

Principles of
Corporate Finance

THIRTEENTH EDITION

Richard A. Brealey

Professor of Finance

London Business School

Stewart C. Myers

Professor of Financial Economics

Sloan School of Management Massachusetts

Institute of Technology

Franklin Allen

Professor of Finance and Economics

Imperial College London

Contents

Preface vii

I Part One; Value

1 Introduction to Corporate Finance 1

- 1-1 Corporate Investment and Financing Decisions 2
Investment Decisions/Financing Decisions/What Is a Corporation?/The Role of the Financial Manager
 - 1-2 The Financial Goal of the Corporation 7
Shareholders Want Managers to Maximize Market Value/A Fundamental Result/The Investment Trade-Off/Should Managers Look After the Interests of Their Shareholders?/Agency Problems and Corporate Governance
 - 1-3 Preview of Coming Attractions 13
- Summary 15 • Problem Sets 15 • Appendix: Why Maximizing Shareholder Value Makes Sense 18

2 How to Calculate Present Values 20

- 2-1 Future Values and Present Values 20
Calculating Future Values/Calculating Present Values/Valuing an Investment Opportunity/Net Present Value/Risk and Present Value/Present Values and Rates of Return/Calculating Present Values When There Are Multiple Cash Flows/The Opportunity Cost of Capital
- 2-2 Looking for Shortcuts—Perpetuities and Annuities 28
How to Value Perpetuities/How to Value Annuities/Valuing Annuities Due/Calculating Annual Payments/Future Value of an Annuity
- 2-3 More Shortcuts—Growing Perpetuities and Annuities 34
Growing Perpetuities/Growing Annuities

- 2-4 How Interest Is Paid and Quoted 36
Continuous Compounding

Summary 39 • Problem Sets 40 • Finance on the Web 45

3 Valuing Bonds 46

- 3-1 Using the Present Value Formula to Value Bonds 47
A Short Trip to Paris to Value a Government Bond/Back to the United States: Semiannual Coupons and Bond Prices
- 3-2 How Bond Prices Vary with Interest Rates 50
Duration and Volatility
- 3-3 The Term Structure of Interest Rates 56
Spot Rates, Bond Prices, and the Law of One Price/Measuring the Term Structure/Why the Discount Factor Declines as Futurity Increases—and a Digression on Money Machines
- 3-4 Explaining the Term Structure 60
Expectations Theory of the Term Structure/Introducing Risk/Inflation and Term Structure
- 3-5 Real and Nominal Rates of Interest 62
Indexed Bonds and the Real Rate of Interest/What Determines the Real Rate of Interest?/Inflation and Nominal Interest Rates
- 3-6 The Risk of Default 67
Corporate Bonds and Default Risk/Sovereign Bonds and Default Risk

Summary 70 • Further Reading 71 • Problem Sets 71
Finance on the Web 76

4 The Value of Common Stocks 77

- 4-1 How Common Stocks Are Traded 78
Trading Results for Boeing
- 4-2 How Common Stocks Are Valued 80
Valuation by Comparables/Stock Prices and Dividends

- 4-3** Estimating the Cost of Equity Capital 87
Using the DCF Model to Set Water, Gas, and Electricity Prices/Dangers Lurk in Constant-Growth Formulas
- 4-4** The Link between Stock Price and Earnings per Share 92
Calculating the Present Value of Growth Opportunities for Fledgling Electronics
- 4-5** Valuing a Business by Discounted Cash Flow 95
Valuing the Concatenator Business/Valuation Format/Estimating Horizon Value/Free Cash Flow, Dividends, and Repurchases

Summary 100 • Problem Sets 101 • Finance on the Web 106 • Mini-Case: Reeby Sports 106

5 Net Present Value and Other Investment Criteria 108

- 5-1** A Review of the Basics 108
Net Present Value's Competitors/Three Points to Remember about NPV
- 5-2** Book Rate of Return and Payback 111
Book Rate of Return /Payback/Discounted Payback
- 5-3** Internal (or Discounted Cash Flow) Rate of Return 114
Calculating the IRR/The IRR Rule/Pitfall 1—landing or Borrowing!/Pitfall 2—Multiple Rates of Return/Pitfall 3—Mutually Exclusive Projects/Pitfall 4—What Happens When There Is More Than One Opportunity Cost of Capital/The Verdict on IRR
- 5-4** Choosing Capital Investments When Resources Are Limited 122
An Easy Problem in Capital Rationing/Uses of Capital Rationing Models

Summary 126 • Further Reading 127 • Problem Sets 127 • Mini-Case: Vegetron's CFO Calls Again 132

6 Making Investment Decisions with the Net Present Value Rule 135

- 6-1** Applying the Net Present Value Rule 135
Rule 1: Discount Cash Flows, Not Profits/Rule 2: Discount Incremental Cash Flows /Rule 3: Treat

Inflation Consistently/Rule 4: Separate Investment and Financing Decisions/Rule 5: Remember to Deduct Taxes

- 6-2** Corporate Income Taxes 142
U.S. Corporate Income Tax Reform
- 6-3** Example—IM&C's Fertilizer Project 144
The Three Elements of Project Cash Flows/Forecasting the Fertilizer Project's Cash Flows/Accelerated Depreciation and First-Year Expensing/Final Comments on Taxes/Project Analysis/Calculating NPV in Other Countries and Currencies
- 6-4** Using the NPV Rule to Choose among Projects 151
Problem 1: The Investment Timing Decision/Problem 2: The Choice between Long- and Short-Lived Equipment/Problem 3: When to Replace an Old Machine/Problem 4: Cost of Excess Capacity

Summary 156 • Further Reading 157 • Problem Sets 157 • Mini-Case: New Economy Transport (A) 165 • New Economy Transport (B) 166

I Part Two: Risk

7 Introduction to Risk and Return 167

- 7-1** Over a Century of Capital Market History in One Easy Lesson 167
Arithmetic Averages and Compound Annual Returns/Using Historical Evidence to Evaluate Today's Cost of Capital
- 7-2** Diversification and Portfolio Risk 174
Variance and Standard Deviation/Measuring Variability/How Diversification Reduces Risk
- 7-3** Calculating Portfolio Risk 181
General Formula for Computing Portfolio Risk/Do I Really Have to Add up 36 Million Boxes?
- 7-4** How Individual Securities Affect Portfolio Risk 185
Market Risk Is Measured by Beta/Why Security Betas Determine Portfolio Risk

7-5 Diversification and Value Additivity 189
 Summary 190 • Further Reading 191 • Problem Sets
 191 • Finance on the Web 197

8 Portfolio Theory and the Capital Asset Pricing Model 198

8-1 Harry Markowitz and the Birth of Portfolio Theory 198
Combining Stocks into Portfolios/We Introduce Borrowing and Lending

8-2 The Relationship between Risk and Return 205
Some Estimates of Expected Returns/Review of the Capital Asset Pricing Model/What If a Stock Did Not Lie on the Security Market Line?

8-3 Validity and Role of the Capital Asset Pricing Model 208
Tests of the Capital Asset Pricing Model/ Assumptions behind the Capital Asset Pricing Model

8-4 Some Alternative Theories 213
Arbitrage Pricing Theory/A Comparison of the Capital Asset Pricing Model and Arbitrage Pricing Theory/The Three-Factor Model

Summary 217 • Further Reading 218 • Problem Sets
 219 • Finance on the Web 225 • Mini-Case: John and
 Marsha on Portfolio Selection 225

9 Risk and the Cost of Capital 228

9-1 Company and Project Costs of Capital 229
Perfect Pitch and the Cost of Capital/Debt and the Company Cost of Capital

9-2 Measuring the Cost of Equity 232
Estimating Beta/The Expected Return on CSX's Common Stock/CSX's After-Tax Weighted-Average Cost of Capital/CSX's Asset Beta

9-3 Analyzing Project Risk 236
What Determines Asset Betas?/Don't Be Fooled by Diversifiable Risk/Avoid Fudge Factors in Discount Rates/Discount Rates for International Projects

9-4 Certainty Equivalents—Another Way to Adjust for Risk 242
Valuation by Certainty Equivalents/When to Use a Single Risk-Adjusted Discount Rate for Long-Lived Assets/A Common Mistake/When You Cannot Use a Single Risk-Adjusted Discount Rate for Long-Lived Assets

Summary 248 • Further Reading 249 • Problem Sets
 249 • Finance on the Web 254 * Mini-Case: The
 Jones Family Incorporated 254

I Part Three: Best Practices in Capital Budgeting

10 Project Analysis 257

10-1 Sensitivity and Scenario Analysis 258
Value of Information/Limits to Sensitivity Analysis/ Scenario Analysis

10-2 Break-Even Analysis and Operating Leverage 262
Break-Even Analysis/Operating Leverage and the Break-Even Point

10-3 Monte Carlo Simulation 264
Simulating the Electric Scooter Project

10-4 Real Options and Decision Trees 266
The Option to Expand/The Option to Abandon/ Production Options/Timing Options/More on Decision Trees/Pro and Con Decision Trees

Summary 274 • Further Reading 275 • Problem Sets
 275 • Mini-Case: Waldo County 282

II How to Ensure That Projects Truly Have Positive NPVs 284

11-1 How Firms Organize the Investment Process 284
The Capital Budget/Project Authorizations—and the Problem of Biased Forecasts/Postaudits

11-2 Look First to Market Values 287
The BMW and Your Sporting Idol

11-3 Economic Rents and Competitive Advantage 292

- 11-4 Marvin Enterprises Decides to Exploit a New Technology—an Example 295
Forecasting Prices of Gargle Blasters/The Value of Marvin New Expansion/Alternative Expansion Plans/The Value of Marvin Stock/The Lessons of Marvin Enterprises

Summary 303 • Further Reading 303 • Problem Sets 303 • Mini-Case: Ecsy-Cola 309

12 Agency Problems and Investment 311

- 12-1 What Agency Problems Should You Watch Out For? 311
Agency Problems Don't Stop at the Top/Risk Taking
- 12-2 Monitoring 314
Boards of Directors /Auditors/Lenders/ Shareholders/Takeovers
- 12-3 Management Compensation 316
Compensation Facts and Controversies/The Economics of Incentive Compensation/The Specter of Short-Termism
- 12-4 Measuring and Rewarding Performance: Residual Income and EVA 323
Residual Income or Economic Value Added (EVA®)/Pros and Cons of EVA
- 12-5 Biases in Accounting Measures of Performance 326
Example: Measuring the Profitability of the Nodhead Supermarket/Measuring Economic Profitability/Do the Biases Wash Out in the Long Run?/What Can We Do about Biases in Accounting Profitability Measures?

Summary 331 • Further Reading 332 • Problem Sets 332

I Part Four: Financing Decisions and Market Efficiency

13 Efficient Markets and Behavioral Finance 337

- 13-1 Differences between Investment and Financing Decisions 338
We Always Come Back to NPV

- 13-2 The Efficient Market Hypothesis 340
A Startling Discovery: Price Changes Are Random/Random Walks: The Evidence/Semistrong Market Efficiency: The Evidence/Strong Market Efficiency: The Evidence

- 13-3 Bubbles and Market Efficiency 348

- 13-4 Behavioral Finance 349
Sentiment/Limits to Arbitrage/Incentive Problems and the Financial Crisis of 2008-2009

- 13-5 The Five Lessons of Market Efficiency 354
Lesson 1: Markets Have No Memory/Lesson 2: Trust Market Prices/Lesson 3: Read the Entrails/Lesson 4: The Do-It-Yourself Alternative/Lesson 5: Seen One Stock, Seen Them All/What If Markets Are Not Efficient? Implications for the Financial Manager

Summary 359 • Further Reading 360 • Problem Sets 361 • Finance on the Web 364

14 An Overview of Corporate Financing 365

- 14-1 Patterns of Corporate Financing 365
Do Firms Rely Too Much on Internal Funds?/How Much Do Firms Borrow?
- 14-2 Common Stock 369
Ownership of the Corporation/Voting Procedures/ Dual-Class Shares and Private Benefits/Equity in Disguise/Preferred Stock
- 14-3 Debt 374
Debt Comes in Many Forms/A Debt by Any Other Name/Variety's the Very Spice of Life
- 14-4 Financial Markets and Intermediaries 377
Financial Markets/Financial Intermediaries/ Investment Funds/Financial Institutions
- 14-5 The Role of Financial Markets and Intermediaries 382
The Payment Mechanism/Borrowing and Lending/ Pooling Risk/Information Provided by Financial Markets/The Financial Crisis of 2007-2009

Summary 386 • Further Reading 387 • Problem Sets 388 • Finance on the Web 390

15 How Corporations Issue Securities 391

- 15-1** Venture Capital 391
The Venture Capital Market
- 15-2** The Initial Public Offering 396
The Public-Private Choice/Arranging an Initial Public Offering/The Sale of Marvin Stock/The Underwriters/Costs of a New Issue/Underpricing of IPOs/Hot New-Issue Periods/The Long-Run Performance of IPO Stocks
- 15-3** Alternative Issue Procedures for IPOs 406
Types of Auction: A Digression
- 15-4** Security Sales by Public Companies 408
General Cash Offers/International Security Issues/The Costs of a General Cash Offer/Market Reaction to Stock Issues/Rights Issues
- 15-5** Private Placements and Public Issues 413
Summary 413 • Further Reading 414
Problem Sets 415 • Finance on the Web 420
Appendix: Marvin's New-Issue Prospectus 421

Part Five: Payout Policy and Capital Structure

16 Payout Policy 425

- 16-1** Facts about Payout 426
How Firms Pay Dividends/How Firms Repurchase Stock
- 16-2** The Information Content of Dividends and Repurchases 428
The Information Content of Share Repurchases
- 16-3** Dividends or Repurchases? The Payout Controversy 431
Payout Policy Is Irrelevant in Perfect Capital Markets/Dividends or Repurchases? An Example/Stock Repurchases and DCF Models of Share Price/Dividends and Share Issues
- 16-4** The Rightists 436
Payout Policy, Investment Policy, and Management Incentives

- 16-5** Taxes and the Radical Left 437
Empirical Evidence on Dividends and Taxes/Alternative Tax Systems
- 16-6** Payout Policy and the Life Cycle of the Firm 441
Payout and Corporate Governance

Summary 443 • Further Reading 444 • Problem Sets 445

17 Does Debt Policy Matter? 451

- 17-1** The Effect of Financial Leverage in a Competitive Tax-Free Economy 452
Enter Modigliani and Miller/The Law of Conservation of Value/An Example of Proposition 1
- 17-2** Financial Risk and Expected Returns 457
Proposition 2/Leverage and the Cost of Equity/How Changing Capital Structure Affects Beta/Watch Out for Hidden Leverage
- 17-3** No Magic in Financial Leverage 464
Today's Unsatisfied Clienteles Are Probably Interested in Exotic Securities/Imperfections and Opportunities
- 17-4** A Final Word on the After-Tax Weighted-Average Cost of Capital 467

Summary 468 • Further Reading 469 • Problem Sets 470 • Mini-Case: Claxton Drywall Comes to the Rescue 474

18 How Much Should a Corporation Borrow? 475

- 18-1** Corporate Taxes 476
How Do Interest Tax Shields Contribute to the Value of Stockholders' Equity?/Recasting Johnson & Johnson's Capital Structure/MM and Taxes
- 18-2** Corporate and Personal Taxes 480
- 18-3** Costs of Financial Distress 482
Bankruptcy Costs/Evidence on Bankruptcy Costs/Direct versus Indirect Costs of Bankruptcy/Financial Distress without Bankruptcy/Debt and Incentives/Risk Shifting: The First Game/Refusing to Contribute Equity Capital: The Second Game/And Three More Games, Briefly/What the Games Cost/Costs of Distress Vary with Type of Asset/The Trade-Off Theory of Capital Structure

- 18-4** The Pecking Order of Financing Choices 495
Debt and Equity Issues with Asymmetric Information/Implications of the Pecking Order/The Trade-Off Theory vs. the Pecking-Order Theory—Some Evidence/The Bright Side and the Dark Side of Financial Slack/Is There a Theory of Optimal Capital Structure?

Summary 501 • Further Reading 502 • Problem Sets 503 • Finance on the Web 506

19 Financing and Valuation 507

- 19-1** The After-Tax Weighted-Average Cost of Capital 508
Review of Assumptions/Mistakes People Make in Using the Weighted-Average Formula
- 19-2** Valuing Businesses 512
Valuing Rio Corporation/Estimating Horizon Value/WACC v.y. the Flow-to-Equity Method
- 19-3** Using WACC in Practice 517
Some Tricks of the Trade/Adjusting WACC When Debt Ratios and Business Risks Differ/Unlevering and Relevering Betas/The Importance of Rebalancing/The Modigliani-Miller Formula, Plus Some Final Advice
- 19-4** Adjusted Present Value 524
APV for the Perpetual Crusher/Other Financing Side Effects/APV for Entire Businesses/APV and Limits on Interest Deductions/A PV for International Investments
- 19-5** Your Questions Answered 529

Summary 531 • Further Reading 532 • Problem Sets 532 • Finance on the Web 537 • Appendix: Discounting Safe, Nominal Cash Flows 538

Part Six: Options

20 Understanding Options 542

- 20-1** Calls, Puts, and Shares 543
Call Options and Position Diagrams/Put Options/Selling Calls and Puts/Position Diagrams Are Not Profit Diagrams

- 20-2** Financial Alchemy with Options 547
Spotting the Option
- 20-3** What Determines Option Values? 552
Risk and Option Values

Summary 557 • Further Reading 558
Problem Sets 558 • Finance on the Web 562

21 Valuing Options 563

- 21-1** A Simple Option-Valuation Model 564
Why Discounted Cash Flow Won't Work for Options/Constructing Option Equivalents from Common Stocks and Borrowing/Valuing the Amazon Put Option
 - 21-2** The Binomial Method for Valuing Options 568
Example: The Two-Step Binomial Method/The General Binomial Method/The Binomial Method and Decision Trees
 - 21-3** The Black-Scholes Formula 573
Using the Black-Scholes Formula/The Risk of an Option/The Black-Scholes Formula and the Binomial Method
 - 21-4** Black-Scholes in Action 577
Executive Stock Options/Warrants/Portfolio Insurance/Calculating Implied Volatilities
 - 21-5** Option Values at a Glance 580
 - 21-6** The Option Menagerie 582
- Summary 582 • Further Reading 583 • Problem Sets 583 • Finance on the Web 588 • Mini-Case: Bruce Honiball's Invention 588

22 Real Options 590

- 22-1** The Value of Follow-On Investment Opportunities 590
Questions and Answers about Blitzen's Mark /// Other Expansion Options
- 22-2** The Timing Option 594
Valuing the Malted Herring Option/Optimal Timing for Real Estate Development
- 22-3** The Abandonment Option 597
Bad News for the Perpetual Crusher/Abandonment Value and Project Life/Temporary Abandonment

- 22-4 Flexible Production and Procurement 600
Aircraft Purchase Options
- 22-5 Investment in Pharmaceutical R&D 604
- 22-6 Valuing Real Options 606
*A Conceptual Problem?/What about Taxes?/
Practical Challenges*
- Summary 608 • Further Reading 609
Problem Sets 609

Part Seven: Debt Financing

23 Credit Risk and the Value of Corporate Debt 614

- 23-1 Yields on Corporate Debt 614
What Determines the Yield Spread?
- 23-2 Valuing the Option to Default 618
*The Value of Corporate Equity/A Digression:
Valuing Government Financial Guarantees*
- 23-3 Bond Ratings and the Probability of Default 622
- 23-4 Predicting the Probability of Default 624
*Statistical Models of Default/Structural Models
of Default*
- Summary 628 • Further Reading 628 • Problem
Sets 629 • Finance on the Web 630

24 The Many Different Kinds of Debt 631

- 24-1 Long-Term Bonds 632
*Bond Terms/Security and Seniority/Asset-Backed
Securities/Call Provisions/Sinking Funds/Bond
Covenants/Private Placed Bonds/Foreign Bonds
and Eurobonds*
- 24-2 Convertible Securities and Some Unusual
Bonds 641
*The Value of a Convertible at Maturity/
Forcing Conversion/Why Do Companies Issue
Convertibles?/Valuing Convertible Bonds/A
Variation on Convertible Bonds: The Bond-
Warrant Package/Innovation in the Bond Market*

- 24-3 Bank Loans 647
*Commitment/Maturity/Rate of Interest/Syndicated
Loans/Security/Loan Covenants*
- 24-4 Commercial Paper and Medium-Term Notes 650
Commercial Paper/Medium-Term Notes
- Summary 652 • Further Reading 653 • Problem
Sets 653 • Mini-Case: The Shocking Demise of
Mr. Thorndike 658 • Appendix: Project Finance 660
Appendix Further Reading 662

25 Leasing 663

- 25-1 What Is a Lease? 663
- 25-2 Why Lease? 664
*Sensible Reasons for Leasing/Some Dubious
Reasons for Leasing*
- 25-3 Operating Leases 667
Example of an Operating Lease/Lease or Buy?
- 25-4 Valuing Financial Leases 669
*Example of a Financial Lease/Who Really Owns
the Leased Asset?/Leasing and the Internal
Revenue Service/A First Pass at Valuing a Lease
Contract/The Story So Far/Financial Leases When
There Is No Interest Tax Shield*
- 25-5 When Do Financial Leases Pay? 675
Leasing around the World
- 25-6 Leveraged Leases 676
- Summary 677 • Further Reading 678 • Problem Sets 678

Part Eight: Risk Management

26 Managing Risk 683

- 26-1 Why Manage Risk? 684
*Reducing the Risk of Cash Shortfalls or Financial
Distress/Agency Costs May Be Mitigated by Risk
Management/The Evidence on Risk Management*
- 26-2 Insurance 687
- 26-3 Reducing Risk with Options 689
- 26-4 Forward and Futures Contracts 690
*A Simple Forward Contract/Futures Exchanges/
The Mechanics of Futures Trading/Trading and*

Pricing Financial Futures Contracts/Spot and Futures Prices—Commodities/More about Forward Contracts/Homemade Forward Rate Contracts

26-5 Swaps 697

Interest Rate Swaps/Currency Swaps/Some Other Swaps

26-6 How to Set Up a Hedge 702

Fledging Interest Rate Risk/Hedge Ratios and Basis Risk

26-7 Is "Derivative" a Four-Letter Word? 705

Summary 707 • Further Reading 708 • Problem Sets 708 • Finance on the Web 714 • Mini-Case: Rensselaer Advisers 714

27 Managing International Risks 717

27-1 The Foreign Exchange Market 717

27-2 Some Basic Relationships 719

Interest Rates and Exchange Rates/The Forward Premium and Changes in Spot Rates/Changes in the Exchange Rate and Inflation Rates/Interest Rates and Inflation Rates/Is Life Really That Simple?

27-3 Hedging Currency Risk 728

Transaction Exposure and Economic Exposure

27-4 Exchange Risk and International Investment Decisions 731

The Cost of Capital for International Investments

27-5 Political Risk 734

Summary 736 • Further Reading 737 • Problem Sets 738 • Finance on the Web 741 • Mini-Case: Exacta, S.a. 742

I Part Nine **Financial Planning and Working Capital Management**

28 Financial Analysis 743

28-1 Financial Ratios 743

28-2 Financial Statements 744

28-3 Home Depot's Financial Statements 745
The Balance Sheet/The Income Statement

28-4 Measuring Home Depot's Performance 748
Economic Value Added/Accounting Rates of Return/Problems with EVA and Accounting Rates of Return

28-5 Measuring Efficiency 752

28-6 Analyzing the Return on Assets: The Du Pont System 754
The Du Pont System

28-7 Measuring Leverage 756
Leverage and the Return on Equity

28-8 Measuring Liquidity 758

28-9 Interpreting Financial Ratios 760

Summary 763 • Further Reading 763 • Problem Sets 763 • Finance on the Web 769

29 Financial Planning 770

29-1 Links between Short-Term and Long-Term Financing Decisions 770

29-2 Tracing Changes in Cash 773
The Cash Cycle

29-3 Cash Budgeting 778

29-4 Dynamic's Short-Term Financial Plan 780
Dynamic Mattress's Financing Plan/Evaluating the Plan/A Note on Short-Term Financial Planning Models

29-5 Long-Term Financial Planning 784
Why Build Financial Plans?/A Long-Term Financial Planning Model for Dynamic Mattress/Pitfalls in Mode! Design/Choosing a Plan

29-6 Growth and External Financing 789

Summary 791 • Further Reading 791 • Problem Sets 792 • Finance on the Web 800

30 Working Capital Management 801

30-1 The Composition of Working Capital 802

30-2 Inventories 804

30-3 Credit Management 806

*Terms of Sale/The Promise to Pay/Credit Analysis/
The Credit Decision/Collection Policy*

30-4 Cash 812

*How Purchases Are Paid For/Speeding Up Check
Collections/International Cash Management/
Paying for Bank Services*

30-5 Marketable Securities 816

*Tax Strategies/Investment Choices/Calculating
the Yield on Money Market Investments/Returns
on Money Market Investments/The International
Money Market/Money Market Instruments*

Summary 822 • Further Reading 823 • Problem Sets
824 • Finance on the Web 829

I Part Ten: **Mergers, Corporate Control,
and Governance**

31 Mergers 830

31-1 Sensible Motives for Mergers 831

*Economies of Scale/Economies of Vertical
Integration/Complementary Resources/Surplus Funds/
Eliminating Inefficiencies/Industry Consolidation*

31-2 Some Dubious Reasons for Mergers 836

*Diversification/Increasing Earnings per Share:
The Bootstrap Game/Lower Financing Costs*

31-3 Estimating Merger Gains and Costs 839

*Right and Wrong Ways to Estimate the Benefits
of Mergers/More on Estimating Costs—What If
the Target's Stock Price Anticipates the Merger?/
Estimating Cost When the Merger Is Financed by
Stock/Asymmetric Information*

31-4 The Mechanics of a Merger 844

*Mergers, Antitrust Law, and Popular Opposition/
The Form of Acquisition/Merger Accounting/Some
Tax Considerations/Cross-Border Mergers and Tax
Inversion*

31-5 Proxy Fights, Takeovers, and the Market for
Corporate Control 847

*Proxy Contests/Takeovers/Valeant Bids for Allergan/
Takeover Defenses/Who Gains Most in Mergers?*

31-6 Merger Waves and Merger Profitability 853

*Merger Waves/Merger Announcements and the
Stock Price/Merger Profitability/Do Mergers
Generate Net Benefits?*

Summary 855 • Further Reading 856 • Problem
Sets 856 • Appendix: Conglomerate Mergers and
Value Additivity 861

32 Corporate Restructuring 863

32-1 Leveraged Buyouts 863

*The RJR Nabisco LBO/Barbarians at the Gate?/
Leveraged Restructurings/LBOs and Leveraged
Restructurings*

32-2 The Private-Equity Market 868

*Private-Equity Partnerships/Are Private-Equity
Funds Today's Conglomerates?*

32-3 Fusion and Fission in Corporate Finance 873

*Spin-Offs/Carve-Outs/Asset Sales/Privatization
and Nationalization*

32-4 Bankruptcy 878

*Is Chapter II Efficient?/Workouts/Alternative
Bankruptcy Procedures*

Summary 883 • Further Reading 884 • Problem Sets 885

33 Governance and Corporate Control
around the World 888

33-1 Financial Markets and Institutions 888

*Investor Protection and the Development of
Financial Markets*

33-2 Ownership, Control, and Governance 892

*Ownership and Control in Japan/Ownership and
Control in Germany/European Boards of Directors/
Shareholders versus Stakeholders/Ownership and
Control in Other Countries/Conglomerates Revisited*

33-3 Do These Differences Matter? 902

*Risk and Short-Termism/Growth Industries and
Declining Industries/Transparency and Governance*

Summary 905 • Further Reading 906
Problem Sets 907

I Part Eleven, **Conclusion**

34 Conclusion: What We Do and Do Not Know about Finance 909

34-1 What We Do Know: The Seven Most Important Ideas in Finance 909

- 1. Net Present Value/2. The Capital Asset Pricing Model/3. Efficient Capital Markets/4. Value Additivity and the Law of Conservation of Value/
- 5. Capital Structure Theory/6. Option Theory/
- 7. Agency Theory

34-2 What We Do Not Know: 10 Unsolved Problems in Finance 912

- 1. What Determines Project Risk and Present Value?/2. Risk and Return—What Have We Missed?/3. How Important Are the Exceptions to

the Efficient-Market Theory?/4. Is Management an Off-Balance-Sheet Liability?/5. How Can We Explain the Success of New Securities and New Markets?/6. How Can We Resolve the Payout Controversy?/7. What Risks Should a Firm Take?/8. What Is the Value of Liquidity?/9. How Can We Explain Merger Waves?/10. Why Are Financial Systems So Prone to Crisis?

34-3 A Final Word 918

APPENDIX A-1

GLOSSARY G-1

INDEX I-1

Note: Present value tables are available in Connect.