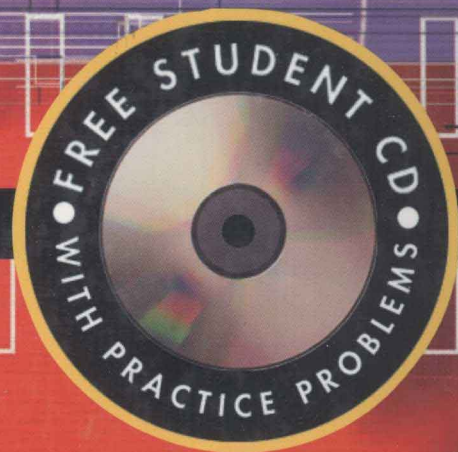


# FOUNDATIONS OF CORPORATE FINANCE

SECOND EDITION

<http://hickman.swcollege.com>



HICKMAN • HUNTER • BYRD

edition **2**

# **FOUNDATIONS OF CORPORATE FINANCE**

**Kent A. Hickman**  
Gonzaga University

**Hugh O. Hunter**  
San Diego State University

**John W. Byrd**  
Fort Lewis College

**SOUTH-WESTERN**  
  
**THOMSON LEARNING**

*Foundations of Corporate Finance, 2e*, by Kent A. Hickman, Hugh O. Hunter, and John W. Byrd

Vice President/Publisher: Jack W. Calhoun  
Acquisitions Editor: Michael B. Mercier  
Developmental Editor: Andrew McGuire  
Marketing Manager: Julie Lindsay  
Production Editor: Kara ZumBahlen  
Manufacturing Coordinator: Charlene Taylor  
Internal Design: Jennifer Lambert  
Cover Design: Michael H. Stratton  
Cover Image: PhotoDisc  
Production House: Pre-Press Co., Inc.  
Compositor: Pre-Press Co., Inc.  
Printer: Quebecor World, Taunton

COPYRIGHT ©2002 by South-Western, a division of Thomson Learning. The Thomson Learning logo is a registered trademark used herein under license.

**All Rights Reserved.** No part of this work covered by the copyright hereon may be reproduced or used in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or information storage and retrieval systems—without the written permission of the publisher.

Printed in the United States of America  
1 2 3 4 5 04 03 02 01

For more information contact South-Western, 5101 Madison Road, Cincinnati, Ohio, 45227 or find us on the Internet at <http://www.swcollege.com>

For permission to use material from this text or product, contact us by

- telephone: 1-800-730-2214
- fax: 1-800-730-2215
- web: <http://www.thomsonrights.com>

**Library of Congress Cataloging-in-Publication Data**

Hickman, Kent A.

Foundations of corporate finance / Kent A. Hickman, Hugh O. Hunter, John W. Byrd.—Ed. 2.

p. cm

Includes index.

ISBN 0-324-01639-5 (package, text and CD)

ISBN 0-324-12796-0 (text only)

ISBN 0-324-12055-9 (CD only)

1. Corporations—Finance. I. Hunter, Hugh O. II. Byrd, John W. III. Title.

HG4026.H48 2001

658.15—dc21

00-067915



# ABOUT THE AUTHORS

Professors Hickman, Hunter, and Byrd have over 45 years experience teaching finance. Their research appears in more than 15 journals including the *Journal of Financial Economics*, *Financial Management*, the *Journal of Applied Corporate Finance*, *Financial Practice and Education*, the *Financial Review*, *Accounting Horizons*, the *Journal of Economic Behavior and Organization*, the *Journal of Portfolio Management*, *Financial Analysts Journal*, and the *Journal of the Royal Statistical Society*.

**Kent A. Hickman** is a professor of finance at Gonzaga University. He earned a Ph.D. in finance at Washington State University after completing an M.S. in applied statistics at the University of Northern Colorado. His B.A. in mathematics is from California State University at San Bernardino. Before pursuing a doctorate, Professor Hickman worked for five years as an investment analyst. He also taught high school mathematics and coached basketball for six years. In his spare time, Kent enjoys sports, reading history, and fishing with his two daughters.

**Hugh O. Hunter** is a visiting professor of finance at San Diego State University and professor emeritus from Eastern Washington University. Professor Hunter's D.B.A. was earned at the University of Southern California where he majored in finance and business economics. He also holds an M.B.A. from California State University at Long Beach and his bachelors degree in business is from the University of Maryland. Prior to twenty years as a university professor, Dr. Hunter spent four years in the aerospace industry and served in the U.S. Army. Hugh also enjoys traveling and visiting his son and daughter who are alive and well in Hollywood.

**John W. Byrd** directs the honors program at Fort Lewis College in Durango, Colorado. He also teaches finance for MBA students at the University of Colorado at Denver via the Internet. With Kent Hickman, John teaches international finance several weeks a year in Rouen, France. Dr. Byrd's Ph.D. in finance is from the University of Oregon. He also has a Master's degree from Yale University and a B.A. in Mathematics from Fort Lewis College. A former instructor and course director for the Colorado Outward Bound School, John and his family often spend time in the mountains near Durango skiing, camping, hiking, and climbing.

# PREFACE

## A MESSAGE TO STUDENTS

This is a book that we wanted to write. Probably all teachers at one time have said, “If I could write a book, this is how it would be.” This is how we approached this book. Collectively, we have been teaching finance for over 40 years. That is not very remarkable, but it is long enough to form some opinions on how finance should be taught. This book represents a melding of our opinions.

In writing this book, we tried hard to avoid the “baby food syndrome”. Some years ago, it was revealed that baby food manufacturers were putting salt and MSG into baby food so that the taste would appeal to the mother, who was, after all, making the purchasing decision. This is an example of an agency problem, one that we will deal with in the book. In this case, the mother was acting as a purchasing agent for the baby. Similarly, textbooks are meant to be read by students, but professors make the purchasing decision. It is not unreasonable, then, for textbooks to be “flavored” to appeal to professors.

We have tried our best to appeal to students. We have kept the book as short and free from clutter as possible. We have sought to explain the central ideas of finance in plain language. At the same time, we hope to pique your interest in this important, exciting, and challenging field.

You will find the book laced with illustrations and examples. They are there to help you understand and retain the most important ideas. Some are interesting, some are preposterous and some are just funny. They remind us that humor is present even in a science that deals with that most somber of commodities—money.

Most importantly, we have tried to provide a faithful representation of the field of finance. We have stripped away most of the accounting and statistics, and have replaced it with the important ideas of modern finance, most of which are younger than many of your professors. The following excerpt is from the last chapter, and sums up our commitment to this book.

*In the first edition, we set out to write the perfect text. Then we scaled back our goal to merely writing the best finance text. Then, near the end with deadlines near, we settled for just a good text. Now, we have been given a second chance to produce something better than good. We sincerely hope that we have provided you with a solid foundation in finance. For many, this will be your only finance course. We would like to hear from you in about two years, to find out how many of these basic ideas you still retain. If you still remember the most important ones, we will have succeeded. If you don't, we will have to do better.*

You don't have to wait two years to contact us. We welcome all corrections, comments, praise and criticism. You may send an email via our web site, or you may write or phone:

Dr. Kent A. Hickman  
School of Business Administration  
Gonzaga University  
Spokane, WA 99258  
(509) 323-3442

## A MESSAGE TO INSTRUCTORS

Our aim was to write this book for the students. We assume that they come to finance with at least a vague knowledge of accounting, economics, and elementary statistics. We also assume that they have little innate desire to study finance. Therefore, rather than taking an encyclopedic approach, we develop and reinforce the essential ideas of finance. By providing a coherent and logical approach to the subject, we hope to sustain student interest in finance, build on their background, and appeal to their common sense. The financial balance sheet is a reference point for the discussion of these ideas, and each of the important ideas is explained in terms of its contribution to firm value.

Not every idea in finance is intuitive, but many are. Therefore, where possible, we appeal to students' common sense to understand the logic underlying the idea. We also lace the text with examples, some fictional and some real. We stress throughout that finance is not an abstraction, but an agglomeration of ideas that have value in the conduct of everyday business and everyday life. We hope that this approach will not only make it easier for your students to learn finance, but also easier for you to teach it. Imagine an introductory finance class in which the students learn the essential ideas with relative ease and approach the class with enthusiasm. Such a class may be as mythical as a company that maximizes wealth, but we hope that this book at least moves the teaching of finance in that direction, while at the same time maintaining the integrity of the subject matter. We entered this project with the assumption that it was possible to write a book that was both appealing and rigorous. As you guide your students through the book, you will doubtless have ideas that we could share with other instructors and that we can include in subsequent editions. Before these ideas escape, send us a note or an e-mail. We promise to respond, although that is the only extrinsic reward we can offer.

### DISTINGUISHING FEATURES OF THIS TEXT

- 1** *The theme of value creation is continued and reaffirmed throughout:*  
In the first chapter, we develop the theme of value creation and continue that throughout the text. The ideas developed in each chapter are linked to the firm's central mission of creating value for its shareholders.
- 2** *The Financial Balance Sheet:* A central construct, the Financial Balance Sheet is incorporated throughout the text to provide continuity between the current topic and value creation. The Financial Balance Sheet has several appealing attributes:
  - It is analogous to, and contrasts with, the accounting balance sheet, an already-familiar concept to beginning finance students. This allows the instructor to directly confront one major source of confusion for students: accounting versus financial data and analysis.
  - It is visual and intuitive.
  - It can be used to visually characterize most financial decisions.

- 3** *Conceptual and intuitive:* Since our first edition promised to be intuitive in the mid-1990s, we note that many books have staked their own claims in this regard. You might try, as we have, to read excerpts from these books to see if you agree. In our opinion, far too many books are a compendium of recipes or formulas into which students plug numbers (or at least students view them as such, and the pervasiveness of hand-held financial calculators has reinforced this view). Missing from this approach is an understanding of how profits are earned, prices are set, and investment and financing decisions are made. We believe that students who understand the underlying concepts will not only be better able to apply the tools, but will also know when the tools are not appropriate.

Examples of this approach include a thorough discussion of where positive net present value projects might be found. Typically, NPV is presented as the output of a black-box formula. We believe that students should think about entry barriers or competitive advantages that will generate positive NPVs. Moreover, students should realize that profitable cash flows are unlikely to continue indefinitely. Entry barriers, firms exploiting competitive advantages, and the transitory nature of project cash flows are included in the coverage of capital budgeting, Chapter 7.

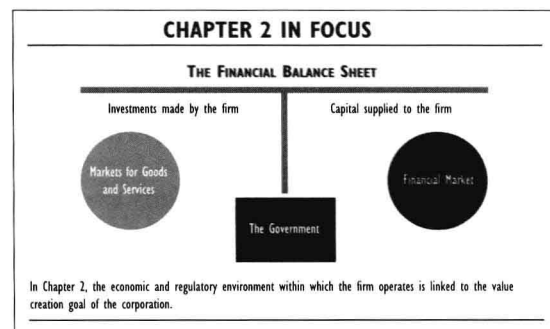
A second example is the treatment of time value. In our view, it is not enough to present students with formulas and keystrokes. In Chapter 4, we develop the formulas logically. We hope that by doing this we are giving them a few basic tools that they can adapt to solve any time value problem.

To foster the development of this intuitive understanding of financial decision making, we incorporate the following features:

- The coherent structure of the text enables the development of topics in a logical fashion and provides linkages between these topics.
- Most chapters begin with a financial balance sheet graphically highlighting the topic covered in the chapter.
- Each chapter contains an introduction that links the chapter to those preceding and following. These reinforce the structure of the text and impart to students a feel for where they're going and why they're making the journey.

- 4** *Finance in the Firm:* Our clients—businesses and students—are doing their best to get us to reduce our compartmentalized approach to teaching. They want us to explain how the various “disciplines” fit together into the coherent whole of business. It is difficult to not agree with this more eclectic approach; however most of us struggle to break out of our compartments. We have attacked this problem in two ways.

First, we have our *Finance In the Firm* boxes. Secondly, we have created Chapter 15 that shows how financial models and paradigms are applied to a wide variety of business activities.



**FINANCE IN THE FIRM**

**ACCOUNTING STATEMENTS AND THE FINANCIAL BALANCE SHEET**

Profitability and show how ratios can measure a company's profitability. Explain solvency and show how ratios can measure a company's solvency. Describe leverage and show how it changes returns to stockholders. Explain some limitations of ratio analysis. Profitability and show how ratios can measure a company's profitability. Explain solvency and show how ratios can measure a company's solvency. Describe leverage and show how it changes returns to stockholders. Explain some limitations of ratio analysis. Profitability and show how ratios can measure a company's profitability. Explain solvency and show how ratios can measure a company's solvency. Describe leverage and show how it changes returns to stockholders. Explain some limitations of ratio analysis.

- 5** *Selecting and packaging material for a single term course:* The text covers all the important topics of corporate finance, but some just briefly. We have found that many chapters of lengthy texts are not covered in a one-term introductory course. For example, chapters on bankruptcy, international finance, and small business management are often ignored. Class time devoted to topics such as cash management, inventory management, and financial ratios is usually much less than text coverage. We have designed a text that comes closer to matching the material we actually teach in our courses. For example, we summarize the important ideas of working capital management in a single chapter (Chapter 12). We feel that this approach makes it more likely that working capital will be included in the introductory course.
- 6** *International finance:* There is no chapter on international finance. Instead, we have integrated this topic into the text, indicated by an icon. For example, international capital markets are included in Chapter 6, and international corporate investing is included in Chapter 9. In addition, there are numerous references to international finance throughout. Covering international finance in this manner produces two benefits. First, it ensures that this important topic is covered, at least minimally. Secondly, it sends a signal to students that international finance is not separate from finance itself.
- It is our belief that one cannot be informed about capital markets without understanding a little of the global markets; and that corporate investing must include consideration of foreign product markets and investment opportunities.
- 7** *Early emphasis on market value and cash flows:* Dealing with these topics in the early chapters establishes a link between accounting and finance and clarifies these important distinctions. Market versus book value is covered in Chapter 1. Cash flows versus earnings are covered in Chapter 3.
- 8** *Real options:* Real options are introduced in the text because options contracts are valuable and integral to many investment decisions. We introduce options in Chapter 2 and real options in Chapter 7.
- 9** *Capital markets coverage:* In keeping with the limitations of a single term course, we have a single chapter on capital markets. In it, we introduce the important ideas of portfolios, risk, and return. We try to impress upon the students that the essence of these ideas is not difficult to grasp and that they really are important. Understanding the basic nature and function of capital markets prepares finance students for more thorough coverage in later courses; and, we hope, we leave non-majors with a few useful ideas that they may apply in their personal, if not their professional, lives.





- 10** *A different approach to financial analysis:* In addition to ratio analysis, Chapter 13 covers the broader issues of evaluating corporate performance, including the need to search for important performance clues and to temper analysis with judgment.
- 11** *Capstone chapters:* This may be the only text with three capstone chapters. Corporate restructuring (Chapter 14) applies financial principles from other chapters to this important and interesting topic. Finance through the firm (Chapter 15) shows how finance is broadly applied throughout the firm. And the epilogue (Chapter 16) includes a solved case that illustrates financial decision making in a business setting.
- 12** *Ethical issues:* Ethical issues, indicated by an icon and integrated throughout, present some of the ethical dilemmas facing financial managers and raise sensitivities to these issues. This treatment of ethics is consistent with the AACSB's recommendation for coverage of these issues.
- 13** *Pedagogical aids:* In addition to those already mentioned, there are numerous other features of the text that are designed to assist the process of learning. They are:
- key terms highlighted in each chapter and listed at the end of the chapters
  - calculator solutions to time value problems presented in Chapter 5
  - Internet addresses and descriptions in the margins, directing students to Web sites that expand on the material being presented
  - Margin notes offer helpful tips and summaries of key points in the chapter
  - extensive end-of-chapter questions and problems, including solved demonstration problems and Excel™ problems
  - end-of-chapter Internet exercises for further research
  - a glossary of key terms, with definitions, at the end of the text
  - solutions to selected end-of-chapter problems in a text appendix



[www.finance.com](http://www.finance.com)

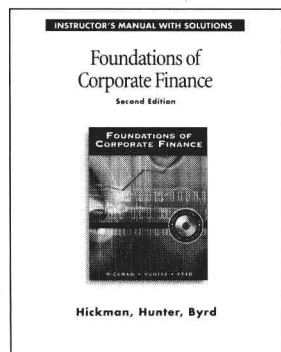


## CHANGES TO THE SECOND EDITION

The first edition of this text was, in several important ways, different from most existing introductory texts. It was brief, conceptual, appealed to students' intuition and pulled together the disparate parts of finance via the financial balance sheet. We have maintained those key features in this new edition. Users of the first edition will note that we have combined Chapters 2 and 3 into a single chapter that includes an introduction to valuation and the effect of markets and government on the firm. We have also collapsed Chapters 7 and 8 on capital markets to a single Chapter 6. And, of course, we have added a new Chapter 15 on finance and the firm. To emphasize the financial balance sheet as a tool that ties together the various parts of finance, we placed at the beginning of each chapter a financial balance sheet that graphically highlights the topic covered in that chapter.

In addition to these changes, as mentioned in the “pedagogical aids” list above, we have added margin URLs and Internet exercises. Calculator keystrokes can now be found in the time value of money chapter, and ethical and global issues have been identified with icons. New “Finance In the Firm” boxes highlight the text’s interdisciplinary perspective. A student CD has also been created to help students master the course.

## ANCILLARY MATERIALS



**Instructor's Manual with Solutions:** This includes a chapter summary, learning objectives and detailed chapter outlines with teaching tips. Solutions are provided for all end-of-chapter questions and problems.

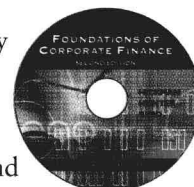
### Instructor's Resource CD-ROM with ExamView Testing Software:

The Instructor's CD is available to instructors and contains all supplements in electronic format plus the ExamView Testing Software. ExamView is a computerized testing program that contains all of the questions in the printed test bank and is an easy-to-use test creation software compatible with Microsoft Windows. Instructors can add or edit questions, instructions, and answers; and select questions by previewing them on the screen, selecting them randomly, or selecting them by number. Instructors can also create and administer quizzes online, whether over the Internet, a local area network, or a wide area network.

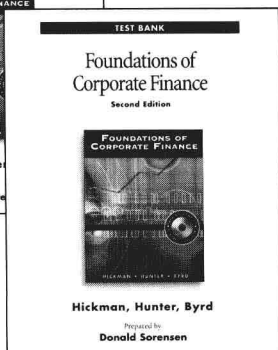
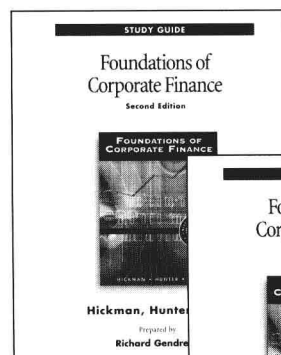


**PowerPoint™:** A PowerPoint Slide Presentation package, prepared by Ted Fu of Stanford University, is offered to enhance lecture materials and presents the key topics in each chapter in an electronic format.

**Student CD-ROM:** A Student CD-ROM comes free with every new copy of the text. It is designed to help students master the Corporate Finance course. The following are included on the CD: General Calculator Keystrokes, Financial Tables, Quizzes, Glossary, PowerPoint Lecture Slides, Spreadsheet Templates, and The Problem Bank: Practice Problems for Financial Management.



The Problem Bank contains over 400 finance problems with solutions, divided into seven major categories such as Time Value of Money, Capital Budgeting, Risk and Return, etc. Solving these problems requires the use of a financial calculator and is intended to supplement the text's end-of-chapter problems, thereby providing additional practice for students in their preparation of homework assignments and for exams.



**Study Guide:** Written by Richard Gendreau of Bemidji State University, the Study Guide includes an outline and a variety of practice questions. Alongside the usual multiple choice, true-false and fill-in questions, there are also essays, problems, and an Internet exercise, to match virtually any testing method.

**Test Bank:** Donald Sorensen of the University of Wisconsin-Whitewater, prepared this ancillary. The Test Bank has been expanded for this edition to include short answer and essay questions along with true-false, multiple choice, and problems.

**Web Site:** <http://hickman.swcollege.com> is the address of the Web site that supports *Foundations of Corporate Finance*. The site provides teaching resources, learning resources, and an Interactive Study Center with key concepts, key terms, online quizzes, Internet applications, current updates, links to relevant finance sites, and many more features.

**Excel™ Templates:** These templates are customized to the end-of-chapter problem sets. They are easy to use, yet are relatively simple in design. Students are encouraged to use these as models for enhancing their own spreadsheet programming skills. Accompanying the spreadsheets is a small data set containing returns on the stocks of the 20 companies featured in Chapter 6. Students may use this data to solve capital market problems.



**Infotrac® College Edition:** Free with each new text, Infotrac allows you to package an entire online library of articles from hundreds of journals such as *Fortune*, *Journal of Finance*, *Money*, and *U.S. News and World Report* with any new textbook. It offers a database updated daily, full-length articles, and keyword searches that quickly and efficiently scan the entire database.



**WebTutor™:** WebTutor is an interactive, web-based, student supplement on WebCT or Blackboard that harnesses the power of the Internet to deliver innovative learning aids that actively engage students. Instructors can incorporate WebTutor as an integral part of the course, or the students can use it on their own as a study guide. Benefits to students include automatic and immediate feedback from quizzes and exams; interactive, multimedia rich explanation of concepts; on-line exercises that reinforce what they've learned; flashcards that include audio support; and greater interaction and involvement through on-line discussion forums.

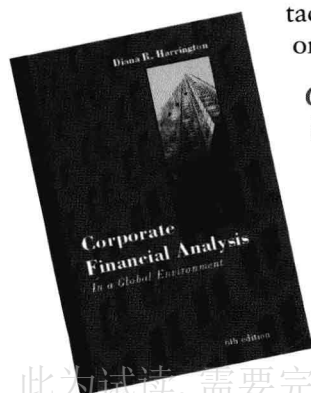
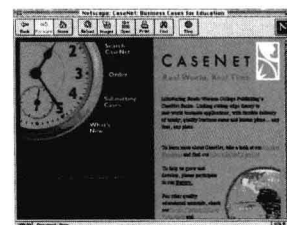


## ADDITIONAL ANCILLARY MATERIALS

**Principles of Finance: An Interactive Approach CD-ROM** by Steve Wyatt, puts the user in total control of this innovative learning tool that comes complete with multimedia tutorials, interactive quizzes, simulations, a sophisticated financial calculator, links to online finance resources, and more. For more information, contact your Thomson Learning/South-Western sales representative, or visit <http://wyatt.swcollege.com>

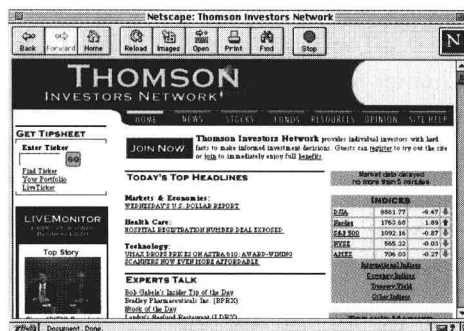
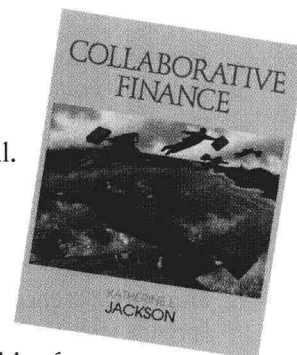


**CaseNet® Internet Resources** bring the practical lessons of real business to your classroom with our premier teaching cases, all based on data from business and industry. Cases help students make the connection between theory and practice, build analytical skills, and solve realistic problems. For more information, contact your Thomson Learning/South-Western sales representative or visit CaseNet at <http://casenet.thomsonlearning.com>



**Corporate Financial Analysis in a Global Environment**, by Diana Harrington. This paperback text emphasizes the financial concepts and tools essential for understanding fundamental business decisions. Harrington uses current examples of actual business situations to demonstrate how financial tools, concepts, and theories can be used by managers to create value through improved financial decision making.

*Collaborative Finance*, by Katherine Jackson. Enhance the learning experience with this workbook, which introduces the team approach into finance education and offers a better understanding of why and when it is appropriate and beneficial. This book provides the resources necessary to effectively implement a variety of team projects covering the major topics of introductory finance classes.



Thomson Investors Network is the leading provider of Internet-based, online financial information, offering individual investors a wealth of information and tools needed to make informed investment decisions. A portfolio tracker, live stock quotes, business news, a variety of company and industry reports, market analysis and commentary, and more are available at the site. Instructors using this text receive a complimentary subscription, and their students can subscribe at a deeply discounted rate. Contact your Thomson Learning/South-Western representative for details. Meanwhile, visit <http://www.thomsoninvest.net> for a preview.

## ACKNOWLEDGMENTS

Reviewers are especially crucial for a book that takes a different approach to teaching finance. Our reviewers had, first, to sanction our approach, and then force us to deliver on our promises. When we went astray, they let us know. Most of all, they were a wonderfully supportive group, providing us with countless suggestions, exposing our lapses, and telling us when we got it right.

Thomas R. Anderson  
*Babson College*

John Aulerich  
*Syracuse University*

Michael L. Austin  
*University of Nevada,  
Reno*

Dean Baim  
*Pepperdine University*

Stephen L. Beach  
*Loyola Marymount  
University*

Michael Becker  
*Valparaiso University*

Omar Benkato  
*Ball State University*

Robert Boldin  
*Indiana University of  
Pennsylvania*

Michael T. Bond  
*Cleveland State University*

Waldo L. Born  
*Eastern Illinois University*

Robin J. Brenner  
*The University of Arizona*

Natalie Chieffe  
*Ohio University*

Raymond A. K. Cox  
*Central Michigan  
University*

Mike Cudd  
*Southeastern Louisiana  
University*

William Dare  
*Southwest Texas State  
University*

Dennis Debrecht  
*Carroll College*

Barry Doyle  
*University of San Francisco*

John Dunkelberg  
*Wake Forest University*

Stan Eakins  
*East Carolina University*

R. M. Eldridge  
*Southern Connecticut State  
University*

John W. Ellis  
*Colorado State University*

Suzanne Erickson  
*Seattle University*

Cheri Etling  
*The Wichita State  
University*

David Fewings  
*Western Washington  
University*

Deborah Ford  
*University of Baltimore*

Satyananda Gabriel  
*Mt. Holyoke College*

Manoj Gupta  
*The Wichita State  
University*



Robert J. Hendershott <i>Santa Clara University</i>	Lalatendu Misra <i>University of Texas at San Antonio</i>	Donald E. Sorensen <i>University of Wisconsin-Whitewater</i>
Stan Hoi <i>Rochester Institute of Technology</i>	Scott Moore <i>John Carroll University</i>	Joseph V. Stanford <i>Bridgewater State College</i>
Gary L. Hoover <i>Jacksonville University</i>	James Musumeci <i>Southern Illinois University at Carbondale</i>	David Y. Suk <i>Rider University</i>
Gow-Cheng Huang <i>Alabama State University</i>	Thomas Niles <i>Johnson State College</i>	Y. Elizabeth Sun <i>San Jose State University</i>
David C. Ketcham <i>Bryant College</i>	Henry R. Oppenheimer <i>The University of Rhode Island</i>	John A. Swiger <i>Our Lady of the Lake University</i>
Kashi Khazeh <i>Salisbury State University</i>	R. Daniel Pace <i>Valparaiso University</i>	Lawrence S. Tai <i>Loyola Marymount University</i>
James D. Keys <i>Florida International University</i>	Dan Page <i>Auburn University</i>	Gary Tallman <i>Northern Arizona University</i>
Siva Krishnan <i>Cameron University</i>	Glenn Pettengill <i>Emporia State University</i>	J. C. Thompson <i>Eastern Kentucky University</i>
David A. Kunz <i>Southeast Missouri State University</i>	Edward L. Prill <i>Colorado State University</i>	Bijesh Tolia <i>Chicago State University</i>
Reinhold P. Lamb <i>The University of North Carolina at Charlotte</i>	Joseph Reising <i>California State University-Fullerton</i>	Amjad Waheed <i>East Tennessee State University</i>
David Louton <i>Bryant College</i>	Diane Schooley <i>Boise State University</i>	Joe Walker <i>University of Alabama-Birmingham</i>
Robert A. Lutz <i>Weber State University</i>	J. Allen Seward <i>Baylor University</i>	Donald Wort <i>California State University-Hayward</i>
Yulong Ma <i>California State University</i>	Bipin Shah <i>University of Nebraska at Omaha</i>	Mark Wrolstad <i>Winona State University</i>
Lee E. McClain, Jr. <i>Western Washington University</i>	Sudhir Singh <i>Frostburg State University</i>	Thomas J. Zwirlein <i>University of Colorado-Colorado Springs</i>
Ginette McManus <i>Saint Joseph's University</i>	Ira Smolowitz <i>American International College</i>	

We owe special thanks to the people at South-Western, who steered us through the long and difficult process of making a book. In particular, we wish to recognize Kara ZumBahlen, production editor, Julie Lindsay, marketing manager, and Thomas Sigel, who shepherded the book through its early stages. First among equals is our development editor, Andrew McGuire, who was a delight to work with, and who, through judicious and good natured prodding, kept the project on schedule.

In the preface to the first edition, we reported that the three of us survived this seemingly interminable project with friendships and marriages intact. Now, both have survived a second edition, due, in no small measure, to our wives—Gini, Maureen and Shere. To them, we again dedicate this book.

# CONTENTS IN BRIEF

	<b>PREFACE</b>	<b>XIII</b>
<b>1</b>	<b>A FINANCIAL MODEL OF THE CORPORATION</b>	<b>1</b>
<b>2</b>	<b>MARKETS, VALUE, AND THE FIRM</b>	<b>25</b>
<b>3</b>	<b>ESTIMATING CASH FLOWS</b>	<b>52</b>
	<b>Appendix 3 CONSTRUCTING A PRO FORMA BALANCE SHEET</b>	<b>96</b>
<b>4</b>	<b>TIME IS MONEY</b>	<b>100</b>
	<b>Appendix 4A SUMMING A GEOMETRIC SERIES AND DERIVATION OF TIME VALUE FORMULAS</b>	<b>132</b>
	<b>Appendix 4B SOLVING TIME VALUE OF MONEY PROBLEMS WITH A FINANCIAL CALCULATOR</b>	<b>135</b>
<b>5</b>	<b>TIME VALUE APPLICATIONS: SECURITY VALUATION AND EXPECTED RETURNS</b>	<b>137</b>
<b>6</b>	<b>RISK AND RETURN IN THE CAPITAL MARKETS</b>	<b>158</b>
	<b>Appendix 6A AN INTERNATIONAL PERSPECTIVE</b>	<b>203</b>
	<b>Appendix 6B COVARIANCE AND CORRELATION</b>	<b>207</b>
	<b>Appendix 6C DETERMINING BETA FROM REGRESSION ANALYSIS</b>	<b>208</b>
<b>7</b>	<b>CAPITAL BUDGETING: INVESTING TO CREATE VALUE</b>	<b>210</b>
	<b>Appendix 7 ACCELERATED COST RECOVERY TAX DEPRECIATION SCHEDULES</b>	<b>257</b>
<b>8</b>	<b>COST OF CAPITAL</b>	<b>258</b>
	<b>Appendix 8 THE BEST PROXY FOR THE RISK-FREE RATE</b>	<b>283</b>
<b>9</b>	<b>RISK, INFLATION, AND THE CORPORATE CAPITAL BUDGET</b>	<b>284</b>
	<b>Appendix 9 SENSITIVITY ANALYSIS USING A SPREADSHEET: TOPFLIGHT AIRLINES</b>	<b>317</b>
<b>10</b>	<b>CAPITAL STRUCTURE: RIGHT-HAND-SIDE DECISIONS AND THE VALUE OF THE FIRM</b>	<b>322</b>
<b>11</b>	<b>DIVIDEND POLICY: DISTRIBUTIONS TO SHAREHOLDERS</b>	<b>348</b>
<b>12</b>	<b>SHORT-TERM FINANCIAL MANAGEMENT</b>	<b>368</b>
<b>13</b>	<b>FINANCIAL ANALYSIS: EVALUATION OF CORPORATE PERFORMANCE</b>	<b>411</b>
	<b>Appendix 13 ETHICS AND FIRM VALUE</b>	<b>440</b>
<b>14</b>	<b>CORPORATE RESTRUCTURING: AN APPLICATION OF FINANCIAL TOOLS</b>	<b>442</b>
	<b>Appendix 14 NUMERICAL ANALYSES OF TWO RESTRUCTURINGS</b>	<b>474</b>
<b>15</b>	<b>FINANCE AND THE FIRM: CREATING VALUE AND IMPROVING DECISION MAKING THROUGH THE FIRM</b>	<b>483</b>
<b>16</b>	<b>EPILOGUE: THE JOURNEY THROUGH CORPORATE FINANCE</b>	<b>503</b>
	<b>APPENDIX A-1 THROUGH A-4</b>	<b>A-1</b>
	<b>ANSWERS TO ODD-NUMBERED PROBLEMS</b>	<b>P-1</b>
	<b>GLOSSARY</b>	<b>G-1</b>
	<b>INDEX</b>	<b>I-1</b>

# CONTENTS

## **PREFACE XIII**

## **I A FINANCIAL MODEL OF THE CORPORATION 1**

WHY CORPORATE FINANCE? 2

CORPORATIONS: PRODUCTS, BONDS, STOCKS, AND PEOPLE 3

THE FINANCIAL BALANCE SHEET 5

THE LEFT-HAND SIDE OF THE FINANCIAL BALANCE SHEET 5 • THE  
RIGHT-HAND SIDE OF THE FINANCIAL BALANCE SHEET 6 • THREE MAJOR  
DISTINCTIONS: THE FINANCIAL BALANCE SHEET VERSUS THE ACCOUNTING  
BALANCE SHEET 9 • ACQUISITION OF CAPITAL 10

THE FINANCIAL GOAL OF THE CORPORATION 11

MANAGEMENT'S JOB 12 • CREATING WEALTH 13 • INFORMATION  
ASYMMETRY 14 • AGENCY COSTS 16 • COMPETING ORGANIZATIONAL  
FORMS 18

CORPORATIONS AND SOCIETY 20

SUMMARY 21

## **2 MARKETS, VALUE, AND THE FIRM 25**

GOVERNMENTS, CORPORATIONS, AND MARKETS 26

MARKETS AND EXCHANGE 28

SOME GENERAL COMMENTS ABOUT MARKETS 28 • MARKETS AND PRICES 29

CORPORATIONS AND MARKETS 30

FINANCIAL MARKETS 31

FINANCIAL SECURITIES, TRANSFERABILITY, AND LIQUIDITY 31 • PRIMARY  
AND SECONDARY MARKETS 33 • MONEY AND CAPITAL MARKETS 34 •  
FOREIGN FINANCIAL MARKETS 36 • COMPETITION AND INFORMATION IN  
THE FINANCIAL MARKETS 37 • INFORMATIONAL EFFICIENCY IN FINANCIAL  
MARKETS 38 • INFORMATIONAL EFFICIENCY AND PROFITS FROM  
INVESTING 41

PRODUCT MARKETS 42

PERFECT AND IMPERFECT COMPETITION 42

MARKET PARTICIPANTS AND VALUE 44

BEHAVIORAL FOUNDATIONS OF VALUE 44 • A SIMPLE VALUE FORMULA 46

SUMMARY 47

### **3 ESTIMATING CASH FLOWS 52**

THE IMPORTANCE OF CASH FLOW 53

THE CASH CYCLE OF A TYPICAL FIRM 54

A SIMPLE CASH CYCLE 54 • THE DAYS MODEL (THE CASH CONVERSION CYCLE MODEL) 57

WHY ACCOUNTING PROFITS AND CASH FLOWS DIFFER 61

REVENUE RECOGNITION 61 • THE MATCHING PRINCIPLE 62 •  
DEPRECIATION 63

TRANSLATING ACCOUNTING PROFITS INTO CASH FLOWS 65

ESTIMATING CASH FLOWS FOR A NEW PROJECT 69

AN INITIAL ESTIMATE 69 • EXAMPLE: ESTIMATING CASH FLOWS FOR THE  
STEAMING BEAN COFFEE CART 73 • SENSITIVITY ANALYSIS 75 •  
BEFORE-TAX AND AFTER-TAX CASH FLOWS 77

MORE ON THE CASH CYCLE: THE EFFECT OF GROWTH 77

WHEN FUTURE CASH FLOWS ARE NOT CERTAIN: COMPUTING EXPECTED CASH  
FLOWS 79

WHEN CASH FLOWS ARE NOT IN DOLLARS 80

SUMMARY 82

APPENDIX 3: CONSTRUCTING A PRO FORMA BALANCE SHEET 96

### **4 TIME IS MONEY 100**

THE TIME VALUE OF MONEY 101

COMPOUND AND SIMPLE INTEREST 103

THE TIME VALUE OF A SINGLE CASH FLOW 104

THE FUTURE VALUE OF A SINGLE CASH FLOW 105 • THE PRESENT VALUE  
OF A CASH FLOW 106 • EFFECTIVE ANNUAL PERCENTAGE RATE 110 •  
CONTINUOUS COMPOUNDING 111

VALUING MULTIPLE CASH FLOWS 112

PERPETUITIES 114 • ANNUITIES 115 • LOAN AMORTIZATION: AN  
ANNUITY APPLICATION 119

SUMMARY 121

APPENDIX 4A: SUMMING A GEOMETRIC SERIES AND DERIVATION OF TIME VALUE  
FORMULAS 132

APPENDIX 4B: SOLVING TIME VALUE OF MONEY PROBLEMS WITH A FINANCIAL  
CALCULATOR 135



## **5 TIME VALUE APPLICATIONS: SECURITY VALUATION AND EXPECTED RETURNS 137**

- AN APPLICATION OF SINGLE CASH FLOW FORMULAS: ZERO COUPON BONDS 139
- A PERPETUITY APPLICATION: PREFERRED STOCK 140
- COMMON STOCK: A GROWING PERPETUITY 141
- COMMON STOCK: NONCONSTANT GROWTH 142
- BONDS: AN ANNUITY AND A SINGLE CASH FLOW 144
  - BOND PRICES AND INTEREST RATES 145
- SOLVING FOR EXPECTED RETURNS 147
- SUMMARY 150

## **6 RISK AND RETURN IN THE CAPITAL MARKETS 158**

- RISK AND RETURN IN THE STOCK MARKET 160
  - WHAT WE CAN LEARN FROM THE CAPITAL MARKETS 160 • INVESTOR BEHAVIOR, PORTFOLIOS, AND RISK 161
- PORTFOLIO RISK AND RETURN 165
  - THE PORTFOLIO EFFECT 165 • RATES OF RETURN AND STANDARD DEVIATION 165 • CORRELATION 169 • CALCULATING THE STRENGTH OF THE PORTFOLIO EFFECT 171 • THE EFFECT OF CORRELATION ON RISK FOR TWO-STOCK PORTFOLIOS 172
- ADDING STOCKS TO A PORTFOLIO TO REDUCE RISK 177
- A BRIEF REVIEW OF PORTFOLIOS AND A FEW KEY POINTS 178
- THE RISK OF STOCKS IN PORTFOLIOS 180
  - STOCKS AND PORTFOLIOS 180 • CALCULATING STOCK RISK 180 • INTERPRETING BETA 183 • THE PAST AND THE FUTURE 184
- RISKS AND RETURN OF INDIVIDUAL SECURITIES 184
  - THE SECURITY MARKET LINE (SML) 184 • WHAT THE SML REALLY TELLS US 186 • STOCK MARKET GAMES 187 • THE CAPITAL ASSET PRICING MODEL 187 • THE DIVIDEND GROWTH MODEL AND THE CAPM 189
- SUMMARY 190
- APPENDIX 6A: AN INTERNATIONAL PERSPECTIVE 203
- APPENDIX 6B: COVARIANCE AND CORRELATION 207
- APPENDIX 6C: DETERMINING BETA FROM REGRESSION ANALYSIS 208