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To Mimi, Drew, Stuart, and Stephen James C. Van Horne

To Emerson, John, June, Lien, and Patricia John M. Wachowicz, Jr.

PREFACE

Financial management continues to develop at an ever more rapid pace. Advancements are occurring not only in the theory of financial management but also in its real-world practice. One result has been for financial management to take on a greater strategic focus, as managers struggle to create value within a corporate setting. Conflicting stakeholder claims, information and financial signaling effects, the globalization of finance, the growth of electronic commerce, strategic alliances, and many other considerations now permeate the landscape of financial decision-making. It is an exciting time, and we hope to convey a sense of excitement to our readers.

The purpose of the tenth edition of Fundamentals of Financial Management is to enable you to understand the financial decision-making process and to interpret the impact that financial decisions will have on value creation. The book, therefore, introduces you to the three major decision-making areas in financial management: the investment, financing, and asset management decisions.

We explore finance, including its frontiers, in an easy-to-understand, user-friendly manner. Although the book is designed for an introductory course in financial management, it can be used as a reference tool as well. For example, participants in management development programs, candidates preparing for various professional exams, and practicing finance professionals will find it useful.

There are many important changes in this new edition. Rather than list them all, we will explain some essential themes that governed our revisions. The institutional material—necessary for understanding the environment in which financial decisions are made—was updated. For example, a relatively new form of business organization in the United States that is growing in popularity, the limited liability company (LLC), is examined. The book is also more international in scope, with many new sections, examples, and boxed features added throughout the book. The effects of electronic commerce and outsourcing on cash management are explored. The role of strategic alliances as an alternative to direct investment or acquisition is highlighted. Attention was also given to streamlining coverage and better expressing fundamental ideas. Material that was no longer relevant or that may have belabored a point was deleted. Some of the more quantitative aspects of Chapter 5, Risk and Return, were moved to an appendix, allowing the instructor more flexibility in covering the material in that important chapter. More questions and problems have been added to the text-especially to Chapter 3, The Time Value of Money, and Chapter 4, The Valuation of Long-Term Securities. Finally, we continued our efforts to make the book more "user friendly." New boxed items appear, including tips, Q&As, and special features, to capture the reader's interest and to illustrate underlying concepts.

The order of the chapters reflects one common sequence for teaching the course, but the instructor may reorder many chapters without causing the students any difficulty. For example, some instructors prefer covering Part III, Tools of Financial Analysis and Planning, before Part II, Valuation. Extensive selected references at the ends of chapters give the reader direct access to relevant literature utilized in preparing the chapters. The appendices at the ends of some chapters invite the reader to go into certain topics in greater depth, but the book's continuity is maintained if this material is not covered.

A number of materials supplement the text. For the teacher, a comprehensive *Instructor's Manual* contains suggestions for organizing the course, answers to chapter questions, and solutions to chapter problems. Another aid is a Test Item File of exten-

sive questions and problems, prepared by Professor Gregory A. Kuhlemeyer, University of Northern Colorado. This supplement is available both in printed form and as a custom computerized test bank (for Windows) through your Prentice Hall sales representative. In addition, Professor Kuhlemeyer has done a wonderful job in preparing an extensive collection of Microsoft PowerPoint slides as outlines (with examples) to go along with the text. The PowerPoint presentation graphics are available on diskettes from your Prentice Hall sales representative and for downloading through the following Prentice Hall FTP web site:

ftp://www.prenhall.com/pub/be/finance.d-006

All text figures and tables are available as transparency masters through the same web site listed above. Finally, computer application software that can be used in conjunction with specially identified end-of-chapter problems is available in both Lotus and Microsoft Excel formats on the same web site.

For the student, "self-correction problems" appear at the end of each chapter in the textbook. These are in addition to the regular questions and problems, and give students immediate feedback on their understanding of the chapter.

To help harness the power of the Internet as a financial management learning device, students (and instructors) are invited to visit the text's web site, Wachoat http://web.utk.edu/~jwachowi/ wicz's Web World. currently residing wacho_world.html. (Note: The Prentice Hall web site-http://www.prenhall.com-will always maintain a current link to Wachowicz's Web World.) Our web site provides links to more than 100 financial management web sites grouped to correspond with the major topic headings in the text (e.g., Valuation, Tools of Financial Analysis and Planning, and so on). Finally, Financial Management Computer Applications is available and is accompanied by software that can be used with either Lotus 1-2-3 or Microsoft Excel. This material is available free through the Prentice Hall web site. End-of-chapter problems that can be solved using the software accompanying Financial Management Computer Applications are identified by the computer symbol shown in the margin.



The authors are grateful for the comments and suggestions of a number of business and government professionals. In particular we would like to thank Jennifer Banner, Pershing Yoakley & Associates, CPAs and Consultants; Sue Harris, Federal Reserve System; John Markese, American Association of Individual Investors; and Annette Winston, First Vantage Bank. For this revision we are also grateful for the reviews and/or suggestions made by the following professors: Cary Collins, University of Tennessee; Ken Cyree, Bryant College; Michael Woatich, Webster University; Vernon Dixon, Haverford College; Ilhan Meric, Rider University; and Marilyn Whitney, University of California at Davis.

Finally, we want to thank the many individuals who helped with the production of this edition. Paul Donnelly, editor, Gladys Soto, assistant editor, and MaryBeth Sanok, editorial assistant, provided strong support and encouragement. Barbara Zeiders did a great job in copy editing, while Greg Teague provided valuable assistance in proofreading all the material. Sallie Steele of Steele/Katigbak once again provided us with a superior index. Special thanks goes to Louise Rothman, who served as an excellent production editor.

We hope that Fundamentals of Financial Management tenth edition contributes to your understanding of finance and imparts a sense of excitement in the process. You, the reader, are the final judge. We thank you for choosing our textbook and welcome your comments and suggestions (please E-mail: jwachowi@utk.edu).

JAMES C. VAN HORNE Palo Alto, California JOHN M. WACHOWICZ, JR. Knoxville, Tennessee

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Increasing shareholder value over time is the bottom line of every move we make.

—Roberto Goizueta CEO, The Coca-Cola Company

INTRODUCTION

The financial manager plays a dynamic role in a modern company's development. This has not always been the case. Until around the first half of this century, financial managers primarily raised funds and managed their firms' cash positions—and that was pretty much it. In the 1950s, the increasing acceptance of present value concepts encouraged financial managers to expand their responsibilities and to become concerned with the selection of capital investment projects.

Today, external factors have an increasing impact on the financial manager. Heightened corporate competition, technological change, volatility in inflation and interest rates, worldwide economic uncertainty, fluctuating exchange rates, tax law changes, and ethical concerns over certain financial dealings must be dealt with almost daily. In the 1990s, finance has played an ever more vital strategic role within the corporation. The chief financial officer (CFO) has emerged as a team player in the overall effort of a company to create value. The "old ways of doing things" simply are not good enough in a world where old ways quickly become obsolete. Thus, today's financial manager must have the flexibility to adapt to the changing external environment if his or her firm is to survive.

If you become a financial manager, your ability to adapt to change, raise funds, invest in assets, and manage wisely will affect the success of your firm and, ultimately, the overall economy as well. To the extent that funds are misallocated, the growth of the economy will be slowed. When economic wants are unfulfilled, this misallocation of funds may work to the detriment of society. In an economy, efficient allocation of resources is vital to optimal growth in that economy; it is also vital to ensuring that individuals obtain satisfaction of their highest levels of personal wants. Thus, through efficiently acquiring, financing, and managing assets, the financial manager contributes to the firm and to the vitality and growth of the economy as a whole.

WHAT IS FINANCIAL MANAGEMENT?

Financial management is concerned with the acquisition, financing, and management of assets with some overall goal in mind. Thus, the decision function of financial management can be broken down into three major areas: the investment, financing, and asset management decisions.

Investment Decision

The investment decision is the most important of the firm's three major decisions. It begins with a determination of the total amount of assets needed to be held by the firm. Picture the firm's balance sheet in your mind for a moment. Imagine liabilities and owners' equity being listed on the right side of the firm's balance sheet and its assets on the left. The financial manager needs to determine the dollar amount that appears above the double lines on the left-hand side of the balance sheet—that is, the size of the firm. Even when this number is known, the composition of the assets must still be decided. For example, how much of the firm's total assets should be devoted to cash or to inventory? Also, the flip side of investment—disinvestment—must not be ignored. Assets that can no longer be economically justified may need to be reduced, eliminated, or replaced.

Financial management Concerns the acquisition, financing, and management of assets with some overall goal in mind.

Financing Decision

The second major decision of the firm is the financing decision. Here the financial manager is concerned with the makeup of the right-hand side of the balance sheet. If you look at the mix of financing for firms across industries, you will see marked differences. Some firms have relatively large amounts of debt, while others are almost debt free. Does the type of financing employed make a difference? If so, why? And, in some sense, can a certain mix of financing be thought of as best?

In addition, dividend policy must be viewed as an integral part of the firm's financing decision. The dividend-payout ratio determines the amount of earnings that can be retained in the firm. Retaining a greater amount of current earnings in the firm means that fewer dollars will be available for current dividend payments. The value of the dividends paid to stockholders must therefore be balanced against the opportunity cost of retained earnings lost as a means of equity financing.

Once the mix of financing has been decided, the financial manager must still determine how best to physically acquire the needed funds. The mechanics of getting a short-term loan, entering into a long-term lease arrangement, or negotiating a sale of bonds or stock must be understood.

Asset Management Decision

The third important decision of the firm is the asset management decision. Once assets have been acquired and appropriate financing provided, these assets must still be managed efficiently. The financial manager is charged with varying degrees of operating responsibility over existing assets. These responsibilities require that the financial manager be more concerned with the management of current assets than with that of fixed assets. A large share of the responsibility for the management of fixed assets would reside with the operating managers who employ these assets.

THE GOAL OF THE FIRM

Efficient financial management requires the existence of some objective or goal because judgment as to whether or not a financial decision is efficient must be made in light of some standard. Although various objectives are possible, we assume in this book that the goal of the firm is to maximize the wealth of the firm's present owners.

Shares of common stock give evidence of ownership in a corporation. Shareholder wealth is represented by the market price per share of the firm's common stock, which, in turn, is a reflection of the firm's investment, financing, and asset management decisions. The idea is that the success of a business decision should be judged by the effect that it ultimately has on share price.

Profit Maximization versus Value Creation

Frequently, **profit maximization** is offered as the proper objective of the firm. However, under this goal a manager could continue to show profit increases by merely issuing stock and using the proceeds to invest in Treasury bills. For most firms, this would result in a decrease in each owner's share of profits—that is, **earnings per share** would fall. Maximizing earnings per share, therefore, is often advocated as an improved version of profit maximization. However, maximization of earnings per share is not a fully appropriate goal because it does not specify the timing or duration of expected returns.

Profit maximization Maximizing a firm's earnings after taxes (EAT).

Earnings per share (EPS)

Earnings after taxes (EAT) divided by the number of common shares outstanding.

WHAT COMPANIES SAY ABOUT THEIR CORPORATE GOAL

"Our prime purpose is to reward risk-bearers by building long-term shareowner wealth."

Source: Campbell Soup Company, 1995 Annual Report.

"We exist for one reason: to maximize share-owner value over time."

Source: The Coca-Cola Company, 1995 Annual Report.

"Creating value for our shareholders is the objective behind all of our operating and financial strategies." Source: Equifax, 1995 Annual Report. "More than ever, our story is about new value and commitment to shareholder wealth."

Source: Georgia-Pacific Annual Report 1995.

"We continue to make shareholder value added the priority throughout the company."

Source: Transamerica Corporation, 1995 Annual Report.

Is the investment project that will produce a \$100,000 return five years from now more valuable than the project that will produce annual returns of \$15,000 in each of the next five years? An answer to this question depends on the time value of money to the firm and to investors at the margin. Few existing stockholders would think favorably of a project that promised its first return in 100 years, no matter how large this return. Therefore, our analysis must take into account the time pattern of returns.

Another shortcoming of the objective of maximizing earnings per share—a shortcoming shared by other traditional return measures such as return on investment—is that risk is not considered. Some investment projects are far more risky than others. As a result, the prospective stream of earnings per share would be more risky if these projects were undertaken. In addition, a company will be more or less risky depending upon the amount of debt in relation to equity in its capital structure. This financial risk also contributes to the overall risk to the investor. Two companies may have the same expected earnings per share, but if the earnings stream of one is subject to considerably more risk than the earnings stream of the other, the market price per share of its stock may well be less.

Finally, this objective does not allow for the effect of dividend policy on the market price of the stock. If the only objective were to maximize earnings per share, the firm would never pay a dividend. It could always improve earnings per share by retaining earnings and investing them at any positive rate of return, however small. To the extent that the payment of dividends can affect the value of the stock, the maximization of earnings per share will not be a satisfactory objective by itself.

For the reasons just given, an objective of maximizing earnings per share may not be the same as maximizing market price per share. The market price of a firm's stock represents the focal judgment of all market participants as to the value of the particular firm. It takes into account present and prospective future earnings per share; the timing, duration, and risk of these earnings; the dividend policy of the firm; and other factors that bear upon the market price of the stock. The market price serves as a barometer for business performance; it indicates how well management is doing on behalf of its shareholders.

Management is under continuous review. Shareholders who are dissatisfied with management performance may sell their shares and invest in another company. This action, if taken by other dissatisfied shareholders, will put downward pressure on market price per share. Thus, management must focus on creating value for share-

holders. This requires management to judge alternative investment, financing, and asset management strategies in terms of their effect on shareholder value (share price). In addition, management should pursue product-market strategies, such as building market share or increasing customer satisfaction, only if they too will increase shareholder value.

Management versus Shareholders

It has long been recognized that the separation of ownership and control in the modern corporation results in potential conflicts between owners and managers. In particular, the objectives of management may differ from those of the firm's shareholders. In a large corporation, stock may be so widely held that shareholders cannot even make known their objectives, much less control or influence management. Thus, this separation of ownership from management creates a situation in which management may act in its own best interests rather than those of the shareholders.

We may think of management as the agents of the owners. Shareholders, hoping that the agents will act in the shareholders' best interests, delegate decision-making authority to them. Jensen and Meckling were the first to develop a comprehensive theory of the firm under agency arrangements. They showed that the principals, in our case the shareholders, can assure themselves that the agents (management) will make optimal decisions only if appropriate incentives are given and only if the agents are monitored. Incentives include stock options, bonuses, and perquisites ("perks," such as company automobiles and expensive offices), and these must be directly related to how close management decisions come to the interests of the shareholders. Monitoring is done by bonding the agent, systematically reviewing management perquisities, auditing financial statements, and limiting management decisions. These monitoring activities necessarily involve costs, an inevitable result of the separation of ownership and control of a corporation. The less the ownership percentage of the managers, the less the likelihood that they will behave in a manner consistent with maximizing shareholder wealth, and the greater the need for outside shareholders to monitor their activities.

Agent(s)
Individual(s)
authorized by another
person, called the
principal, to act in the
latter's behalf.

Agency (theory)
A branch of economics relating to the behavior of principals (such as owners) and their agents (such as managers).

INCENTIVE COMPENSATION PROGRAMS CAN BE USED TO ALIGN CHIEF EXECUTIVE OFFICER'S AND SHAREHOLDERS' INTERESTS

Shareholders rely on CEOs to adopt policies that maximize the value of their shares. Like other human beings, however, CEOs tend to engage in activities that increase their own well-being. One of the most critical roles of the board of directors is to create incentives that make it in the CEO's best interest to do what's in the shareholders' best interests. Conceptually this is not a difficult challenge. Some combination of three basic policies will create the right monetary incentives for CEOs to maximize the value of their companies:

- 1. Boards can require that CEOs become substantial owners of company stock.
- Salaries, bonuses, and stock options can be structured so as to provide big rewards for superior performance and big penalties for poor performance.
- The threat of dismissal for poor performance can be made real.

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¹ Michael C. Jensen and William H. Meckling, "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure," *Journal of Financial Economics* 3 (October 1976), 305–60.

Some people suggest that the primary monitoring of managers comes not from the owners but from the managerial labor market. They argue that efficient capital markets provide signals about the value of a company's securities and, thus, about the performance of its managers. Managers with good performance records should have an easier time finding other employment, if they need to, than managers with poor performance records. Thus, if the managerial labor market is competitive both within and outside the firm, it will tend to discipline managers. In that situation, the signals given by changes in the total market value of the firm's securities become very important.

Social Responsibility

Maximizing shareholder wealth does not imply that management should ignore social responsibility such as protecting the consumer, paying fair wages to employees, maintaining fair hiring practices and safe working conditions, supporting education, and becoming involved in environmental issues such as clean air and water. Many people feel that a firm has no choice but to act in socially responsible ways. They argue that shareholder wealth and, perhaps, the corporation's very existence, depend on its being socially responsible. Because the criteria for social responsibility are not clearly defined, however, it is difficult to formulate consistent policies. When society, acting through Congress and other representative bodies, establishes the rules governing the trade-off between social goals and economic efficiency, the task for the corporation is clearer. The company can then be viewed as producing both private and social goods, and the maximization of shareholder wealth remains a viable corporate objective.

ORGANIZATION OF THE FINANCIAL MANAGEMENT FUNCTION

Whether your business career takes you in the direction of manufacturing, marketing, finance, or accounting, it is important for you to understand the role that financial management plays in the operations of the firm. Figure 1-1 is an organization chart for a typical manufacturing firm that gives special attention to the finance function.

As the head of one of the three major functional areas of the firm, the vice president of finance, or chief financial officer (CFO), generally reports directly to the president, or chief executive officer (CEO). In large firms, the financial operations overseen by the CFO will be split into two branches, with one headed by a treasurer and the other by a controller.

The controller's responsibilities are primarily accounting in nature. Cost accounting, as well as budgets and forecasts, concerns internal consumption. External financial reporting is provided to the IRS, to the Securities and Exchange Commission (SEC), and to stockholders.

The treasurer's responsibilities fall into the decision areas most commonly associated with financial management: investment (capital budgeting, pension management), financing (commercial banking and investment banking relationships, investor relations, dividend disbursement), and asset management (cash management, credit management). The organization chart may give you the false impression that a clear split exists between treasurer and controller responsibilities. In a well-functioning firm, information will flow easily back and forth between both branches. In small firms the treasurer and controller functions may be combined into one position with a resulting commingling of activities.