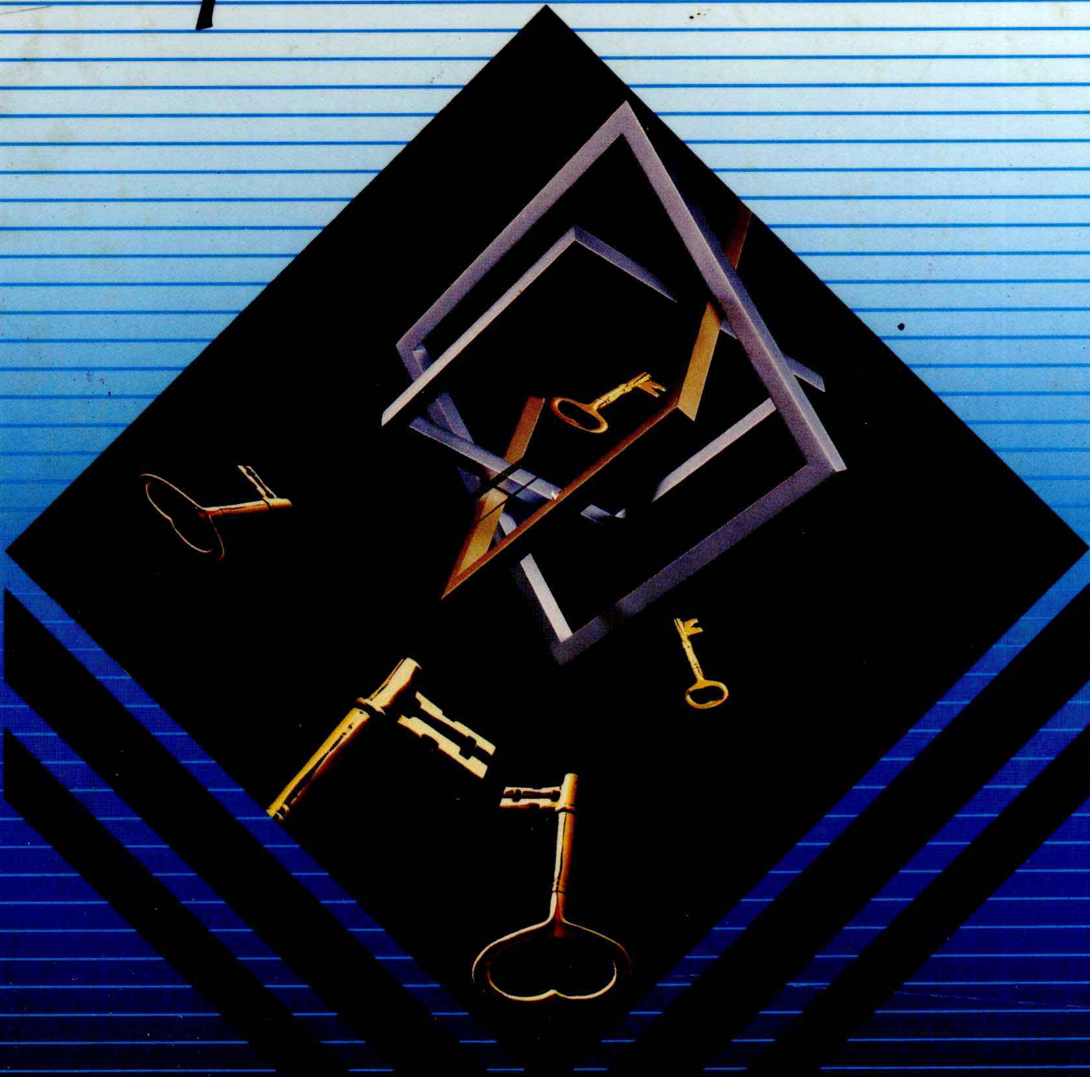
Corporate Finance



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Corporate Finance

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with 160 illustrations

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Preface

Teaching and practicing corporate finance in the late 1980s have become more challenging than ever before. The last 10 years have seen fundamental changes in financial markets and financial instruments. Scarcely a day goes by without an announcement in the financial press about such matters as takeovers, junk bonds, financial restructurings, and leveraged buyouts. Both the theory and practice of corporate finance have been moving ahead with uncommon speed, and our teaching must keep pace.

These developments place new burdens on the teaching of corporate finance. On the one hand, the changing world of finance makes it more difficult to keep materials up to date. On the other hand, however, the teacher must distinguish what is permanent from what is temporary to avoid the temptation to follow fads. Our solution to this problem is to emphasize the modern fundamentals of the theory of finance and to make the theory come to life with contemporary examples. All too often the beginning student of corporate finance views it as a collection of unrelated topics, which are unified largely because they are bound together between the covers of one book. Our aim is to present corporate finance as the working of a small number of integrated and powerful intuitions.

From our survey of existing introductory corporate finance textbooks, including the ones we have used, this commonsense approach does not seem always to have been followed. Despite the centrality of the concept of risk in finance, few if any of the textbooks fully incorporate the new advances in this area. The treatment of risk frequently comprises no more than a single chapter, with only passing references to new advances such as the arbitrage pricing theory (APT). Seldom is there an attempt to offer an internally consistent and self-contained treatment of the concept of risk. As a consequence, many textbooks get the essential intuitions of the capital asset pricing model (CAPM) and the APT completely confused.

A second problem we have found is that most introductory texts pay only lip service to net present value (NPV) as the organizing principle of corporate finance and stop short of organizing a text consistently around the principle. The most basic notion, that firms must use capital markets to measure the rates of return required by shareholders for new investments in risky projects, is seldom well understood by the new student. The relationships between capital markets and the firm tend to get lost in an overall mechanical approach to NPV.

How This Book Is Different

Aside from our general theme, *Corporate Finance* contains several distinctive features. Three are readily apparent: new material on capital markets; a self-contained, coherent discussion of risk; and attention to pedagogy.

THE NEW MATERIAL ON CAPITAL MARKETS

The first principle of corporate financial decision making is that a project or financing arrangement is worth accepting only if it is at least as desirable as the opportunities available to shareholders in the capital markets. In writing this book, we have attempted to highlight the important role of capital markets in corporate financial decision making. This had necessitated the addition of entirely new chapters such as Chapter 6, "Some Lessons from Capital Market History." In Chapter 6 we describe the statistical history of the U.S. capital markets from 1926 to 1986, and we draw several important lessons from them for financial managers. One important fact that emerges is that risky assets have experienced returns that are on the average higher than less risky ones. This gives us a starting point for determining the required return on risky assets.

Our emphasis on capital markets has also led us to recast conventional material in new contexts with new perspectives. Thus Chapter 3, "Financial Markets and Net Present Value: First Principles of Finance," presents an account of *why* the NPV rule is one that shareholders should force managers to use. This is a subject that is treated in some (but not all) introductory texts, but our chapter explains how individual shareholders and corporations can use capital markets so that they will agree on the NPV rule regardless of their time and risk preferences. It goes beyond the "black box" description that is without content.

In Chapter 12 we show the critical differences between capital markets and product and labor markets. These differences are important in understanding where NPV comes from. The chapter provides a crisp and clear idea of how efficient capital markets work. We point out that the firm will seek to find positive NPV from its decisions. There are many positive NPV projects in the product and labor markets; however, the capital markets don't provide as many opportunities for positive NPV.

COHERENT DISCUSSION OF RISK

Part III of this book is devoted to risk. We start with a detailed statistical description of the history of U.S. capital markets as a background for our discussion of risk and risk premiums. In Chapters 7 and 8 we describe three basic principles of risk:

1. Diversification
2. Systematic risk
3. Arbitrage

Our approach is to use the intuition of the arbitrage pricing theory. We describe the nature of systematic and unsystematic risk and how diversification eliminates unsystematic risks. We show that a security market line (SML) must emerge from an arbitrage equilibrium. The recasting of the SML with an arbitrage pricing intuition renders it far simpler to understand and teaches far more about its fundamental nature. Diversification and arbitrage are the key mechanisms by which equilibrium occurs. The instructor who is familiar with the CAPM should find that our approach closely parallels and simplifies his or her teaching methodology.

ATTENTION TO PEDAGOGY

We see three keys to good pedagogy in a corporate finance text: (1) extensive examples, questions, and problems; (2) consistency in the level of difficulty; and (3) conceptual coherence.

There is room for both easy and hard textbooks in corporate finance. Of course, good textbooks should not shift haphazardly from hard to easy, and vice versa. Our approach is to write a text that is consistently moderate in difficulty. Our book is designed for two audiences—the MBA candidate and undergraduate. Therefore our objective has been to write a book with sufficient flexibility to be taught to both of these audiences. We have written the core material on value, risk, capital budgeting, and capital structure at a consistently moderate level of difficulty. Some chapters can be omitted without loss of continuity for a more introductory-level treatment. More specialized chapters, such as those on options, warrants and convertibles, and mergers and acquisitions, may be covered in more advanced courses.

We have found that many textbooks lack conceptual coherence. We attempt to use consistently the intuitions of arbitrage, net present value, efficient markets, and options throughout the book. However, we have also attempted to enliven some of the conceptual material by including the recent results of modern financial research. This research has at times raised more questions than answers; therefore we have presented some of the puzzles, anomalies, and unresolved questions of corporate finance. We hope that this will pique the curiosity of the bright students and motivate them to work harder to grasp the complexities of modern corporate finance.

Learning Aids

Getting the theory and concepts correct and up-to-date is only one phase of developing a corporate finance text. To be an effective teaching tool the text must present the theory and concepts in a coherent way that can be easily learned. With this in mind, we have included several study aids:

1. *Concept Questions*. After each major section in a chapter is a unique learning tool called "Concept Questions." Concept Questions point to essential material and allow students periodically to test their recall and comprehension.
2. *Key Terms*. Students will note that important words are highlighted in **boldface** type the first time they appear. Additionally, they are listed at the end of the chapter along with the page number on which they appear. New words appear in *italics* when they are first mentioned. Both key terms and new words are defined in the glossary at the end of the text.
3. *Demonstration problems*. Throughout the text we have provided worked-out sample problems to give students a clear understanding of the logic and structure of the solution process.

4. *Boxed material.* Key equations and concepts are summarized and set apart in boxes for easy reference.
5. *Problems sets.* Because problems are so critical to a student's learning, we have included an extensive array of class-tested problem sets at the end of each chapter. The problem sets are graded for difficulty, moving from easier problems intended to build confidence and skill to more difficult problems designed to challenge the enthusiastic student. Additionally, we have tried to make the problems in the critical "concept" chapters, such as those on value, risk, and capital structure, challenging and interesting. We provide answers to selected problems at the end of the book.
6. *Enumerated chapter summaries.* At the end of each chapter a numbered summary provides a quick review of key concepts in the chapter.
7. *Suggested Readings.* Each chapter is followed by a short, annotated list of books and articles to which interested students can refer for additional information.

Supplements

As with the text, developing supplements of extraordinary quality and utility was the primary objective. Each component in the supplements package underwent extensive review and revision. As a result, the package contains several features not offered with any other corporate finance text.

INSTRUCTOR'S MANUAL

Conversion Notes, unique to our manual, contain information that details how our book differs in coverage and terminology from other major texts so that you can adapt your present lecture notes.

Lecture Notes include ideas or comments on context or teaching, up-to-date practical examples, selected equations, recommended readings, and suggestions for handouts and transparencies to use with your lectures.

Supplemental Problems in addition to those in the text are offered for use during lectures or for testing.

Answers to the text problems and Concept Questions are provided.

A *Computer Section* describes how to use the software offered free to adopters of the text. It offers suggestions on classroom use of the 17 Lotus 1-2-3 worksheets and tips on good spreadsheet techniques.

TEST BANK

Prepared by Glenn N. Pettengill and Brad Jordan, both of the University of Missouri at Columbia, the Test Bank includes 700 multiple-choice questions—approximately 25 per chapter.

MICROTEST II

All 700 questions from the Test Bank are included in a computerized version. Microtest allows you to edit, scramble, add, or delete questions. It is available in IBM format.

STUDY GUIDE

Written by Brad Jordan of the University of Missouri at Columbia, the Study Guide is a direct companion to the text. It is uniquely designed to involve the student in the learning process. Each chapter contains Learning Objectives, Chapter Highlights in narrative form, Key Terms, 10 problems and worked-out solutions, and 25 fill-in Concept Text questions and answers.

SOFTWARE

Provided free to adopters, the software consists of 17 Lotus 1-2-3 spreadsheets. Developed by Hugh McLaughlin of Bentley College, the software provides additional review of concepts and refines students' spreadsheet techniques and skills for constructing simple models.

ACETATES

Over 100 acetates provide numerous worked-out solutions to problems as well as highlight key charts and tables.

The Intended Audience of This Book

Many years ago, when the authors were graduate students at Harvard and UCLA, there was only one course in corporate finance. This course was taught in different versions in both the undergraduate and MBA programs. This is no longer true. Although there are many variations at different schools, we have observed two general course sequences. Our book is designed to fit into both of these curriculum approaches.

The first is a two-semester (or quarter) sequence. The first course includes valuation, risk, capital budgeting, and capital structure. Long-term financing, financial planning (short-term and long-term), mergers and acquisitions, and special topics are covered in the second semester. Sometimes capital budgeting, risk, and capital structure are taught again in the second semester but at a higher level than in the first semester.

The second course sequence that we have observed is a core course and a case course with special topics. The core course covers valuation, risk, capital budgeting, and capital structure in the first semester; the core material is reinforced in a case course in the second semester. In addition, new topics in long-term financing, international finance, and mergers and acquisitions usually are covered.

This book has been written for the introductory courses in corporate finance at the MBA level and for advanced courses in many undergraduate programs. Some instructors will find our text appropriate for the introductory course at the undergraduate level as well.

We assume that most students either will have taken or will be concurrently enrolled in courses in accounting, statistics, and economics. This exposure will help students understand some of the more difficult material. However, the book is self-contained, and a prior knowledge of these areas is not essential. The only mathematics prerequisite is basic algebra.

Acknowledgments

This book was written and produced over 3 years, and many people have helped us in many different ways. The reviewers of our manuscript and supplements, selected by Times Mirror/Mosby, made numerous excellent and useful suggestions, many of which have been incorporated. We extend our thanks and gratitude for their countless contributions and insights.

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Stephen A. Ross
Randolph W. Westerfield

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