INVESTMENTS

Principles of Portfolio and Equity Analysis

CONTENTS

Foreword					
Ack	Acknowledgments				
Intro	ntroduction				
	APTER 1 arket Organization and Structure	1			
	Learning Outcomes	1			
	Introduction	1			
2.	The Functions of the Financial System	2 3			
	2.1. Helping People Achieve Their Purposes in Using the Financial System				
	2.2. Determining Rates of Return	8			
_	2.3. Capital Allocation Efficiency	9			
3.	Assets and Contracts	10			
	3.1. Classifications of Assets and Markets	11			
	3.2. Securities	13			
	3.3. Currencies	16			
	3.4. Contracts 3.5. Commodities	16 22			
	3.6. Real Assets	22			
4	Financial Intermediaries	24			
٦.	4.1. Brokers, Exchanges, and Alternative Trading Systems	25			
	4.2. Dealers	26			
	4.3. Securitizers	27			
	4.4. Depository Institutions and Other Financial Corporations	29			
	4.5. Insurance Companies	30			
	4.6. Arbitrageurs	31			
	4.7. Settlement and Custodial Services	33			
	4.8. Summary	35			
5.	•	35			
	5.1. Short Positions	36			
	5.2. Levered Positions	38			

⁄i						Cor	ntents

	•		
6	5. Orders	4	41
	6.1. Execution Instructions		42
	6.2. Validity Instructions		45
	6.3. Clearing Instructions	•	47
7	7. Primary Security Markets	•	47
	7.1. Public Offerings	•	4 8
	7.2. Private Placements and Other Primary-Market Transactions		50
	7.3. Importance of Secondary Markets to Primary Markets		51
8	3. Secondary Security Market and Contract Market Structures		51
	8.1. Trading Sessions		51
	8.2. Execution Mechanisms		52
	8.3. Market Information Systems		56
9	D. Well-Functioning Financial Systems		56
). Market Regulation		58
11	. Summary	(61
	Problems		63
CHA	APTER 2		
S	ecurity Market Indices	`\	73
	Learning Outcomes		73
1.	Introduction		73
	Index Definition and Calculations of Value and Returns		75
	2.1. Calculation of Single-Period Returns		75
	2.2. Calculation of Index Values over Multiple Time Periods		 77
3.	Index Construction and Management		78
٠.	3.1. Target Market and Security Selection		, o 79
	3.2. Index Weighting		, , 79
	3.3. Index Management: Rebalancing and Reconstitution		88
4.	Uses of Market Indices		90
-,	4.1. Gauges of Market Sentiment		90
	4.2. Proxies for Measuring and Modeling Returns, Systematic Risk,		, ,
	and Risk-Adjusted Performance		90
	4.3. Proxies for Asset Classes in Asset Allocation Models		90
	4.4. Benchmarks for Actively Managed Portfolios		91
	4.5. Model Portfolios for Investment Products		91
5.			91
٠.	5.1. Broad Market Indices		91
	5.2. Multimarket Indices		92
	5.3. Sector Indices		92
	5.4. Style Indices		 93
6.			94
٠.	6.1. Construction		94
	6.2. Types of Fixed-Income Indices		95
7.	Indices for Alternative Investments		96
/ •	7.1. Commodity Indices		98
	7.2. Real Estate Investment Trust Indices		98
	7.3. Hedge Fund Indices		98
	7.5. Heage I and marces		70

-	•
Contents	V1
Jonienis	VI

8.	Summary	101
	Problems	102
	:-	
	APTER 3	100
IVI	arket Efficiency	109
	Learning Outcomes	109
	Introduction	109
2.	The Concept of Market Efficiency	111
	2.1. The Description of Efficient Markets	111
	2.2. Market Value versus Intrinsic Value	113
	2.3. Factors Contributing to and Impeding a Market's Efficiency	114
	2.4. Transaction Costs and Information-Acquisition Costs	117
3.	Forms of Market Efficiency	118
	3.1. Weak Form	119
	3.2. Semistrong Form	119
	3.3. Strong Form	122
,	3.4. Implications of the Efficient Market Hypothesis	122
4.	Market Pricing Anomalies	124
	4.1. Time-Series Anomalies 4.2. Cross-Sectional Anomalies	125
	4.2. Cross-Sectional Anomalies 4.3. Other Anomalies	127 128
	4.4. Implications for Investment Strategies	130
5	Behavioral Finance	130
٦.	5.1. Loss Aversion	131
	5.2. Overconfidence	131
	5.3. Other Behavioral Biases	132
	5.4. Information Cascades	133
	5.5. Behavioral Finance and Efficient Markets	133
6	Summary	134
0.	Problems	134
		131
CHA	APTER 4	
Po	ortfolio Management: An Overview	139
	Learning Outcomes	139
1.	Introduction	139
	A Portfolio Perspective on Investing	140
	2.1. Portfolio Diversification: Avoiding Disaster	140
	2.2. Portfolios: Reduce Risk	142
	2.3. Portfolios: Composition Matters for the Risk-Return Tradeoff	145
	2.4. Portfolios: Not Necessarily Downside Protection	145
	2.5. Portfolios: The Emergence of Modern Portfolio Theory	148
3.	Investment Clients	149
	3.1. Individual Investors	149
	3.2. Institutional Investors	150

viii	Contents
111	Contents

4.	Steps in the Portfolio Management Process	156
	4.1. Step One: The Planning Step	156
	4.2. Step Two: The Execution Step	156
	4.3. Step Three: The Feedback Step	159
5	Pooled Investments	160
٦.	5.1. Mutual Funds	160
		164
	5.2. Types of Mutual Funds	
_	5.3. Other Investment Products	167
6.	Summary	172
	Problems	172
CH.	APTER 5	
Po	ortfolio Risk and Return: Part I	175
	Learning Outcomes	175
	Introduction	175
2.	Investment Characteristics of Assets	176
	2.1. Return	176
	2.2. Other Major Return Measures and Their Applications	` 185
	2.3. Variance and Covariance of Returns	` 189
	2.4. Historical Return and Risk	192
•	2.5. Other Investment Characteristics	197
3.	Risk Aversion and Portfolio Selection	200
	3.1. The Concept of Risk Aversion	201
	3.2. Utility Theory and Indifference Curves	202
	3.3. Application of Utility Theory to Portfolio Selection	206
4.	Portfolio Risk	209
	4.1. Portfolio of Two Risky Assets	210
	4.2. Portfolio of Many Risky Assets	215
	4.3. The Power of Diversification	216
5.	Efficient Frontier and Investor's Optimal Portfolio	222
	5.1. Investment Opportunity Set	222
	5.2. Minimum-Variance Portfolios	223
	5.3. A Risk-Free Asset and Many Risky Assets	225
	5.4. Optimal Investor Portfolio	228
6	Summary	234
٠.	Problems	234
		_0 -
	APTER 6	
Po	ortfolio Risk and Return: Part II	243
_	Learning Outcomes	243
1.	Introduction	243
2.	Capital Market Theory	244
	2.1. Portfolio of Risk-Free and Risky Assets	244
	2.2. The Capital Market Line	248

Contents ix

3.	Pricing of Risk and Computation of Expected Return	256
	3.1. Systematic Risk and Nonsystematic Risk	257
	3.2. Calculation and Interpretation of Beta	259
4.	The Capital Asset Pricing Model	267 267
	4.1. Assumptions of the CAPM4.2. The Security Market Line	269
	4.3. Applications of the CAPM	272
5	Beyond the Capital Asset Pricing Model	284
٦.	5.1. The CAPM	284
	5.2. Limitations of the CAPM	284
	5.3. Extensions to the CAPM	286
	5.4. The CAPM and Beyond	287
6.	Summary	287
	Problems	288
CH/	APTER 7	
	asics of Portfolio Planning and Construction	295
	Learning Outcomes	295
	Introduction	295
2.	Portfolio Planning	296
	2.1. The Investment Policy Statement	296
	2.2. Major Components of an IPS	297
_	2.3. Gathering Client Information	309
3.	Portfolio Construction	312
	3.1. Capital Market Expectations	312
	3.2. The Strategic Asset Allocation	313
	3.3. Steps toward an Actual Portfolio	321
4	3.4. Additional Portfolio Organizing Principles Summary	325 326
4.	Problems	327
	APTER 8 verview of Equity Securities	331
	Learning Outcomes	331
1.	Introduction	331
2.	Equity Securities in Global Financial Markets	332
3.	* · ·	338
	3.1. Common Shares	339
	3.2. Preference Shares	343
4.	Private versus Public Equity Securities	345
5.	Investing in Nondomestic Equity Securities	347
	5.1. Direct Investing	348
	5.2. Depository Receipts	349

X

6.	Risk and Return Characteristics of Equity Securities	353
	6.1. Return Characteristics of Equity Securities	353
	6.2. Risk of Equity Securities	354
7.	Equity Securities and Company Value	356
	7.1. Accounting Return on Equity	356
	7.2. The Cost of Equity and Investors' Required Rates of Return	361
	Summary	362
`	Problems	363
CHA	APTER 9	
	troduction to Industry and Company Analysis	369
	Learning Outcomes	369
1.	Introduction	370
2.	Uses of Industry Analysis	370
3.	11	371
	3.1. Products and/or Services Supplied	371
	3.2. Business-Cycle Sensitivities	372
,	3.3. Statistical Similarities	3.74
4.	Industry Classification Systems	374
	4.1. Commercial Industry Classification Systems	374
	4.2. Governmental Industry Classification Systems	378
	4.3. Strengths and Weaknesses of Current Systems	380
5.	4.4. Constructing a Peer Group Describing and Analyzing an Industry	380 385
٦.	5.1. Principles of Strategic Analysis	386
	5.2. External Influences on Industry Growth, Profitability, and Risk	405
6.	Company Analysis	412
0.	6.1. Elements That Should Be Covered in a Company Analysis	413
	6.2. Spreadsheet Modeling	416
7.	Summary	417
•	Problems	420
CII	APTER 10	
	APTER 10 quity Valuation: Concepts and Basic Tools	425
	Learning Outcomes	425
1.	Introduction	420
2.		420
3.		428
	Present Value Models: The Dividend Discount Model	430
= *	4.1. Preferred Stock Valuation	434
	4.2. The Gordon Growth Model	436
	4.3. Multistage Dividend Discount Models	441
5.		445
	5.1. Relationships among Price Multiples, Present Value Models,	
	· and Fundamentals	445

Contents xi

	5.2. The Method of Comparables	449
	5.3. Illustration of a Valuation Based on Price Multiples	452
	5.4. Enterprise Value	454
6.	Asset-Based Valuation	457
7.	Summary	461
	Problems -	462
	APTER 11	
Ec	quity Market Valuation	469
	Learning Outcomes	469
	Introduction	469
2.	Estimating a Justified P/E Ratio	470
	2.1. Neoclassical Approach to Growth Accounting	470
	2.2. The China Economic Experience	472
	2.3. Quantifying China's Future Economic Growth	474
2	2.4. Equity Market Valuation	476
3.	Top-Down and Bottom-Up Forecasting 3.1. Portfolio Suitability of Each Forecasting Type	484 485
	3.2. Using Both Forecasting Types	487
	3.3. Top-Down and Bottom-Up Forecasting of Market Earnings	107
	per Share	488
4.	Relative Value Models	491
	4.1. Earnings-Based Models	491
	4.2. Asset-Based Models	502
5.	Summary	506
	Problems	508
CHA	APTER 12	·
	echnical Analysis	515
	Learning Outcomes	515
1.	Introduction	515
2.		516
	2.1. Principles and Assumptions	516
	2.2. Technical and Fundamental Analysis	518
3.	Technical Analysis Tools	520
	3.1. Charts	520
	3.2. Trend	530
	3.3. Chart Patterns	532
	3.4. Technical Indicators	544
,	3.5. Cycles	562
4.	Elliott Wave Theory	563
	Intermarket Analysis	566
6.	Summary Problems	568 570
	T TODICIIIS	<i>)/</i> (

xii	Contents
Glossary	575
References	589
About the Authors	595
About the CFA Program	601
Index	603