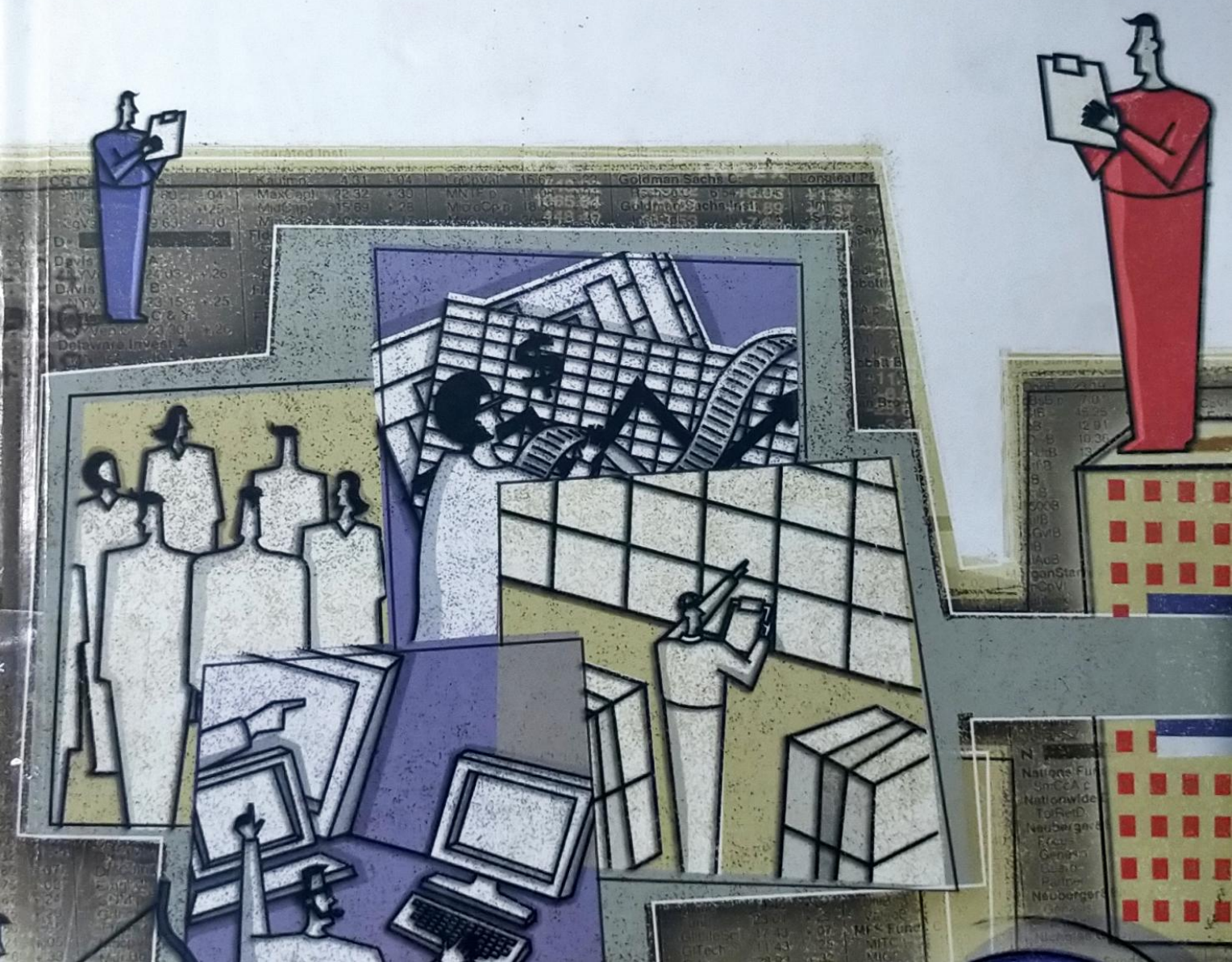


648

**Ross
Westerfield
Jordan**

Essentials of Corporate Finance

FOURTH EDITION



Essentials of Corporate Finance

FOURTH EDITION

Stephen A. Ross

Massachusetts Institute of Technology

Randolph W. Westerfield

University of Southern California

Bradford D. Jordan

University of Kentucky

GIFT OF THE ASIA FOUNDATION
NOT FOR RE-SALE

QUÀ TẶNG CỦA QUỸ CHÂU Á
KHÔNG ĐƯỢC BÁN LẠI



Irwin

Boston Burr Ridge, IL Dubuque, IA Madison, WI New York San Francisco St. Louis
Bangkok Bogotá Caracas Kuala Lumpur Lisbon London Madrid Mexico City
Milan Montreal New Delhi Santiago Seoul Singapore Sydney Taipei Toronto

To our families and friends with love and gratitude

—S.A.R. R.W.W. B.D.J.

The McGraw-Hill Companies



Irwin

ESSENTIALS OF CORPORATE FINANCE

Published by McGraw-Hill/Irwin, a business unit of The McGraw-Hill Companies, Inc., 1221 Avenue of the Americas, New York, NY, 10020. Copyright © 2004, 2001, 1999, 1996, by The McGraw-Hill Companies, Inc. All rights reserved. No part of this publication may be reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written consent of The McGraw-Hill Companies, Inc., including, but not limited to, in any network or other electronic storage or transmission, or broadcast for distance learning. Some ancillaries, including electronic and print components, may not be available to customers outside the United States.

This book is printed on acid-free paper.

domestic 5 6 7 8 9 0 DOW/DOW 0 9 8 7 6 5

international 5 6 7 8 9 0 DOW/DOW 0 9 8 7 6 5

ISBN 0-07-251076-5 (student edition)

ISBN 0-07-253201-7 (annotated instructor's edition)

Publisher: *Stephen M. Patterson*

Sponsoring editor: *Michele Janicek*

Developmental editor: *Jennifer V. Rizzi*

Executive marketing manager: *Rhonda Seelinger*

Senior producer, Media technology: *Melissa Kansa*

Senior project manager: *Jean Lou Hess*

Senior production supervisor: *Rose Hepburn*

Lead designer: *Pam Verros*

Senior supplement producer: *Carol Loreth*

Senior digital content specialist: *Brian Nacik*

Cover design: *Michael Warrell*

Interior design: *Michael Warrell*

Typeface: *10/12 Times Roman*

Compositor: *GAC Indianapolis*

Printer: *R. R. Donnelley*

Library of Congress Cataloging-in-Publication Data

Ross, Stephen A.

Essentials of corporate finance / Stephen A. Ross, Randolph W. Westerfield, Bradford D. Jordan.— 4th ed.

p. cm. — (The McGraw-Hill/Irwin series in finance, insurance, and real estate)

Includes bibliographical references and indexes.

ISBN 0-07-251076-5 (student ed. : alk. paper) — ISBN 0-07-121507-7 (international : alk. paper) — ISBN 0-07-253201-7 (annotated instructor's ed.)

1. Corporations—Finance. I. Westerfield, Randolph. II. Jordan, Bradford D. III. Title. IV. Series.

HG4026 .R676 2004

658.15—dc21

2002038905

INTERNATIONAL EDITION ISBN 0-07-121507-7

Copyright © 2004. Exclusive rights by The McGraw-Hill Companies, Inc. for manufacture and export. This book cannot be re-exported from the country to which it is sold by McGraw-Hill. The International Edition is not available in North America.

www.mhhe.com

About the Authors



Stephen A. Ross

Sloan School of Management,
Franco Modigliani Professor of
Finance and Economics
*Massachusetts Institute of
Technology*

Stephen A. Ross is the Franco Modigliani Professor of Finance and Economics at the Sloan School of Management, Massachusetts Institute of Technology. One of the most widely published authors in finance and economics, Professor Ross is recognized for his work in developing the Arbitrage Pricing Theory and his substantial contributions to the discipline through his research in signaling, agency theory, option pricing, and the theory of the term structure of interest rates, among other topics. A past president of the American Finance Association, he currently serves as an associate editor of several academic and practitioner journals. He is a trustee of CalTech and a director of the College Retirement Equity Fund (CREF) and Freddie Mac. He is also the co-chairman of Roll and Ross Asset Management Corporation.



Randolph W. Westerfield

Marshall School of Business, Dean
of the School of Business
Administration and holder of the
Robert R. Dockson Dean's Chair of
Business Administration
University of Southern California

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.

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.

Professor Westerfield serves as a member of the Board of Directors of Health Management Associates (NYSE: HMA), William Lyon Homes, Inc. (NYSE: WLS), the Lord Foundation, and the AACSB International. 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. Departments of Justice and Labor, and the State of California.



Bradford D. Jordan

Gatton College of Business and
Economics, Professor of Finance
and holder of the Richard W. and
Janis H. Furst Endowed Chair in
Finance
University of Kentucky

Bradford D. Jordan is Professor of Finance and holder of the Richard W. and Janis H. Furst Endowed Chair in Finance at the University of Kentucky. He has a long-standing interest in both applied and theoretical issues in corporate finance and 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 a past president of the Southern Finance Association, and he is coauthor (with Charles J. Corrado) of *Fundamentals of Investments: Valuation and Management*, 2/e, a leading investments text, also published by McGraw-Hill/Irwin.



From the Authors

With the Fourth Edition of *Essentials of Corporate Finance*, we have continued to refine our focus on our target audience, which is the undergraduate student taking a core course in business or corporate finance. This can be a tough course to teach. One reason is that the class is usually required of all business students, so it is not uncommon for a majority of the students to be nonfinance majors. In fact, this may be the only finance course many of them will ever have. With this in mind, our goal in *Essentials* is to convey the most important concepts and principles at a level that is approachable for the widest possible audience.

To achieve our goal, we have worked to distill the subject down to its bare essentials (hence, the name of this book), while retaining a decidedly modern approach to finance. We have always maintained that the subject of corporate finance can be viewed as the working of a few very powerful intuitions. We also think that understanding the “why” is just as important, if not more so, than understanding the “how,” especially in an introductory course. Based on the gratifying market feedback we have received from our first three editions, as well as from our other text, *Fundamentals of Corporate Finance* (now in its 6th edition), many of you agree.

By design, this book is not encyclopedic. As the table of contents indicates, we have a total of 18 chapters. Chapter length is about 30 pages, so the text is aimed squarely at a single-term course, and most of the book can be realistically covered in a typical semester or quarter. Writing a book for a one-term course necessarily means some picking and choosing, with regard to both topics and depth of coverage. Throughout, we strike a balance by introducing and covering the essentials (there’s that word again!) while leaving some more specialized topics to follow-up courses.

The other things we have always stressed, and have continued to improve with this edition, are readability and pedagogy. *Essentials* is written in a relaxed, conversational style that invites the students to join in the learning process rather than being a passive information absorber. We have found that this approach dramatically increases students’ willingness to read and learn on their own. Between larger and larger class sizes and the ever-growing demands on faculty time, we think this is an essential (!) feature for a text in an introductory course.

Throughout the development of this book, we have continued to take a hard look at what is truly relevant and useful. In doing so, we have worked to downplay purely theoretical issues and minimize the use of extensive and elaborate calculations to illustrate points that are either intuitively obvious or of limited practical use.

As a result of this process, three basic themes emerge as our central focus in writing *Essentials of Corporate Finance*:

An Emphasis on Intuition We always try to separate and explain the principles at work on a common-sense, 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 We treat net present value (NPV) as the basic concept underlying corporate finance. Many texts stop well short of consistently integrating this important principle. The most basic and important notion, that NPV represents the

excess of market value over cost, often is lost in an overly mechanical approach that emphasizes computation at the expense of comprehension. In contrast, every subject we cover is firmly rooted in valuation, and care is taken throughout to explain how particular decisions have valuation effects.

A Managerial Focus Students shouldn't lose sight of the fact that financial management concerns management. We emphasize the role of the financial manager as decision maker, and we stress the need for managerial input and judgment. We consciously avoid "black box" approaches to finance, and, where appropriate, the approximate, pragmatic nature of financial analysis is made explicit, possible pitfalls are described, and limitations are discussed.

Today, as we prepare to once again enter the market, our goal is to stick with and build on the principles that have brought us this far. However, based on an enormous amount of feedback we have received from you and your colleagues, we have made this edition and its package even more flexible than previous editions. We offer flexibility in coverage and pedagogy by providing a wide variety of features in the book to help students to learn about corporate finance. We also provide flexibility in package options by offering the most extensive collection of teaching, learning, and technology aids of any corporate finance text. Whether you use just the textbook, or the book in conjunction with other products, we believe you will find a combination with this edition that will meet your current as well as your changing needs.

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

Brief Contents

PART ONE

OVERVIEW OF FINANCIAL MANAGEMENT

- 1 Introduction to Financial Management 1

PART TWO

UNDERSTANDING FINANCIAL STATEMENTS AND CASH FLOW

- 2 Financial Statements, Taxes, and Cash Flow 21
3 Working with Financial Statements 48

PART THREE

VALUATION OF FUTURE CASH FLOWS

- 4 Introduction to Valuation: The Time Value of Money 87
5 Discounted Cash Flow Valuation 112

PART FOUR

VALUING STOCKS AND BONDS

- 6 Interest Rates and Bond Valuation 153
7 Equity Markets and Stock Valuation 194

PART FIVE

CAPITAL BUDGETING

- 8 Net Present Value and Other Investment Criteria 223
9 Making Capital Investment Decisions 256

PART SIX

RISK AND RETURN

- 10 Some Lessons from Capital Market History 289
11 Risk and Return 322

PART SEVEN

LONG-TERM FINANCING

- 12 Cost of Capital 361
13 Leverage and Capital Structure 388
14 Dividends and Dividend Policy 419
15 Raising Capital 442

PART EIGHT

SHORT-TERM FINANCIAL MANAGEMENT

- 16 Short-Term Financial Planning 471
17 Working Capital Management 502

PART NINE

TOPICS IN BUSINESS FINANCE

- 18 International Aspects of Financial Management 537

APPENDICES

- A Mathematical Tables 560
B Key Equations 568
C Answers to Selected End-of-Chapter Problems 571
D Using the HP-10B and TI BA II Plus Financial Calculators 574

Glossary 577

Name Index 583

Subject Index 584

Contents

PART ONE

OVERVIEW OF FINANCIAL MANAGEMENT

CHAPTER 1

Introduction to Financial Management

1.1 Finance: A Quick Look 2

The Four Basic Areas 2

Corporate Finance 2

Investments 2

Financial Institutions 3

International Finance 3

Why Study Finance? 3

Marketing and Finance 3

Accounting and Finance 4

Management and Finance 4

You and Finance 4

1.2 Business Finance and the Financial Manager 4

What is Business Finance? 5

The Financial Manager 5

Financial Management Decisions 6

Capital Budgeting 6

Capital Structure 6

Working Capital Management 6

Conclusion 6

1.3 Forms of Business Organization 7

Sole Proprietorship 7

Partnership 7

Corporation 8

A Corporation by Another Name . . . 9

1.4 The Goal of Financial Management 10

Profit Maximization 10

The Goal of Financial Management in a Corporation 10

A More General Financial Management Goal 10

1.5 The Agency Problem and Control of the Corporation 12

Agency Relationships 12

Management Goals 12

Do Managers Act in the Stockholders' Interests? 13

Managerial Compensation 13

Control of the Firm 13

Conclusion 13

Stakeholders 14

1.6 Financial Markets and the Corporation 15

Cash Flows to and from the Firm 15

Primary versus Secondary Markets 16

Primary Markets 16

Secondary Markets 17

Summary and Conclusions 18

Critical Thinking and Concepts Review 19

What's On the Web? 20

PART TWO

UNDERSTANDING FINANCIAL STATEMENTS AND CASH FLOW

CHAPTER 2

Financial Statements, Taxes, and Cash Flow

2.1 The Balance Sheet 22

Assets: The Left-Hand Side 22

Liabilities and Owners' Equity: The Right-Hand Side 23

Net Working Capital 23

Liquidity 24

Debt versus Equity 25

Market Value versus Book Value 25

2.2 The Income Statement 26

GAAP and the Income Statement 27

Noncash Items 28

Time and Costs 29

2.3 Taxes 30

Corporate Tax Rates 31

Average versus Marginal Tax Rates 31

2.4 Cash Flow 33

Cash Flow from Assets 33

Operating Cash Flow 33

Capital Spending 34

Change in Net Working Capital 35

Conclusion 35

A Note on "Free" Cash Flow 35

Cash Flow to Creditors and Stockholders 36

Cash Flow to Creditors 36

Cash Flow to Stockholders 36

Conclusion 36

An Example: Cash Flows for Dole Cola 38

Operating Cash Flow 38

Net Capital Spending 39

Change in NWC and Cash Flow from Assets	39
Cash Flow to Creditors and Stockholders	39
Summary and Conclusions	40
Chapter Review and Self-Test Problem	41
Answer to Chapter Review and Self-Test Problem	41
Critical Thinking and Concepts Review	43
Questions and Problems	44
What's On the Web?	47

CHAPTER 3

Working with Financial Statements

3.1 Standardized Financial Statements	49
Common-Size Balance Sheets	50
Common-Size Income Statements	51
3.2 Ratio Analysis	52
Short-Term Solvency, or Liquidity, Measures	53
<i>Current Ratio</i>	53
<i>Quick (or Acid-Test) Ratio</i>	54
<i>Cash Ratio</i>	55
Long-Term Solvency Measures	55
<i>Total Debt Ratio</i>	55
<i>Times Interest Earned</i>	55
<i>Cash Coverage</i>	56
Asset Management, or Turnover, Measures	56
<i>Inventory Turnover and Days' Sales in Inventory</i>	56
<i>Receivables Turnover and Days' Sales in Receivables</i>	57
<i>Total Asset Turnover</i>	57
Profitability Measures	58
<i>Profit Margin</i>	58
<i>Return on Assets</i>	59
<i>Return on Equity</i>	59
Market Value Measures	59
<i>Price-Earnings Ratio</i>	59
<i>Market-to-Book Ratio</i>	60
3.3 The Du Pont Identity	61
3.4 Internal and Sustainable Growth	62
Dividend Payout and Earnings Retention	62
ROA, ROE, and Growth	63
<i>The Internal Growth Rate</i>	63
<i>The Sustainable Growth Rate</i>	64
<i>Determinants of Growth</i>	65
3.5 Using Financial Statement Information	66
Why Evaluate Financial Statements?	66
<i>Internal Uses</i>	67
<i>External Uses</i>	67
Choosing a Benchmark	67
<i>Time-Trend Analysis</i>	67
<i>Peer Group Analysis</i>	67

Problems with Financial Statement Analysis	72
Summary and Conclusions	74
Chapter Review and Self-Test Problems	75
Answers to Chapter Review and Self-Test Problems	76
Critical Thinking and Concepts Review	77
Questions and Problems	79
What's On the Web?	84

PART THREE

VALUATION OF FUTURE CASH FLOWS

CHAPTER 4

Introduction to Valuation: The Time Value of Money

4.1 Future Value and Compounding	88
Investing for a Single Period	88
Investing for More Than One Period	88
4.2 Present Value and Discounting	95
The Single-Period Case	95
Present Values for Multiple Periods	96
4.3 More on Present and Future Values	99
Present versus Future Value	99
Determining the Discount Rate	99
Finding the Number of Periods	103
Summary and Conclusions	106
Chapter Review and Self-Test Problems	107
Answers to Chapter Review and Self-Test Problems	107
Critical Thinking and Concepts Review	108
Questions and Problems	108
What's On the Web?	111

CHAPTER 5

Discounted Cash Flow Valuation

5.1 Future and Present Values of Multiple Cash Flows	113
Future Value with Multiple Cash Flows	113
Present Value with Multiple Cash Flows	116
A Note on Cash Flow Timing	120
5.2 Valuing Level Cash Flows: Annuities and Perpetuities	121
Present Value for Annuity Cash Flows	122
<i>Annuity Tables</i>	123
<i>Finding the Payment</i>	124
<i>Finding the Rate</i>	126

	Future Value for Annuities	127
	A Note on Annuities Due	128
	Perpetuities	129
5.3	Comparing Rates: The Effect of Compounding Periods	131
	Effective Annual Rates and Compounding	131
	Calculating and Comparing Effective Annual Rates	131
	EARs and APRs	133
	EARs, APRs, Financial Calculators, and Spreadsheets	134
5.4	Loan Types and Loan Amortization	135
	Pure Discount Loans	135
	Interest-Only Loans	135
	Amortized Loans	136
	Summary and Conclusions	140
	Chapter Review and Self-Test Problems	141
	Answers to Chapter Review and Self-Test Problems	141
	Critical Thinking and Concepts Review	143
	Questions and Problems	144
	What's On the Web?	150

PART FOUR

VALUING STOCKS AND BONDS

CHAPTER 6

Interest Rates and Bond Valuation

6.1	Bonds and Bond Valuation	154
	Bond Features and Prices	154
	Bond Values and Yields	155
	Interest Rate Risk	158
	Finding the Yield to Maturity: More Trial and Error	160
6.2	More on Bond Features	163
	Is It Debt or Equity?	164
	Long-Term Debt: The Basics	164
	The Indenture	165
	<i>Terms of a Bond</i>	<i>166</i>
	<i>Security</i>	<i>166</i>
	<i>Seniority</i>	<i>167</i>
	<i>Repayment</i>	<i>167</i>
	<i>The Call Provision</i>	<i>167</i>
	<i>Protective Covenants</i>	<i>168</i>
6.3	Bond Ratings	168
6.4	Some Different Types of Bonds	170
	Government Bonds	170
	Zero Coupon Bonds	171
	Floating-Rate Bonds	172

Other Types of Bonds 173

6.5	Bond Markets	173
	How Bonds Are Bought and Sold	175
	Bond Price Reporting	175
6.6	Inflation and Interest Rates	180
	Real versus Nominal Rates	180
	The Fisher Effect	181
6.7	Determinants of Bond Yields	182
	The Term Structure of Interest Rates	182
	Bond Yields and the Yield Curve: Putting It All Together	185
	Conclusion	186
	Summary and Conclusions	186
	Chapter Review and Self-Test Problems	187
	Answers to Chapter Review and Self-Test Problems	187
	Critical Thinking and Concepts Review	188
	Questions and Problems	189
	What's On the Web?	192

CHAPTER 7

Equity Markets and Stock Valuation

7.1	Common Stock Valuation	195
	Cash Flows	195
	Some Special Cases	196
	<i>Zero Growth</i>	<i>197</i>
	<i>Constant Growth</i>	<i>197</i>
	<i>Nonconstant Growth</i>	<i>200</i>
	Components of the Required Return	202
7.2	Some Features of Common and Preferred Stock	204
	Common Stock Features	204
	<i>Shareholder Rights</i>	<i>204</i>
	<i>Proxy Voting</i>	<i>205</i>
	<i>Classes of Stock</i>	<i>205</i>
	<i>Other Rights</i>	<i>206</i>
	<i>Dividends</i>	<i>206</i>
	<i>Conclusion</i>	<i>207</i>
	Preferred Stock Features	207
	<i>Stated Value</i>	<i>208</i>
	<i>Cumulative and Noncumulative Dividends</i>	<i>208</i>
	<i>Is Preferred Stock Really Debt?</i>	<i>208</i>
7.3	The Stock Markets	209
	Dealers and Brokers	209
	Organization of the NYSE	209
	<i>Members</i>	<i>209</i>
	<i>Operations</i>	<i>210</i>
	<i>Floor Activity</i>	<i>210</i>
	Nasdaq Operations	212
	<i>ECNs</i>	<i>212</i>

Stock Market Reporting	213
Summary and Conclusions	215
Chapter Review and Self-Test Problems	216
Answers to Chapter Review and Self-Test Problems	216
Critical Thinking and Concepts Review	217
Questions and Problems	218
What's On the Web?	220

PART FIVE

CAPITAL BUDGETING

CHAPTER 8

Net Present Value and Other Investment Criteria

8.1 Net Present Value	224
The Basic Idea	224
Estimating Net Present Value	225
8.2 The Payback Rule	228
Defining the Rule	228
Analyzing the Rule	230
Redeeming Qualities of the Rule	231
Summary of the Rule	231
8.3 The Average Accounting Return	232
8.4 The Internal Rate of Return	234
Problems with the IRR	237
Nonconventional Cash Flows	237
Mutually Exclusive Investments	239
Redeeming Qualities of the IRR	241
8.5 The Profitability Index	242
8.6 The Practice of Capital Budgeting	242
Summary and Conclusions	244
Chapter Review and Self-Test Problems	245
Answers to Chapter Review and Self-Test Problems	246
Critical Thinking and Concepts Review	247
Questions and Problems	248
What's On the Web?	255

CHAPTER 9

Making Capital Investment Decisions

9.1 Project Cash Flows: A First Look	257
Relevant Cash Flows	257
The Stand-Alone Principle	257

9.2 Incremental Cash Flows	258
Sunk Costs	258
Opportunity Costs	258
Side Effects	259
Net Working Capital	259
Financing Costs	259
Other Issues	260
9.3 Pro Forma Financial Statements and Project Cash Flows	260
Getting Started: Pro Forma Financial Statements	260
Project Cash Flows	261
Project Operating Cash Flow	261
Project Net Working Capital and Capital Spending	262
Projected Total Cash Flow and Value	262
The Tax Shield Approach	263
9.4 More on Project Cash Flow	264
A Closer Look at Net Working Capital	264
Depreciation	265
Modified ACRS (MACRS) Depreciation	266
Book Value versus Market Value	266
An Example: The Majestic Mulch and Compost Company (MMCC)	268
Operating Cash Flows	268
Changes in NWC	269
Capital Spending	270
Total Cash Flow and Value	270
Conclusion	270
9.5 Evaluating NPV Estimates	272
The Basic Problem	272
Forecasting Risk	272
Sources of Value	274
9.6 Scenario and Other What-If Analyses	274
Getting Started	274
Scenario Analysis	275
Sensitivity Analysis	277
9.7 Additional Considerations in Capital Budgeting	278
Managerial Options and Capital Budgeting	278
Contingency Planning	278
Strategic Options	279
Conclusion	279
Capital Rationing	280
Soft Rationing	280
Hard Rationing	280
Summary and Conclusions	281
Chapter Review and Self-Test Problems	281
Answers to Chapter Review and Self-Test Problems	281
Critical Thinking and Concepts Review	282
Questions and Problems	283

PART SIX**RISK AND RETURN****CHAPTER 10****Some Lessons from Capital Market History**

- 10.1 Returns 291**
 - Dollar Returns 291
 - Percentage Returns 292
- 10.2 The Historical Record 294**
 - A First Look 295
 - A Closer Look 295
- 10.3 Average Returns: The First Lesson 299**
 - Calculating Average Returns 301
 - Average Returns: The Historical Record 301
 - Risk Premiums 301
 - The First Lesson 302
- 10.4 The Variability of Returns: The Second Lesson 303**
 - Frequency Distributions and Variability 303
 - The Historical Variance and Standard Deviation 303
 - The Historical Record 307
 - Normal Distribution 307
 - The Second Lesson 308
 - Using Capital Market History 309
- 10.5 Capital Market Efficiency 311**
 - Price Behavior in an Efficient Market 311
 - The Efficient Markets Hypothesis 313
 - Some Common Misconceptions about the EMH 313
 - The Forms of Market Efficiency 315
- Summary and Conclusions 316**
- Chapter Review and Self-Test Problems 316**
- Answers to Chapter Review and Self-Test Problems 316**
- Critical Thinking and Concepts Review 317**
- Questions and Problems 318**
- What's On the Web? 321**

CHAPTER 11**Risk and Return**

- 11.1 Expected Returns and Variances 323**
 - Expected Return 323
 - Calculating the Variance 325
- 11.2 Portfolios 327**
 - Portfolio Weights 327
 - Portfolio Expected Returns 327
 - Portfolio Variance 329

- 11.3 Announcements, Surprises, and Expected Returns 330**
 - Expected and Unexpected Returns 330
 - Announcements and News 331
- 11.4 Risk: Systematic and Unsystematic 332**
 - Systematic and Unsystematic Risk 333
 - Systematic and Unsystematic Components of Return 333
- 11.5 Diversification and Portfolio Risk 334**
 - The Effect of Diversification: Another Lesson from Market History 334
 - The Principle of Diversification 335
 - Diversification and Unsystematic Risk 335
 - Diversification and Systematic Risk 336
- 11.6 Systematic Risk and Beta 337**
 - The Systematic Risk Principle 337
 - Measuring Systematic Risk 338
 - Portfolio Betas 339
- 11.7 The Security Market Line 341**
 - Beta and the Risk Premium 341
 - The Reward-to-Risk Ratio 342*
 - The Basic Argument 343*
 - The Fundamental Result 344*
 - The Security Market Line 346
 - Market Portfolios 346*
 - The Capital Asset Pricing Model 346*
- 11.8 The SML and the Cost of Capital: A Preview 349**
 - The Basic Idea 349
 - The Cost of Capital 349
- Summary and Conclusions 350**
- Chapter Review and Self-Test Problems 350**
- Answers to Chapter Review and Self-Test Problems 351**
- Critical Thinking and Concepts Review 352**
- Questions and Problems 354**
- What's On the Web? 360**

PART SEVEN**LONG-TERM FINANCING****CHAPTER 12****Cost of Capital**

- 12.1 The Cost of Capital: Some Preliminaries 362**
 - Required Return versus Cost of Capital 362
 - Financial Policy and Cost of Capital 363
- 12.2 The Cost of Equity 363**
 - The Dividend Growth Model Approach 364
 - Implementing the Approach 364*

Estimating g	364
Advantages and Disadvantages of the Approach	365
The SML Approach	366
Implementing the Approach	366
Advantages and Disadvantages of the Approach	366
12.3 The Costs of Debt and Preferred Stock	367
The Cost of Debt	367
The Cost of Preferred Stock	368
12.4 The Weighted Average Cost of Capital	369
The Capital Structure of Weights	369
Taxes and the Weighted Average Cost of Capital	370
Solving the Warehouse Problem and Similar Capital Budgeting Problems	372
Calculating the WACC for Eastman Chemical	372
Eastman's Cost of Equity	373
Eastman's Cost of Debt	374
Eastman's WACC	375
12.5 Divisional and Project Costs of Capital	376
The SML and the WACC	377
Divisional Cost of Capital	378
The Pure Play Approach	378
The Subjective Approach	379
Summary and Conclusions	380
Chapter Review and Self-Test Problems	380
Answers to Chapter Review and Self-Test Problems	380
Critical Thinking and Concepts Review	381
Questions and Problems	382
What's On the Web?	387

CHAPTER 13

Leverage and Capital Structure

13.1 The Capital Structure Question	389
13.2 The Effect of Financial Leverage	390
The Impact of Financial Leverage	390
Financial Leverage, EPS, and ROE: An Example	390
EPS versus EBIT	391
Corporate Borrowing and Homemade Leverage	393
13.3 Capital Structure and the Cost of Equity Capital	395
M&M Proposition I: The Pie Model	395
The Cost of Equity and Financial Leverage:	
M&M Proposition II	396
Business and Financial Risk	397
13.4 Corporate Taxes and Capital Structure	398
The Interest Tax Shield	399
Taxes and M&M Proposition I	399
Conclusion	400
13.5 Bankruptcy Costs	401
Direct Bankruptcy Costs	401

Indirect Bankruptcy Costs	402
13.6 Optimal Capital Structure	402
The Static Theory of Capital Structure	403
Optimal Capital Structure and the Cost of Capital	404
Capital Structure: Some Managerial Recommendations	404
Taxes	406
Financial Distress	406
13.7 Observed Capital Structures	406
13.8 A Quick Look at the Bankruptcy Process	408
Liquidation and Reorganization	408
Bankruptcy Liquidation	408
Bankruptcy Reorganization	409
Financial Management and the Bankruptcy Process	410
Agreements to Avoid Bankruptcy	411
Summary and Conclusions	412
Chapter Review and Self-Test Problems	412
Answers to Chapter Review and Self-Test Problems	412
Critical Thinking and Concepts Review	413
Questions and Problems	414
What's On the Web?	416

CHAPTER 14

Dividends and Dividend Policy

14.1 Cash Dividends and Dividend Payment	420
Cash Dividends	421
Standard Method of Cash Dividend Payment	421
Dividend Payment: A Chronology	421
More on the Ex-Dividend Date	422
14.2 Does Dividend Policy Matter?	423
An Illustration of the Irrelevance of Dividend Policy	423
Current Policy: Dividends Set Equal to Cash Flow	423
Alternative Policy: Initial Dividend Greater Than Cash Flow	424
A Test	424
Some Real-World Factors Favoring a Low Payout	425
Taxes	425
Flotation Costs	425
Dividend Restrictions	425
Some Real-World Factors Favoring a High Payout	425
Desire for Current Income	426
Tax and Legal Benefits from High Dividends	426
Clientele Effects: A Resolution of Real-World Factors?	427
14.3 Establishing a Dividend Policy	427
Residual Dividend Approach	427
Dividend Stability	428
A Compromise Dividend Policy	429

- 14.4 Stock Repurchase: An Alternative to Cash Dividends 430**
 Cash Dividends versus Repurchase 430
 Real-World Considerations in a Repurchase 431
 Share Repurchase and EPS 432
- 14.5 Stock Dividends and Stock Splits 432**
 Value of Stock Splits and Stock Dividends 433
The Benchmark Case 434
Popular Trading Range 434
 Reverse Splits 434
- Summary and Conclusions 435**
- Chapter Review and Self-Test Problem 436**
- Answer to Chapter Review and Self-Test Problem 436**
- Critical Thinking and Concepts Review 436**
- Questions and Problems 437**
- What's On the Web? 440**

CHAPTER 15

Raising Capital

- 15.1 The Financing Life Cycle of a Firm: Early-Stage Financing and Venture Capital 443**
 Venture Capital 443
 Some Venture Capital Realities 444
 Choosing a Venture Capitalist 444
 Conclusion 445
- 15.2 Selling Securities to the Public: The Basic Procedure 445**
- 15.3 Alternative Issue Methods 448**
- 15.4 Underwriters 448**
 Choosing an Underwriter 449
 Types of Underwriting 449
Firm Commitment Underwriting 450
Best Efforts Underwriting 450
 The Green Shoe Provision 450
 The Aftermarket 450
 Lockup Agreements 451
 The Quiet Period 451
- 15.5 IPOs and Underpricing 451**
 Evidence on Underpricing 452
 IPO Underpricing: The 1999–2000 Experience 453
 Why Does Underpricing Exist? 455
- 15.6 New Equity Sales and the Value of the Firm 458**
- 15.7 The Cost of Issuing Securities 459**
- 15.8 Issuing Long-Term Debt 463**
- 15.9 Shelf Registration 464**
 Summary and Conclusions 464
 Chapter Review and Self-Test Problem 465

- Answer to Chapter Review and Self-Test Problem 465**
- Critical Thinking and Concepts Review 465**
- Questions and Problems 468**
- What's On the Web? 468**

PART EIGHT

SHORT-TERM FINANCIAL MANAGEMENT

CHAPTER 16

Short-Term Financial Planning

- 16.1 Tracing Cash and Net Working Capital 472**
- 16.2 The Operating Cycle and the Cash Cycle 474**
 Defining the Operating and Cash Cycles 474
The Operating Cycle 474
The Cash Cycle 475
 The Operating Cycle and the Firm's Organizational Chart 476
 Calculating the Operating and Cash Cycles 476
The Operating Cycle 477
The Cash Cycle 478
 Interpreting the Cash Cycle 479
- 16.3 Some Aspects of Short-Term Financial Policy 481**
 The Size of the Firm's Investment in Current Assets 481
 Alternative Financing Policies for Current Assets 482
 Which Financing Policy Is Best? 484
 Current Assets and Liabilities in Practice 485
- 16.4 The Cash Budget 486**
 Sales and Cash Collections 487
 Cash Outflows 488
 The Cash Balance 488
- 16.5 Short-Term Borrowing 489**
 Unsecured Loans 489
 Secured Loans 490
Accounts Receivable Financing 490
Inventory Loans 491
 Other Sources 491
- 16.6 A Short-Term Financial Plan 491**
 Summary and Conclusions 492
 Chapter Review and Self-Test Problems 493
 Answers to Chapter Review and Self-Test Problems 494
 Critical Thinking and Concepts Review 495
 Questions and Problems 495
 What's On the Web? 501

CHAPTER 17

Working Capital Management

17.1 Float and Cash Management 503

- Reasons for Holding Cash 503
 - The Speculative and Precautionary Motives* 503
 - The Transaction Motive* 503
 - Benefits of Holding Cash* 504
- Understanding Float 504
 - Disbursement Float* 504
 - Collection Float and Net Float* 505
 - Float Management* 506
 - Ethical and Legal Questions* 506
 - Electronic Data Interchange: The End of Float?* 506

17.2 Cash Management: Collection, Disbursement, and Investment 507

- Cash Collection and Concentration 507
 - Components of Collection Time* 507
 - Cash Collection* 507
 - Lockboxes* 508
 - Cash Concentration* 509
- Managing Cash Disbursements 509
 - Increasing Disbursement Float* 509
 - Controlling Disbursements* 510
- Investing Idle Cash 511
 - Temporary Cash Surpluses* 511
 - Characteristics of Short-Term Securities* 512
 - Some Different Types of Money Market Securities* 513

17.3 Credit and Receivables 513

- Components of Credit Policy 514
- Terms of the Sale 514
 - The Basic Form* 514
 - The Credit Period* 515
 - Cash Discounts* 516
 - Credit Instruments* 517
- Optimal Credit Policy 517
 - The Total Credit Cost Curve* 518
 - Organizing the Credit Function* 519
- Credit Analysis 519
 - Credit Information* 519
 - Credit Evaluation and Scoring* 519
- Collection Policy 520
 - Monitoring Receivables* 520
 - Collection Effort* 521

17.4 Inventory Management 521

- The Financial Manager and Inventory Policy* 521
- Inventory Types* 522
- Inventory Costs* 523

17.5 Inventory Management Techniques 524

- The ABC Approach* 524
- The Economic Order Quantity Model* 524
 - Inventory Depletion* 524

The Carrying Costs 526

The Shortage Costs 526

The Total Costs 526

Extensions to the EOQ Model 528

Safety Stocks 528

Reorder Points 529

Managing Derived-Demand Inventories 530

Materials Requirements Planning 530

Just-in-Time Inventory 530

Summary and Conclusions 531

Chapter Review and Self-Test Problems 531

Answers to Chapter Review and Self-Test Problems 531

Critical Thinking and Concepts Review 532

Questions and Problems 534

What's On the Web? 536

PART NINE

TOPICS IN BUSINESS FINANCE

CHAPTER 18

International Aspects of Financial Management

18.1 Terminology 538

18.2 Foreign Exchange Markets and Exchange Rates 539

- Exchange Rates 540
 - Exchange Rate Quotations* 540
 - Cross-Rates and Triangle Arbitrage* 542
- Types of Transactions 543

18.3 Purchasing Power Parity 544

- Absolute Purchasing Power Parity 545
- Relative Purchasing Power Parity 546
 - The Basic Idea* 546
 - The Result* 546
 - Currency Appreciation and Depreciation* 548

18.4 Exchange Rates and Interest Rates 549

- Covered Interest Arbitrage 549
- Interest Rate Parity 550

18.5 Exchange Rate Risk 551

- Short-Run Exposure 551
- Long-Run Exposure 552
- Translation Exposure 552
- Managing Exchange Rate Risk 553

18.6 Political Risk 554

Summary and Conclusions 554

Chapter Review and Self-Test Problems 555

Answers to Chapter Review and Self-Test Problems	555
Critical Thinking and Concepts Review	556
Questions and Problems	557
What's On the Web?	559

C	Answers to Selected End-of-Chapter Problems	571
D	Using the HP-10B and TI BA II Plus Financial Calculators	574
	Glossary	577
	Name Index	583
	Subject Index	584

APPENDICES

A	Mathematical Tables	560
B	Key Equations	568

List of Boxes

REALITY BYTES

CHAPTER 1	The Costs of Unethical Conduct	11
	Fight!	15
CHAPTER 2	A Bitter Pill for McKesson's Stockholders	28
CHAPTER 3	Growing Broke: A By-the-Book Case?	64
	What Financial Statements Don't Tell You	73
CHAPTER 4	A Quack Investment?	101
CHAPTER 5	Jackpot!	118
	An Unwelcome Christmas Present	140
CHAPTER 6	Exotic Bonds	174
CHAPTER 7	Play with the Pros	207
CHAPTER 9	When Things Go Wrong . . .	273
CHAPTER 10	The Super Guide to Investing	310
	Can the Pros Beat the Market?	314
CHAPTER 11	Beta, Beta, Who's Got the Beta?	340
CHAPTER 12	EVA: An Old Idea Moves into the Modern Age	371
CHAPTER 13	Bankruptcy, "Prepack" Style	411
CHAPTER 14	Stock Buybacks: The Good, the Bad, and the Ugly	433
CHAPTER 15	IPO Underpricing around the World	455
	The (Mis)-Pricing of Palm, Inc.	457
	Anatomy of an IPO	461
CHAPTER 16	Cash Cycle Competition	480
CHAPTER 17	Inventory Management: From Razors to Gasoline	522
CHAPTER 18	McPricing	547