

FUNDAMENTALS OF CORPORATE FINANCE

THIRD EDITION



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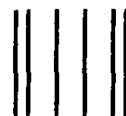
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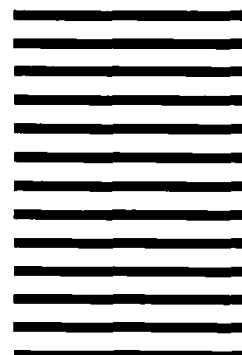
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To our families and friends with love and gratitude

S. A. R.

R. W. W.

B. D. J.

A B O U T T H E A U T H O R S

Stephen A. Ross, *Yale University*

Stephen Ross has held the position of Sterling Professor of Economics and Finance at Yale University since 1985. One of the most widely published authors in finance and economics, Professor Ross is recognized for his work in developing the Arbitrage Pricing Theory. He has also made substantial contributions to the discipline through his research in signalling, agency theory, options, and the theory of the term structure of interest rates. Previously the president of the American Finance Association, he serves as an associate editor of the *Journal of Finance* and the *Journal of Economic Theory*. He is cochairman of Roll and Ross Asset Management Corporation, and a managing director of WP Capital Management, LP.

Randolph W. Westerfield, *University of Southern California*

Dr. Randolph W. Westerfield is Dean of the University of Southern California School of Business Administration and holder of the Robert R. Dockson Dean's Chair of Business Administration. The USC School of Business Administration, founded in 1920, is the oldest business school in Southern California.

From 1988 to 1993 Dr. Westerfield served as the chairman of the School's finance and business economics department and The Charles B. Thornton Professor of Finance. He came to USC from the Wharton School, University of Pennsylvania, where he was the chairman of the finance department and member of the finance faculty for 20 years. He was the senior research associate at the Rodney L. White Center for Financial Research at Wharton. His areas of expertise include corporate financial policy, investment management and analysis, mergers and acquisitions, and stock market price behavior.

Dr. Westerfield has served as a member of the Continental Bank trust committee, supervising all activities of the trust department. He has been consultant to a number of corporations, including AT&T, Mobil Oil and Pacific Enterprises, as well as to the United Nations, the U.S. Department of Justice and Labor, and the State of California.

Bradford D. Jordan, *University of Missouri-Columbia*

Bradford Jordan is Associate Professor of Finance at the University of Missouri. He has a longstanding interest in both applied and theoretical issues in corporate finance, and he has extensive experience teaching all levels of corporate finance and financial management policy. Professor Jordan has published numerous articles on issues such as cost of capital, capital structure, and the behavior of security prices. He is Ph.D. Coordinator for the Finance Department at the University of Missouri.

In the 1990s, the challenge of financial management is greater than ever. In recent years, we have seen fundamental changes in financial markets and instruments, and the practice of corporate finance continues to evolve rapidly. Often, what was yesterday's state of the art is commonplace today, and it is essential that our finance courses and finance texts do not get left behind. *Fundamentals of Corporate Finance* provides what we believe, and the market has confirmed, is the first modern, unified treatment of financial management that is suitable for introductory students.

The Underlying Philosophy

Rapid and extensive changes place new burdens on those teaching corporate finance. On the one hand, it is much more difficult to keep materials up to date. On the other, the permanent must be distinguished from the temporary to avoid following what is merely the latest fad. Our solution is to stress the modern fundamentals of finance and to make the subject come alive with contemporary examples. As we emphasize throughout this book, we view the subject of corporate finance as the working of a small number of integrated and very powerful intuitions.

From our survey of existing introductory textbooks, including the ones we have used, this commonsense approach seems to be the exception rather than the rule. All too often, the beginning student views corporate finance as a collection of unrelated topics which are unified by virtue of being bound together between the covers of one book. In many cases, this perception is only natural because the subject is treated in a way that is both topic oriented and procedural. Commonly, emphasis is placed on detailed and specific "solutions" to certain narrowly posed problems. How often have we heard students exclaim that they could solve a particular problem if only they knew which formula to use?

We think this approach misses the forest for the trees. As time passes, the details fade, and what remains, if we are successful, is a sound grasp of the underlying principles. This is why our overriding concern, from the first page to the last, is with the basic logic of financial decision making.

Distinctive Features

Our general philosophy is apparent in the following ways:

An Emphasis on Intuition We are always careful to separate and explain the principles at work on an intuitive level before launching into any specifics. The underlying ideas are discussed first in very general terms and then by way of examples that illustrate in more concrete terms how a financial manager might proceed in a given situation.

A Unified Valuation Approach Many texts pay only lip service to net present value (NPV) as the basic concept of corporate finance and stop short of consistently integrating this important principle. The most basic notion, that NPV represents the excess of market value over cost, tends to get lost in an overly mechanical approach to NPV that emphasizes computation at the expense of understanding. Every subject covered in *Fundamentals of Corporate Finance*, from capital budgeting to capital structure, is firmly rooted in valuation, and care is taken throughout to explain how particular decisions have valuation effects.

A Managerial Focus Students won't lose sight of the fact that financial management concerns management. Throughout the text, the role of the financial manager as decision maker is emphasized, and the need for managerial input and judgment is stressed. "Black box" approaches to finance are consciously avoided.

In *Fundamentals of Corporate Finance*, these three themes work together to provide a consistent treatment, a sound foundation, and a practical, workable understanding of how to evaluate financial decisions.

Intended Audience

This text is designed and developed explicitly for a first course in business or corporate finance. The typical student will not have previously taken a course in finance, and no previous knowledge of finance is assumed. Since this course is frequently part of a common business core, the text is intended for majors and nonmajors alike. In terms of background or prerequisites, the book is nearly self-contained. Some familiarity with basic accounting principles is assumed, but even these are reviewed very early on. The only other tool the student needs is basic algebra. As a result, students with very different backgrounds will find the text very accessible.

Coverage

From the start, *Fundamentals of Corporate Finance* contains innovative coverage on a wide variety of subjects. For example, Chapter 4, on long-term financial planning, contains a thorough discussion of the sustainable growth rate as a planning tool. Chapter 9, on project analysis and evaluation, contains an extensive discussion of how to evaluate NPV estimates. Chapter 10, on capital market history, discusses in detail the famous Ibbotson-Sinquefeld study and the nature of capital market risks and returns. Chapter 13, on selling securities to the public, contains a modern, up-to-date discussion of IPOs and the costs of going public. "International Corporate Finance," Chapter 21, introduces the global economy. It covers key international relationships and their valuation effects. Chapter 22, "Risk Management: An Introduction to Financial Engineering," presents material on this increasingly important topic at a level appropriate for an introductory class.

This is just a sampling. Because *Fundamentals of Corporate Finance* is not a "me-too" book, we have taken a very close look at what is likely to be relevant in the 1990s, and we have taken a fresh, modern approach to many traditional subjects. In doing so, we eliminated topics of dubious relevance, downplayed

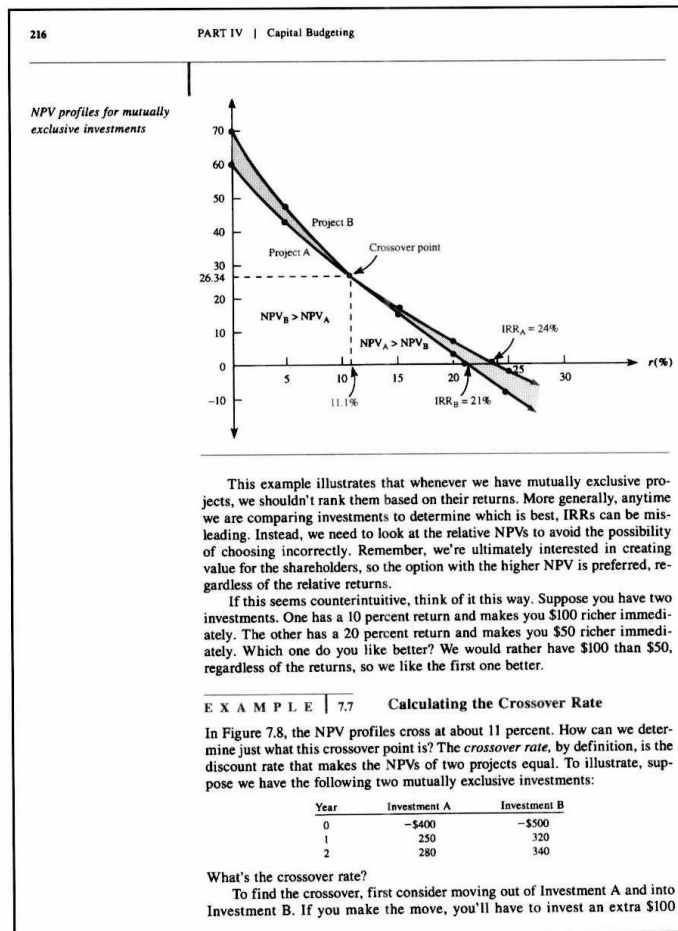
purely theoretical issues, and minimized the use of extensive and elaborate computations to illustrate points that are either intuitively obvious or of limited practical use.

Unlike virtually any other introductory text, *Fundamentals of Corporate Finance* provides extensive real-world practical advice and guidance. We try to go beyond just presenting dry, standard textbook material to show how to actually use the tools discussed in the text. When necessary, the approximate, pragmatic nature of some types of financial analysis is made explicit, possible pitfalls are described, and limitations are outlined.

Attention to Pedagogy

In addition to illustrating pertinent concepts and presenting up-to-date coverage, *Fundamentals of Corporate Finance* strives to present the material in a way that makes it coherent and easy to understand. To meet the varied needs of the intended audience, *Fundamentals of Corporate Finance* is rich in valuable learning tools and support, including:

1. **Pedagogical Use of Color.** Throughout development of the third edition, color is used as a functional element in the discussion. In almost every chapter, color plays an extensive, nonschematic, and largely self-evident role. An example of the pedagogical use of color follows.



2. "In Their Own Words" Boxes. This unique series of boxes appears throughout the text. Each box is written by a distinguished scholar or practitioner on key topics in the text. Boxes include essays by Merton Miller on capital structure, Fisher Black on dividends, and Roger Ibbotson on capital market history. A complete list of "In Their Own Words" boxes appears on page xxx.

12 PART I | Overview of Corporate Finance

CHAPTER 1 | Introduction to Corporate Finance 13

IN THEIR OWN WORDS . . .

Clifford W. Smith, Jr. on Market Incentives for Ethical Behavior



Ethics is a topic that has been receiving increased interest in the business community. Much of this discussion has been led by philosophers and has focused on moral principles. Rather than review these issues, I want to discuss a complementary (but often ignored) set of issues from an economist's viewpoint. Markets impose potentially substantial costs on individuals and institutions that engage in unethical behavior. These market forces thus provide important incentives which foster ethical behavior in the business community. At its core, economics is the study of making choices. I thus want to examine ethical behavior simply as one choice facing an individual. Economic analysis suggests that in considering an action, you identify its expected costs and benefits. If the estimated benefits exceed the esti-

mated costs, you take the action; if not, you don't. To focus this discussion, let's consider the following specific choice: Suppose you have a contract to deliver a product of a specified quality. Would you cheat by reducing quality to lower costs in an attempt to increase profits? Economics implies that the higher the expected costs of cheating, the more likely ethical actions will be chosen. This simple principle has several implications.

First, the higher the probability of detection, the less likely an individual is to cheat. This implication helps us understand numerous institutional arrangements for monitoring in the marketplace. For example, a company agrees to have its financial statements audited by an external public accounting firm. This periodic professional

monitoring increases the probability of detection, thereby reducing any incentive to misstate the firm's financial condition.

Second, the higher the sanctions imposed if detected, the less likely an individual is to cheat. Hence, a business transaction that is expected to be repeated between the same parties faces a lower probability of cheating because the lost profits from the foregone stream of future sales provide powerful incentives for contract compliance. However, if continued corporate existence is more uncertain, so are the expected costs of foregone future sales. Therefore firms in financial difficulty are more likely to cheat than financially healthy firms. Firms thus have incentives to adopt financial policies that help credibly bond against cheating. For example, if prod-

uct quality is difficult to assess prior to purchase, customers doubt a firm's claims about product quality. Where quality is more uncertain, customers are only willing to pay lower prices. Such firms thus have particularly strong incentives to adopt financial policies that imply a lower probability of insolvency. Therefore such firms should have lower leverage, fewer leases, and engage in more hedging.

Third, the expected costs are higher if information about cheating is rapidly and widely distributed to potential future customers. Thus information services like *Consumer Reports*, which monitor and report on product quality, help deter cheating. By lowering the costs for potential customers to monitor quality, the expected costs of cheating are raised.

Finally, the costs imposed in a firm that is caught cheating depend on the market's assessment of the ethical breach. Some actions viewed as clear transgressions by some might be viewed as justifiable behavior

by others. Ethical standards also vary across markets. For example, a payment that if disclosed in the U.S. would be labeled a bribe, might be viewed as a standard business practice in a third-world market. The costs imposed will be higher the greater the consensus that the behavior was unethical.

Establishing and maintaining a reputation for ethical behavior is a valuable corporate asset in the business community. This analysis suggests that a firm concerned about the ethical conduct of its employees should pay careful attention to potential conflicts among the firm's management, employees, customers, creditors, and shareholders. Consider Sears, the department store giant that was found to be charging customers for auto repairs of questionable necessity. In an effort to make the company more service oriented (in the way that competitors like Nordstrom are), Sears initiated an across-the-board policy of commission sales. But what works in clothing and

housewares does not always work the same way in the auto repair shop. A customer for a man's suit knows as much as the salesperson about the product. But many auto repair customers know little about the inner workings of their cars and thus are more likely to rely on employee recommendations in deciding on purchases. Sears's compensation policy resulted in recommendations of unnecessary repairs to customers. Sears would not have had to deal with its repair shop problems and the consequent erosion of its reputation had it anticipated that its commission sales policy would encourage auto shop employees to cheat its customers.

Clifford W. Smith, Jr. is the Clarey Professor of Finance at the University of Rochester's Simon School of Business Administration. He is an editor of the *Journal of Financial Economics*. His research focuses on corporate financial policy and the structure of financial institutions.

3. Concept Building. Chapter sections are intentionally kept short to promote a step-by-step, building block approach to learning. Each section is then followed by a series of short concept questions that highlight the key ideas just presented. Students use these questions to make sure they can identify and understand the most important concepts as they read.

The dividend will grow by \$1.84 over that period. Dividend growth is a subject we will return to in a later chapter.

CONCEPT QUESTIONS

5.1a What do we mean by the future value of an investment?

5.1b What does it mean to compound interest? How does compound interest differ from simple interest?

5.1c In general, what is the future value of \$1 invested at r per period for t periods?

4. Summary Tables. These tables succinctly restate key principles, results, and equations. They appear whenever it is useful to emphasize and summarize a group of related concepts.

		T A B L E 2.5
		<i>Cash Flow Summary</i>
I.	The cash flow identity Cash flow from assets = Cash flow to creditors (bondholders) + Cash flow to stockholders (owners)	
II.	Cash flow from assets = Operating cash flow - Net capital spending - Additions to net working capital (NWC)	
	where: Operating cash flow = Earnings before interest and taxes (EBIT) + Depreciation - Taxes Net capital spending = Ending net fixed assets - Beginning net fixed assets + Depreciation Additions to NWC = Ending NWC - Beginning NWC	
III.	Cash flow to creditors (bondholders) Cash flow to creditors = Interest paid - Net new borrowing	
IV.	Cash flow to stockholders (owners) Cash flow to stockholders = Dividends paid - Net new equity raised	

5. **Numbered Examples.** Separate numbered and titled examples are extensively integrated into the chapters as indicated below. These examples provide detailed applications and illustrations of the text material in a step-by-step format. Each example is completely self-contained so that students don't have to search for additional information. Based on our classroom testing, these examples are among the most useful learning aids because they provide both detail and explanation. A small color bar signals the end of each example.

EXAMPLE 5.7 Deceptive Advertising?

Recently, some businesses have been advertising things like "Come try our product. If you do, we'll give you \$100 just for coming by!" If you read the fine print, what you find out is that they will give you a savings certificate that will pay you \$100 in 25 years or so. If the going interest rate on such certificates is 10 percent per year, how much are they really giving you today?

What you're actually getting is the present value of \$100 to be paid in 25 years. If the discount rate is 10 percent per year, then the discount factor is:

$$1/1.1^{25} = 1/10.8347 = .0923$$

This tells you that a dollar in 25 years is worth a little more than nine cents today, assuming a 10 percent discount rate. Given this, the promotion is actually paying you about $.0923 \times \$100 = \9.23 . Maybe this is enough to draw customers, but it's not \$100. |

6. **Key Terms.** These are contained in each chapter and are printed in blue the first time they appear. These terms are defined within the text and also in the marginal definitions.

discount rate
The rate used to calculate the present value of future cash flows.

The quantity in brackets, $1/(1 + r)^t$, goes by several different names. Since it's used to discount a future cash flow, it is often called a *discount factor*. With this name, it is not surprising that the rate used in the calculation is often called the **discount rate**. We will tend to call it this in talking about present values. The quantity in brackets is also called the *present value interest factor* for \$1 at r percent for t periods and is sometimes abbreviated as $PVIF(r, t)$. Finally, calculating the present value of a future cash flow to determine its worth today is commonly called *discounted cash flow* (DCF) valuation.

To illustrate, suppose you need \$1,000 in three years. You can earn 15 percent on your money. How much do you have to invest today? To find out, we have to determine the present value of \$1,000 in three years at 15 percent. We do this by discounting \$1,000 back three periods at 15 percent. With these numbers, the discount factor is:

7. **Key Equations.** These are called out in the text and identified by equation numbers. The list in Appendix B shows the key equations by chapter.

8. **Highlighted Phrases.** Throughout the text important ideas are presented separately and printed in green. Printing these phrases in color not only draws attention to them, but also indicates their importance to the students.

discounted payback period
The length of time required for an investment's discounted cash flows to equal its initial cost.

ignored time value. There is a variation of the payback period, the **discounted payback period**, that fixes this particular problem. The **discounted payback period** is the length of time until the sum of the discounted cash flows is equal to the initial investment. The *discounted payback rule* would be:

Based on the discounted payback rule, an investment is acceptable if its discounted payback is less than some prespecified number of years.

To see how we might calculate the discounted payback period, suppose that we require a 12.5 percent return on new investments. We have an investment that costs \$300 and has cash flows of \$100 per year for five years. To get

9. Chapter Summary and Conclusion. These paragraphs review the chapter's key points and provide closure to the chapter.

5.7 | SUMMARY AND CONCLUSIONS

This chapter has introduced you to the basic principles of present value and discounted cash flow valuation. In it, we explain a number of things about the time value of money, including:

1. For a given rate of return, the value at some point in the future of an investment made today can be determined by calculating the future value of that investment.
2. The current worth of a future cash flow or series of cash flows can be determined for a given rate of return by calculating the present value of the cash flow(s) involved.
3. The relationship between present value (PV) and future value (FV) for a given rate r and time t is given by the basic present value equation:

$$PV = FV_t / (1 + r)^t$$

As we have shown, it is possible to find any one of the four components (PV, FV, r , t) given the other three.

4. A series of constant cash flows that arrive or are paid at the end of each period is called an ordinary annuity, and we describe some useful shortcuts for determining the present and future values of annuities.

10. Chapter Review Problems and Self-Tests. Review and self-test problems appear after the chapter summaries. Detailed answers to the self-test problems immediately follow. These questions and answers allow students to test their abilities in solving key problems related to the content of the chapter.

Chapter Review Problems and Self-Test

- 5.1 **Calculating Future Values** Assume you deposit \$1,000 today in an account that pays 8 percent interest. How much will you have in four years? How much will you have if the 8 percent is compounded quarterly? How much will you have in 4½ years in this case?
- 5.2 **Calculating Present Values** Suppose you have just celebrated your 19th birthday. A rich uncle set up a trust fund for you that will pay you \$100,000 when you turn 25. If the relevant discount rate is 11 percent, how much is this fund worth today?
- 5.3 **Present Values with Multiple Cash Flows** A first-round draft choice quarterback has been signed to a three-year, \$10 million contract. The details provide for an immediate cash bonus of \$1 million. The player is to receive \$2 million in salary at the end of the first year, \$3 million the next, and \$4 million at the end of the last year. Assuming a 10 percent discount rate, is this package worth \$10 million? How much is it worth?
- 5.4 **Future Value with Multiple Cash Flows** You plan to make a series of deposits in an interest-bearing account. You will deposit \$1,000 today, \$2,000 in two years, and \$8,000 in five years. If you withdraw \$3,000 in three years and \$5,000 in seven years, how much will you have after eight years if the interest rate is 9 percent? What is the present value of these cash flows?

Answers to Self-Test Problems

- 5.1 We need to calculate the future value of \$1,000 at 8 percent for four years. The future value factor is:

$$1.08^4 = 1.3605$$

The future value is thus $\$1,000 \times 1.3605 = \$1,360.50$. If the 8 percent is compounded quarterly, then the rate is actually 2 percent per quarter. In four years, there are 16 quarters; so the future value factor is now:

$$1.02^{16} = 1.3728$$

The future value of your \$1,000 is thus \$1,372.80 in this case, which is a little more than before because of the extra compounding. Notice that we could have calculated the EAR first:

$$EAR = (1 + .08/4)^4 - 1 = 8.24322\%$$

The future value factor would then be:

$$1.0824322^4 = 1.3728$$

This is just as we calculated. To find the future value after 4½ years, we could either use the actual quarterly rate with 18 quarters or the effective annual rate with 4.5 years. We'll do both:

$$\begin{aligned} \text{Future value} &= \$1,000 \times (1.02)^{18} \\ &= \$1,000 \times 1.42825 = \$1,428.25 \end{aligned}$$

Or:

$$\begin{aligned} \text{Future value} &= \$1,000 \times (1.0824322)^{4.5} = \$1,000 \times 1.42825 \\ &= \$1,428.25 \end{aligned}$$

11. **End-of-Chapter Questions and Problems.** We have found that many students learn better when they have plenty of opportunity to practice. We therefore provide extensive end-of-chapter questions and problems. The end-of-chapter support we provide greatly exceeds what is typical in an introductory textbook. The questions and problems are segregated into three levels—Basic, Intermediate, and Challenge. All problems are fully annotated so that students and instructors can readily identify particular types. Throughout the text, we have worked to supply interesting problems that illustrate real world applications of chapter material. Answers to selected end-of-chapter questions appear in Appendix C.

Questions and Problems

1. **Calculating Payback** What is the payback period for the following set of cash flows? **Basic**
(Questions 1–20)

Year	Cash Flow
0	–\$2,000
1	800
2	600
3	900
4	300

2. **Calculating Payback** An investment project provides annual cash inflows of \$750 per year for eight years. What is the project payback period if the initial cost is \$2,500? What if the initial cost is \$5,000? \$7,500?

has conventional cash flows and a positive NPV. What do you know about its payback? Its discounted payback? Its profitability index? Its IRR? Explain.

Intermediate
(Questions 21–30)

21. **Interpreting Payback**

- a. Describe how the payback period is calculated, and describe the information this measure provides about a sequence of cash flows. What is the payback criterion decision rule?
- b. What are the problems associated with using the payback period as a means of evaluating cash flows?
- c. What are the advantages of using the payback period to evaluate cash flows? Are there any circumstances where using payback might be appropriate? Explain.

- b. Find C in terms of I , N , and r such that this is a profitable project according to the NPV decision rule.
- c. Find C in terms of I , N , and r such that the project has a benefit/cost ratio of 1.5.

Challenge
(Questions 31–33)

31. **Payback and NPV** An investment under consideration has a payback of seven years and a cost of \$70,000. If the required return is 16 percent, what is the worst-case NPV? The best-case NPV? Explain.

32. **Multiple IRRs** This problem is useful for testing the ability of financial calculators and computer software. Consider the following cash flows. How many IRRs can there be? How many are there (hint: search between 20 percent and 70 percent)? When should we take this project?

12. Indexes for this edition are divided into four types—name, equation, key term, and subject indexes. Entries from the two supplemental chapters, “Options and Corporate Securities” and “Leasing”, are included in these indexes.

Organization of the Text

We have found that the phrase “so much to do, so little time” accurately describes an introductory finance course. For this reason, we designed *Fundamentals of Corporate Finance* to be as flexible and modular as possible. There are a total of nine parts, and, in broad terms, the instructor is free to decide the particular sequence. Further, within each part, the first chapter generally contains an overview and survey. Thus, when time is limited, subsequent chapters can be omitted. Finally, the sections placed early in each chapter are generally the most important, and later sections frequently can be omitted without loss of continuity. For these reasons, the instructor has great control over the topics covered, the sequence in which they are covered, and the depth of coverage.

Part One of the text contains two chapters. Chapter 1 considers the goal of the corporation, the corporate form of organization, the agency problem, and, briefly, financial markets. Chapter 2 succinctly discusses cash flow versus accounting income, market value versus book value, and taxes. It also provides a useful review of financial statements.

After Part One, either Part Two, on financial statements analysis, long-range planning, and corporate growth, or Part Three, on time value and stock and bond valuation, follows naturally. Part Two can be omitted entirely if desired. After Part Three, most instructors will probably want to move directly into Part Four, which covers net present value, discounted cash flow valuation, and capital budgeting.

Part Five contains two chapters on risk and return. The first one, on market history, is designed to give students a feel for typical rates of return on risky assets. The second one discusses the expected return/risk tradeoff, and it develops the security market line in a highly intuitive way that bypasses much of the usual portfolio theory and statistics.

The first chapter of Part Six introduces long-term financing by discussing the essential features of debt and equity instruments. Important elements of bankruptcy and reorganization are covered briefly as well. The second chapter in Part Six covers selling securities to the public with an emphasis on the role of the investment banker and the costs of going public. Because both chapters contain a fair amount of descriptive material, they can easily be assigned as out-of-class reading as time constraints dictate.

Cost of capital, capital structure, and dividend policy are covered in the three consecutive chapters of Part Seven. The chapter on dividends can be covered independently, if desired, and the chapter on capital structure can be omitted without creating loss of continuity.

Part Eight covers issues in short-term financial management. The first of the three chapters is a general survey of short-term financial management, which is very useful when time does not permit a more in-depth treatment. The next two chapters provide greater detail on cash, credit, and inventory management.

Last, Part Nine covers three important topics: mergers, international finance, and financial engineering. Supplemental chapters on Options and Leasing are also available and can be packaged with the book. Our reviewing and feedback indicated that the majority of Introductory courses run out of time before reaching this material, so we decided to make these two chapters available separately. Each of these supplements comes with the complete professor and student support that accompanies the text. For additional information on how to package either of these supplements with the book, please contact your Irwin sales representative.

Acknowledgments

To borrow a phrase, writing an introductory finance textbook is easy—all you do is sit down at a word processor and open a vein. We never would have completed this book without the incredible amount of help and support we received from literally dozens of our colleagues, students, editors, family members, and friends. We would like to thank, without implicating, all of you.

Clearly, our greatest debt is to our many colleagues (and their students) who, like us, wanted to try an alternative to what they were using and made the decision to change. Needless to say, without this support we would not be publishing a third edition!

Our plan for developing the third edition began with 13 of our colleagues who had an interest in the book and regularly teach the introductory course. They used the second edition and kept detailed records of their experiences (as well as their students'). We integrated their many comments and recommendations throughout. These 13 hearty souls, to whom we are deeply indebted, are:

Jennifer R. Frazier <i>James Madison University</i>	Jason Lin (AIE review) <i>Northeast Missouri State University</i>
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Jim Keys <i>Florida International University</i>	Tom Zwirlein <i>University of Colorado, Colorado Springs</i>
David Kuipers <i>University of Missouri–Columbia</i>	

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California State University, Northridge

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Wichita State University

Adrian C. Edwards
Western Michigan University

Thomas H. Eysell
University of Missouri, St. Louis

Deborah Ann Ford
University of Baltimore

Darryl E. J. Gurley
Florida A&M University

John M. Harris, Jr.
Clemson University

Randy Jorgensen
University of Southern Maine

Delvin D. Hawley
University of Mississippi

Robert C. Higgins
University of Washington, Seattle

Steve Isberg
University of Baltimore

James M. Johnson
Northern Illinois University

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Mississippi State University

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University of Central Arkansas

Dubos J. Masson
Treasury Management Associates

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University of Notre Dame

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University of Texas, San Antonio

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Winona State University (Minnesota)

Pamela P. Peterson
Florida State University

George A. Racette
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Canisius College

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University of Illinois at Urbana-Champaign

Ricardo J. Rodriguez
University of Miami

Martha A. Schary
Boston University

Roger Severns
Mankato State University

Dilip K. Shome
Virginia Polytechnic Institute and State University

Neil W. Sicherman
University of South Carolina

George S. Swales, Jr.
Southwest Missouri State University

John G. Thatcher
University of Wisconsin-Whitewater

Harry Thiewes
Mankato State University

Michael R. Vetsuypens
Southern Methodist University

David J. Wright
University of Wisconsin-Parkside

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University of Illinois at Urbana-Champaign

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Throughout the development of this edition, we have taken great care to discover and eliminate errors. Our goal is to provide the best textbook available on the subject. We want to ensure that future editions are error free, and, to that end, we will gladly offer \$10 per arithmetic error to the first individual reporting it as a modest token of our appreciation. More than this, we would like to hear from instructors and students alike. Please write and tell us how to make this a better text. Forward your comments to: Dr. Brad Jordan, c/o Irwin Editorial–Finance, Richard D. Irwin, Inc., 1333 Burr Ridge Parkway, Burr Ridge, IL 60521.

Stephen A. Ross
Randolph W. Westerfield
Bradford D. Jordan

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*Note: Options and Leasing chapters are available at no extra charge to you. See your sales representative for further details.