Co	nte	nts

Foreword	Xİ
Preface	XV
About the Author	XXİ
CHAPTER 1 Introduction Theoretical Precision or Theoretical Resilience? Practical Difficulties as Well Overview of Our Analysis A Quick and Important Note on Mathematical Notation	1 2 3 5 6
CHAPTER 2 Inflation-Protected Bonds as a Valuation Template Formulas behind the Intuition TIPS versus Traditional Fixed-Rate Bonds: Measuring the Differences A Peek Ahead	8 9 14 19
CHAPTER 3 Valuing Uncertain, Perpetual Income Streams Mathematical Development of Unleveraged Firm Valuation What Does the Valuation Formula Tell Us about Sensitivity to Inflation? Sensitivity to Real Discount Rates and Growth Factors Comparison with a Traditional Model of Firm Valuation	22 24 29 37 42
CHAPTER 4 Valuing a Leveraged Equity Security Leverage in the Presence of Corporate Income Taxes From Theory to Practice	46 52 58

viii c	ONTENTS
Chapter 4 Supplement: Relationship between Leveraged	
Equity Discount Rate and Debt-to-Capital Ratio for	
Highly Leveraged Companies	63
CHAPTER 5	
Case Studies in Valuation during the Recent Decade	65
Case 1: Coca-Cola	66
Case 2: Intel	73
Case 3: Procter & Gamble	79
Market-Implied, Inflation-Adjusted Discount Rates for	
Coca-Cola, Intel, and Procter & Gamble	83
Case 4: Enron	85
Tying Up the Package: Practical Lessons from All Four Cases	90
CHAPTER 6	
Treatment of Mergers and Acquisitions	91
Generalizing from the P&G/Gillette Example	97
Applicability of the Results under Alternate Merger Terms	102
Analytical Postscript 1: Common Stock Buybacks and	
Issuances Outside the Merger Framework	105
Analytical Postscript 2: A Word on Executive Stock	
Option Grants	106
CHAPTER 7	
A Fair Representation? Broad Sample Testing over a	
10-Year Market Cycle	109
Sample Descriptive Data	113
Basic Valuation Results	121
Predictive Strength of the Model for the Whole Period	124
Predictive Strength of the Model for Subperiods	128
CHAPTER 8	
Price Volatility and Underlying Causes	132
Deriving the Formula for Price Changes	136
Translating the Price Change Formula into Volatility	
Estimates	139
Digression: Impact of Debt Leverage on Equity Volatility	140
Obtaining the Volatility of the Underlying Variables	147
CHAPTER 9	
Constructing Efficient Portfolios	156
Extracting Expected Equity Returns from Observed	
Price/Earnings Ratios: Part I	161
Extracting Expected Equity Returns from Observed	
Price/Earnings Ratios: Part II	164

Contents	
Extra sting Exposted Equity Potymers from Observed	
Extracting Expected Equity Returns from Observed Price/Earnings Ratios: Part III	168
Creating Efficient Portfolios: Unconstrained Case	172
Creating Efficient Portfolios: Case Where Asset	
Weights Are Required to Be Nonnegative	176
Computing the Variance/Covariance Matrix Inputs	179
CHAPTER 10	
Selecting among Efficient Portfolios and Making Dynamic	
Rebalancing Adjustments	182
Reconciling Portfolio Desirability and Feasibility	186
Turning Theory into Easily Calculated Results	188
Adjusting for Changes in Long-Term Expected Returns	190
on Common Equity Adapting to More General Changes in Risk-Adjusted	190
Expected Returns	197
Recapitulation and an Important Caveat	205
	_00
CHAPTER 11	
How Did We Arrive Here Historically? Where Might We Go	
Prospectively?	207
Crises of Confidence	208
Some Answers Begin to Emerge	211
What If Everyone Followed This Type of Model and	
Investing?	213
Next Steps	213
APPENDIX A	
Mathematical Review of Growth Rates for Earnings,	
Dividends, and Book Value per Share	217
	217
APPENDIX B	
Sustainable and Nonsustainable Inflation Rates	229
APPENDIX C	200
Deriving the "Equity Duration" Formula	239
APPENDIX D Traditional Growth/Equity Valuation Formula	241
	241
APPENDIX E Adjustments Required to the Traditional Growth/Equity	
Valuation Formula to Preserve Inflation Neutrality	244

<u>×</u>	CONTENTS
APPENDIX F Brief Recapitulation of the Miller 1977 Capital Structure Irrelevance Theorem	247
APPENDIX G Time Series Charts of Unleveraged, Inflation-Adjusted Discount Rate Estimates	249
APPENDIX H Comparison of Volatility of Pretax and After-Tax Income	255
APPENDIX I Relationship between Observed Price-to-Earnings ("P/E") Ratios and Nominal Interest Rates	257
APPENDIX J Additional Background on Mathematical Optimization Evect to Constraint Conditions	259
APPENDIX K Derivation of Asset Class Covariances	262
APPENDIX L Expected Return and Variance/Govariance Inputs Underlying	
Portfolio Examples	266
Bibliography	268
Index	275

,