first is a reputation effect, i.e., that stockholders will not take any action that hurts lenders now if they feel that doing so might hurt them when they try to borrow money in the future. The second is that lenders might be able to protect themselves fully by writing covenants proscribing the firm from taking any action that hurts them.
3. ***The managers of the firm do not attempt to mislead or lie to*** financial markets about the firm’s future prospects, and there is sufficient information for markets to make judgments about the

Figure 2.1 Stock Price Maximization: The Costless Scenario



effects of actions on long-term cash flows and value. Markets are assumed to be *reasoned and rational* in their assessments of these actions and the consequent effects on value.

4. **There are no social costs or social benefits.** All costs created by the firm in its pursuit of maximizing stockholder wealth can be traced and charged to the firm.

With these assumptions, there are no side costs to stock price maximization. Consequently, managers can concentrate on maximizing stock prices. In the process, stockholder wealth and firm value will be maximized, and society will be made better off. The assumptions needed for the classical objective are summarized in a pictorial form in Figure 2.1.

## MAXIMIZE STOCK PRICES: REAL-WORLD CONFLICTS OF INTEREST

Even a casual perusal of the assumptions needed for stock price maximization to be the only objective when making decisions suggests that there are potential shortcomings in each one. Managers might not always make decisions that are in the best interests of stockholders, stockholders do sometimes take actions that hurt lenders, information delivered to markets is often erroneous and sometimes misleading, and there are social costs that cannot be captured in the financial statements of the company. In the section that follows, we consider some of the ways real-world problems might trigger a breakdown in the stock price maximization objective.

### Stockholders and Managers

In classical corporate financial theory, stockholders are assumed to have the power to discipline and replace managers who do not maximize their wealth. The two mechanisms that exist for this power to be exercised are the annual meeting, wherein stockholders gather to evaluate management performance, and the board of directors, whose fiduciary duty is to ensure that managers serve stockholders' interests. Although the legal backing for this assumption may be reasonable, the practical power of these institutions to enforce stockholder control is debatable. In this section, we will begin by looking at the limits on stockholder power and then examine the consequences for managerial decisions.

### The Annual Meeting

Every publicly traded firm has an annual meeting of its stockholders, during which stockholders can both voice their views on management and vote on changes to the corporate charter. Most stockholders, however, do not go to the annual meetings, partly because they do not feel that they can make a difference and partly because it would not make financial sense for them to do so.<sup>1</sup> It is true that investors can exercise their power with proxies,<sup>2</sup> but incumbent management starts off with a clear advantage.<sup>3</sup> Many stockholders do not bother to fill out their proxies; among those who do, voting for incumbent management is often the default option.

For institutional stockholders with significant holdings in a large number of securities, the easiest option, when dissatisfied with incumbent management, is to “vote with their feet,” which is to sell their stock and move on. An activist posture on the part of these stockholders would go a long way toward making managers more responsive to their interests, and there are trends toward more activism, which will be documented later in this chapter.

### The Board of Directors

The board of directors is the body that oversees the management of a publicly traded firm. As elected representatives of the stockholders, the directors are obligated to ensure that managers are looking out for stockholder interests. They can change the top management of the firm and have a substantial influence on how it is run. On major decisions, such as acquisitions of other firms, managers have to get the approval of the board before acting.

The capacity of the board of directors to discipline management and keep them responsive to stockholders is diluted by a number of factors.

1. Many directors find themselves unable to spend enough time on management oversight, partly because of other commitments and partly because many of them serve on the boards of several corporations. As a result of corporate scandals associated with lack of board oversight and facing the threat of legal consequences, directors seem to be spending more time on their duties, taking on fewer directorships, and are being paid more. A survey of the 1500 largest companies in 2013 noted an increase in both hours spent by directors at these companies and the pay, with the median director retainer increasing from \$130,000 in 2008 to \$168,720 in 2012, with a large percentage (about 61%) of this payment taking the form of equity (shares or options).<sup>4</sup>
2. Even those directors who spend time trying to understand the internal workings of a firm are stymied by their lack of expertise on core business issues, especially relating to accounting rules and tender offers, and rely instead on top managers and outside experts.
3. In some firms, a large number of the directors' work for the firm can be categorized as insiders and are unlikely to challenge the chief executive officer (CEO). Even when directors are outsiders, they are often not independent, insofar as the company's CEO often has a major say in who serves on the board. Korn/Ferry's annual survey of boards also found in 1988 that 74% of the 426 companies it surveyed relied on recommendations by the CEO to come up with new directors, whereas only 16% used a search firm. In its 1998 survey, Korn/Ferry found a shift toward more independence on this issue, with almost three-quarters of firms reporting the existence of a nominating committee that is at least nominally independent of the CEO. The latest Korn/Ferry survey confirmed

<sup>1</sup>An investor who owns 100 shares of stock in, say, Coca-Cola will very quickly wipe out any potential returns he makes on his investment if he or she flies to Atlanta every year for the annual meeting.

<sup>2</sup>A *proxy* enables stockholders to vote in absentia on boards of directors and on resolutions that will be coming to a vote at the meeting. It does not allow them to ask open-ended questions of management.

<sup>3</sup>This advantage is magnified if the corporate charter allows incumbent management to vote proxies that were never sent back to the firm. This is the equivalent of having an election in which the incumbent gets the votes of anybody who does not show up at the ballot box.

<sup>4</sup>These data are from a survey by Equilar, a provider of compensation and corporate governance data.