

---

# CONTENTS

<b>Foreword</b>	<b>xi</b>
<b>Acknowledgments</b>	<b>xv</b>
<b>Introduction</b>	<b>xvii</b>
 <b>CHAPTER 1</b>	
<b>Equity Valuation: Applications and Processes</b>	<b>1</b>
Learning Outcomes	1
1. Introduction	1
2. Value Definitions and Valuation Applications	2
2.1. What Is Value?	2
2.1.1. Intrinsic Value	2
2.1.2. Going-Concern Value and Liquidation Value	4
2.1.3. Fair Market Value and Investment Value	4
2.1.4. Definitions of Value: Summary	5
2.2. Applications of Equity Valuation	5
3. The Valuation Process	7
3.1. Understanding the Business	8
3.1.1. Industry and Competitive Analysis	8
3.1.2. Analysis of Financial Reports	10
3.1.3. Sources of Information	11
3.1.4. Considerations in Using Accounting Information	12
3.2. Forecasting Company Performance	17
3.3. Selecting the Appropriate Valuation Model	18
3.3.1. Absolute Valuation Models	18
3.3.2. Relative Valuation Models	20
3.3.3. Valuation of the Total Entity and Its Components	22
3.3.4. Issues in Model Selection and Interpretation	24
3.4. Converting Forecasts to a Valuation	25
3.5. Applying the Valuation Conclusion: The Analyst's Role and Responsibilities	26
4. Communicating Valuation Results	28
4.1. Contents of a Research Report	29
4.2. Format of a Research Report	31
4.3. Research Reporting Responsibilities	32

5. Summary	33
Problems	35

## CHAPTER 2

### Return Concepts 37

Learning Outcomes	37
1. Introduction	37
2. Return Concepts	38
2.1. Holding Period Return	38
2.2. Realized and Expected (Holding Period) Return	39
2.3. Required Return	39
2.4. Expected Return Estimates from Intrinsic Value Estimates	40
2.5. Discount Rate	43
2.6. Internal Rate of Return	43
3. The Equity Risk Premium	44
3.1. Historical Estimates	45
3.1.1. Arithmetic Mean or Geometric Mean	49
3.1.2. Long-term Government Bonds or Short-term Government Bills	50
3.1.3. Adjusted Historical Estimates	51
3.2. Forward-Looking Estimates	53
3.2.1. Gordon Growth Model Estimates	54
3.2.2. Macroeconomic Model Estimates	55
3.2.3. Survey Estimates	57
4. The Required Return on Equity	57
4.1. The Capital Asset Pricing Model	57
4.1.1. Beta Estimation for a Public Company	58
4.1.2. Beta Estimation for Thinly Traded Stocks and Nonpublic Companies	62
4.2. Multifactor Models	64
4.2.1. The Fama-French Model	65
4.2.2. Extensions to the Fama-French Model	69
4.2.3. Macroeconomic and Statistical Multifactor Models	70
4.3. Build-up Method Estimates of the Required Return on Equity	71
4.3.1. Build-up Approaches for Private Business Valuation	71
4.3.2. Bond Yield Plus Risk Premium	73
4.4. The Required Return on Equity: International Issues	75
5. The Weighted Average Cost of Capital	76
6. Discount Rate Selection in Relation to Cash Flows	78
7. Summary	78
Problems	80

## CHAPTER 3

### Discounted Dividend Valuation 83

Learning Outcomes	83
1. Introduction	84
2. Present Value Models	85

2.1. Valuation Based on the Present Value of Future Cash Flows	85
2.2. Streams of Expected Cash Flows	87
3. The Dividend Discount Model	93
3.1. The Expression for a Single Holding Period	93
3.2. The Expression for Multiple Holding Periods	94
4. The Gordon Growth Model	97
4.1. The Gordon Growth Model Equation	97
4.2. The Links among Dividend Growth, Earnings Growth, and Value Appreciation in the Gordon Growth Model	104
4.3. Share Repurchases	104
4.4. The Implied Dividend Growth Rate	105
4.5. The Present Value of Growth Opportunities	106
4.6. Gordon Growth Model and the Price-to-Earnings Ratio	109
4.7. Estimating a Required Return Using the Gordon Growth Model	111
4.8. The Gordon Growth Model: Concluding Remarks	111
5. Multistage Dividend Discount Models	112
5.1. Two-Stage Dividend Discount Model	113
5.2. Valuing a Non-Dividend-Paying Company	116
5.3. The H-Model	117
5.4. Three-Stage Dividend Discount Models	119
5.5. Spreadsheet (General) Modeling	123
5.6. Estimating a Required Return Using Any DDM	125
5.7. Multistage DDM: Concluding Remarks	127
6. The Financial Determinants of Growth Rates	127
6.1. Sustainable Growth Rate	128
6.2. Dividend Growth Rate, Retention Rate, and ROE Analysis	129
6.3. Financial Models and Dividends	132
7. Summary	134
Problems	137

## CHAPTER 4

### Free Cash Flow Valuation

145

Learning Outcomes	145
1. Introduction to Free Cash Flows	146
2. FCFF and FCFE Valuation Approaches	146
2.1. Defining Free Cash Flow	147
2.2. Present Value of Free Cash Flow	148
2.2.1. Present Value of FCFF	148
2.2.2. Present Value of FCFE	149
2.3. Single-Stage (Constant-Growth) FCFF and FCFE Models	149
2.3.1. Constant-Growth FCFF Valuation Model	149
2.3.2. Constant-Growth FCFE Valuation Model	150
3. Forecasting Free Cash Flow	151
3.1. Computing FCFF from Net Income	151
3.2. Computing FCFF from the Statement of Cash Flows	155
3.3. Noncash Charges	157
3.4. Computing FCFE from FCFF	163



3.5. Finding FCFF and FCFE from EBIT or EBITDA	169
3.6. FCFF and FCFE on a Uses-of-Free-Cash-Flow Basis	171
3.7. Forecasting FCFF and FCFE	172
3.8. Other Issues in Free Cash Flow Analysis	177
3.8.1. Analyst Adjustments to CFO	177
3.8.2. Free Cash Flow versus Dividends and Other Earnings Components	177
3.8.3. Free Cash Flow and Complicated Capital Structures	180
4. Free Cash Flow Model Variations	182
4.1. An International Application of the Single-Stage Model	182
4.2. Sensitivity Analysis of FCFF and FCFE Valuations	184
4.3. Two-Stage Free Cash Flow Models	185
4.3.1. Fixed Growth Rates in Stage 1 and Stage 2	186
4.3.2. Declining Growth Rate in Stage 1 and Constant Growth in Stage 2	188
4.4. Three-Stage Growth Models	192
5. Nonoperating Assets and Firm Value	194
6. Summary	194
Problems	196

## CHAPTER 5

### **Residual Income Valuation 209**

Learning Outcomes	209
1. Introduction	210
2. Residual Income	210
2.1. The Use of Residual Income in Equity Valuation	213
2.2. Commercial Implementations	214
3. The Residual Income Model	215
3.1. The General Residual Income Model	219
3.2. Fundamental Determinants of Residual Income	223
3.3. Single-Stage Residual Income Valuation	224
3.4. Multistage Residual Income Valuation	225
4. Residual Income Valuation in Relation to Other Approaches	230
4.1. Strengths and Weaknesses of the Residual Income Model	232
4.2. Broad Guidelines for Using a Residual Income Model	233
5. Accounting and International Considerations	234
5.1. Violations of the Clean Surplus Relationship	235
5.2. Balance Sheet Adjustments for Fair Value	243
5.3. Intangible Assets	244
5.4. Nonrecurring Items	247
5.5. Other Aggressive Accounting Practices	248
5.6. International Considerations	248
6. Summary	249
Problems	252

3.5. Finding FCFF and FCFE from EBIT or EBITDA	169
3.6. FCFF and FCFE on a Uses-of-Free-Cash-Flow Basis	171
3.7. Forecasting FCFF and FCFE	172
3.8. Other Issues in Free Cash Flow Analysis	177
3.8.1. Analyst Adjustments to CFO	177
3.8.2. Free Cash Flow versus Dividends and Other Earnings Components	177
3.8.3. Free Cash Flow and Complicated Capital Structures	180
4. Free Cash Flow Model Variations	182
4.1. An International Application of the Single-Stage Model	182
4.2. Sensitivity Analysis of FCFF and FCFE Valuations	184
4.3. Two-Stage Free Cash Flow Models	185
4.3.1. Fixed Growth Rates in Stage 1 and Stage 2	186
4.3.2. Declining Growth Rate in Stage 1 and Constant Growth in Stage 2	188
4.4. Three-Stage Growth Models	192
5. Nonoperating Assets and Firm Value	194
6. Summary	194
Problems	196

## CHAPTER 5

### Residual Income Valuation 209

Learning Outcomes	209
1. Introduction	210
2. Residual Income	210
2.1. The Use of Residual Income in Equity Valuation	213
2.2. Commercial Implementations	214
3. The Residual Income Model	215
3.1. The General Residual Income Model	219
3.2. Fundamental Determinants of Residual Income	223
3.3. Single-Stage Residual Income Valuation	224
3.4. Multistage Residual Income Valuation	225
4. Residual Income Valuation in Relation to Other Approaches	230
4.1. Strengths and Weaknesses of the Residual Income Model	232
4.2. Broad Guidelines for Using a Residual Income Model	233
5. Accounting and International Considerations	234
5.1. Violations of the Clean Surplus Relationship	235
5.2. Balance Sheet Adjustments for Fair Value	243
5.3. Intangible Assets	244
5.4. Nonrecurring Items	247
5.5. Other Aggressive Accounting Practices	248
5.6. International Considerations	248
6. Summary	249
Problems	252



**CHAPTER 6****Market-Based Valuation: Price and Enterprise Value Multiples****257**

Learning Outcomes	257
1. Introduction	258
2. Price and Enterprise Value Multiples in Valuation	259
2.1. The Method of Comparables	259
2.2. The Method Based on Forecasted Fundamentals	260
3. Price Multiples	262
3.1. Price to Earnings	262
3.1.1. Alternative Definitions of P/E	263
3.1.2. Calculating the Trailing P/E	265
3.1.3. Forward P/E	272
3.1.4. Valuation Based on Forecasted Fundamentals	275
3.1.5. Valuation Based on Comparables	279
3.1.6. P/Es in Cross-Country Comparisons	291
3.1.7. Using P/Es to Obtain Terminal Value in Multistage Dividend Discount Models	293
3.2. Price to Book Value	295
3.2.1. Determining Book Value	298
3.2.2. Valuation Based on Forecasted Fundamentals	304
3.2.3. Valuation Based on Comparables	305
3.3. Price to Sales	306
3.3.1. Determining Sales	307
3.3.2. Valuation Based on Forecasted Fundamentals	310
3.3.3. Valuation Based on Comparables	311
3.4. Price to Cash Flow	312
3.4.1. Determining Cash Flow	314
3.4.2. Valuation Based on Forecasted Fundamentals	316
3.4.3. Valuation Based on Comparables	317
3.5. Price to Dividends and Dividend Yield	318
3.5.1. Calculation of Dividend Yield	318
3.5.2. Valuation Based on Forecasted Fundamentals	319
3.5.3. Valuation Based on Comparables	320
4. Enterprise Value Multiples	320
4.1. Enterprise Value to EBITDA	321
4.1.1. Determining Enterprise Value	322
4.1.2. Valuation Based on Forecasted Fundamentals	325
4.1.3. Valuation Based on Comparables	325
4.2. Other Enterprise Value Multiples	326
4.3. Enterprise Value to Sales	327
4.4. Price and Enterprise Value Multiples in a Comparable Analysis: Some Illustrative Data	328
5. International Considerations When Using Multiples	330
6. Momentum Valuation Indicators	332
7. Valuation Indicators: Issues in Practice	337

7.1. Averaging Multiples: The Harmonic Mean	338
7.2. Using Multiple Valuation Indicators	340
8. Summary	344
Problems	346

## **CHAPTER 7**

### **Private Company Valuation 353**

Learning Outcomes	353
1. Introduction	354
2. The Scope of Private Company Valuation	354
2.1. Private and Public Company Valuation: Similarities and Contrasts	354
2.1.1. Company-Specific Factors	355
2.1.2. Stock-Specific Factors	356
2.2. Reasons for Performing Valuations	356
3. Definitions (Standards) of Value	358
4. Private Company Valuation Approaches	360
4.1. Earnings Normalization and Cash Flow Estimation Issues	361
4.1.1. Earnings Normalization Issues for Private Companies	361
4.1.2. Cash Flow Estimation Issues for Private Companies	365
4.2. Income Approach Methods of Private Company Valuation	367
4.2.1. Required Rate of Return: Models and Estimation Issues	368
4.2.2. Free Cash Flow Method	373
4.2.3. Capitalized Cash Flow Method	373
4.2.4. Excess Earnings Method	375
4.3. Market Approach Methods of Private Company Valuation	377
4.3.1. Guideline Public Company Method	379
4.3.2. Guideline Transactions Method	382
4.3.3. Prior Transaction Method	384
4.4. Asset-based Approach to Private Company Valuation	385
4.5. Valuation Discounts and Premiums	386
4.5.1. Lack of Control Discounts	388
4.5.2. Lack of Marketability Discounts	389
4.6. Business Valuation Standards and Practices	393
5. Summary	395
Problems	397

### **Glossary 405**

### **References 413**

### **About the Authors 419**

### **About the CFA Program 421**

### **Index 423**