

ETHICAL AND PROFESSIONAL STANDARDS

CFA® Program Curriculum
2016 • LEVEL III • VOLUME 1

CONTENTS

How to Use the CFA Program Curriculum		v
Curriculum Development Process		v
Organization of the Curriculum		vi
Features of the Curriculum		vi
Designing Your Personal Study Program		vii
Feedback		ix
Ethical and Professional Standards		
Study Session 1	Code of Ethics and Standards of Professional Conduct	3
Reading 1	Code of Ethics and Standards of Professional Conduct	5
	Preface	5
	Evolution of the CFA Institute Code of Ethics and Standards of Professional Conduct	6
	<i>Standards of Practice Handbook</i>	6
	Summary of Changes in the Eleventh Edition	7
	CFA Institute Professional Conduct Program	9
	Adoption of the Code and Standards	10
	Acknowledgments	10
	Ethics and the Investment Industry	11
	Why Ethics Matters	11
	CFA Institute Code of Ethics and Standards of Professional Conduct	15
	Preamble	15
	The Code of Ethics	15
	Standards of Professional Conduct	16
Reading 2	Guidance for Standards I—VII	21
	Standard I: Professionalism	21
	Standard 1(A) Knowledge of the Law	21
	Guidance	21
	Recommended Procedures for Compliance	26
	Application of the Standard	27
	Standard 1(B) Independence and Objectivity	30
	Guidance	30
	Recommended Procedures for Compliance	35
	Application of the Standard	36
	Standard 1(C) Misrepresentation	43
	Guidance	43
	Recommended Procedures for Compliance	46
	Application of the Standard	48
	Standard 1(D) Misconduct	53
	Guidance	53
	Recommended Procedures for Compliance	54
	Application of the Standard	54

Standard II: Integrity of Capital Markets	56
Standard 11(A) Material Nonpublic Information	56
Guidance	56
Recommended Procedures for Compliance	60
Application of the Standard	63
Standard 11(B) Market Manipulation	68
Guidance	68
Application of the Standard	69
Standard III: Duties to Clients	73
Standard III(A) Loyalty, Prudence, and Care	73
Guidance	73
Recommended Procedures for Compliance	77
Application of the Standard	78
Standard 111(6) Fair Dealing	82
Guidance	82
Recommended Procedures for Compliance	84
Application of the Standard	86
Standard III(C) Suitability	90
Guidance	90
Recommended Procedures for Compliance	93
Application of the Standard	94
Standard 111(D) Performance Presentation	97
Guidance	97
Recommended Procedures for Compliance	98
Application of the Standard	98
Standard 111(E) Preservation of Confidentiality	101
Guidance	101
Recommended Procedures for Compliance	103
Application of the Standard	103
Standard IV: Duties to Employers	105
Standard IV(A) Loyalty	105
Guidance	105
Recommended Procedures for Compliance	109
Application of the Standard	109
Standard IV(B) Additional Compensation Arrangements	116
Guidance	116
Recommended Procedures for Compliance	116
Application of the Standard	116
Standard IV(C) Responsibilities of Supervisors	118
Guidance	118
Recommended Procedures for Compliance	120
Application of the Standard	122
Standard V: Investment Analysis, Recommendations, and Actions	126
Standard V(A) Diligence and Reasonable Basis	126
Guidance	126
Recommended Procedures for Compliance	130
Application of the Standard	130
Standard V(B) Communication with Clients and Prospective Clients	137
Guidance	138

	.Recommended Procedures for Compliance	140
	Application of the Standard	141
	- Standard V(C) Record Retention	146
	Guidance	146
	Recommended Procedures for Compliance	147
	Application of the Standard	148
	Standard VI: Conflicts of Interest	149
	Standard VI(A) Disclosure of Conflicts	149
	Guidance	149
	Recommended Procedures for Compliance	152
	Application of the Standard	152
	Standard VI(B) Priority of Transactions	157
	Guidance	157
	Recommended Procedures for Compliance	158
	Application of the Standard	160
	Standard VI(C) Referral Fees	162
	Guidance	162
	Recommended Procedures for Compliance	162
	Application of the Standard	162
	Standard VII: Responsibilities as a CFA Institute Member or CFA Candidate	165
	Standard VII(A) Conduct as Participants in CFA Institute Programs	165
	Guidance	165
	Application of the Standard	167
	Standard VII(B) Reference to CFA Institute, the CFA Designation, and the CFA Program	170
	Guidance	170
	Recommended Procedures for Compliance	174
	Application of the Standard	174
	<i>Practice Problems</i>	177
	<i>Solutions</i> »	187
Study Session 2	Ethical and Professional Standards in Practice	195
Reading 3	Application of the Code and Standards	197
	Introduction	197
	The Consultant	198
	Mark Vernley	198
	The Consulting Contract	199
	Evaluation of the Situation	199
	Pearl Investment Management (A)	202
	Knowledge of the Law and Obligation to Obey	203
	Responsibilities of Supervisors	204
	Trading for Personal Accounts	204
	Maintaining Confidential Client Information	205
	Pearl Investment Management (B)	206
	Responsibility of Candidates to Comply with the Code and Standards	206
	Dealing with Clients	207
	Errors in Client Accounts	208

	Pearl Investment Management (C)	208
	Proper Care and Independent Judgment	210
	Use of Insider Information	210
	Using the Research of Others	211
	Reasonable Basis for a Research Opinion	211
	Relevant Factors and Fact versus Opinion in Research Reports	212
	Misrepresentation of Services and Performance Presentation	212
	<i>Practice Problems</i>	214
	<i>Solutions</i>	231
Reading 4	Asset Manager Code of Professional Conduct	239
	Introduction	239
	Adopting the Code and Claiming Compliance	241
	Acknowledgement of Claim of Compliance to CFA Institute	241
	General Principles of Conduct	241
	Asset Manager Code of Professional Conduct	242
	Loyalty to Clients	242
	Investment Process and Actions	242
	Trading	242
	Risk Management, Compliance, and Support	243
	Performance and Valuation	243
	Disclosures	243
	Appendix 6—Recommendations and Guidance	244
	Loyalty to Clients	244
	Investment Process and Actions	245
	Trading	248
	Risk Management, Compliance, and Support	250
	Performance and Valuation	254
	Disclosures	255
	<i>Practice Problems</i>	259
	<i>Solutions</i>	264
	Glossary	G-1
	Index	1-1

BEHAVIORAL FINANCE, INDIVIDUAL INVESTORS, AND INSTITUTIONAL INVESTORS

CFA® Program Curriculum
2016 • LEVEL III • VOLUME 2

CONTENTS

How to Use the CFA Program Curriculum		vii
Curriculum Development Process		vii
Organization of the Curriculum		viii
Features of the Curriculum		viii
Designing Your Personal Study Program		ix
Feedback		xi
Portfolio Management		
Study Session 3	Behavioral Finance	3
Reading 5	The Behavioral Finance Perspective	5
	Introduction	5
	Behavioral versus Traditional Perspectives	7
	Traditional Finance Perspectives on Individual Behavior	8
	Behavioral Finance Perspectives on Individual Behavior	14
	Neuro-economics	19
	Decision Making	20
	Decision Theory	20
	Bounded Rationality	22
	Prospect Theory	24
	Perspectives on Market Behavior and Portfolio Construction	28
	Traditional Perspectives on Market Behavior	28
	Traditional Perspectives on Portfolio Construction	36
	Alternative Models of Market Behavior and Portfolio Construction	36
	<i>Summary</i>	42
	<i>Practice Problems</i>	45
	<i>"Solutions"</i>	47
Reading 6	The Behavioral Biases of Individuals	49
	Introduction	49
	Categorizations of Behavioral Biases	50
	Differences between Cognitive Errors and Emotional Biases	51
	Cognitive Errors	52
	Belief Perseverance Biases	52
	Information-Processing Biases	62
	Cognitive Errors: Conclusion	69
	Emotional Biases	69
	Loss-Aversion Bias	70
	Overconfidence Bias	73
	Self-Control Bias	76
	Status Quo Bias	77
	Endowment Bias	78
	Regret-Aversion Bias	79
	Emotional Biases: Conclusion	80

	Investment Policy and Asset Allocation	81
	Behaviorally Modified Asset Allocation	82
	Case Studies	86
	<i>Summary</i>	96
	<i>Practice Problems</i>	99
	<i>Solutions</i>	102
Reading 7	Behavioral Finance and Investment Processes	107
	Introduction	107
	The Uses and Limitations of Classifying Investors into Types	108
	General Discussion of Investor Types	108
	Limitations of Classifying Investors into Various Types	116
	How Behavioral Factors Affect Adviser-Client Relations	117
	Formulating Financial Goals	118
	Maintaining a Consistent Approach	118
	Investing as the Client Expects	118
	Ensuring Mutual Benefits	119
	Limitations of Traditional Risk Tolerance Questionnaires	119
	How Behavioral Factors Affect Portfolio Construction	120
	Inertia and Default	120
	Naive Diversification	122
	Company Stock: Investing in the Familiar	122
	Excessive Trading	123
	Home Bias	124
	Behavioral Portfolio Theory	124
	Behavioral Finance and Analyst Forecasts	125
	Overconfidence in Forecasting Skills	126
	Influence of Company's Management on Analysis	131
	Analyst Biases in Conducting Research	133
	How Behavioral Factors Affect Committee Decision Making	136
	Investment Committee Dynamics	137
	Techniques for Structuring and Operating Committees to Address	
	Behavioral Factors	137
	How Behavioral Finance Influences Market Behavior	138
	Defining Market Anomalies	138
	Momentum	140
	Bubbles and Crashes	141
	Value and Growth	144
	<i>Summary</i>	145
	<i>Practice Problems</i>	148
	<i>Solutions</i>	153
Study Session 4	Private Wealth Management (1)	155
Reading 8	Managing Individual Investor Portfolios	157
	Introduction	158
	Case Study	158
	The Inger Family	159

	Investor Characteristics	162
	Situational Profiling	162
	"Psychological Profiling"	165
	Investment Policy Statement	171
	Setting Return and Risk Objectives	172
	Constraints	176
	An Introduction to Asset Allocation	188
	Asset Allocation Concepts	188
	Monte Carlo Simulation in Personal Retirement Planning	196
	<i>Summary</i>	200
	<i>Practice Problems</i>	202
	<i>Solutions</i>	213
Reading 9	Taxes and Private Wealth Management in a Global Context	225
	Introduction	225
	Overview of Global Income Tax Structures	226
	International Comparisons of Income Taxation	227
	Common Elements	227
	General Income Tax Regimes	229
	Other Considerations	232
	After-Tax Accumulations and Returns for Taxable Accounts	232
	Simple Tax Environments	232
	Blended Taxing Environments	239
	Accrual Equivalent Returns and Tax Rates	243
	Types of Investment Accounts	245
	Tax-Deferred Accounts	246
	Tax-Exempt Accounts	246
	After-Tax Asset Allocation	247
	Choosing Among Account Types	248
	Taxes and Investment Risk	250
	Implications for Wealth Management	251
	Asset Location	251
	Trading Behavior	254
	Tax Loss Harvesting	255
	Holding Period Management	258
	After-Tax Mean-Variance Optimization	260
	<i>Summary</i>	260
	<i>Practice Problems</i>	262
	<i>Solutions</i>	267
Reading 10	Estate Planning in a Global Context	271
	Introduction	272
	Domestic Estate Planning: Some Basic Concepts	273
	Estates, Wills, and Probate	273
	Legal Systems, Forced Heirship, and Marital Property Regimes	274
	Income, Wealth, and Wealth Transfer Taxes	276
	Core Capital and Excess Capital	278
	Estimating Core Capital with Mortality Tables	280
	Estimating Core Capital with Monte Carlo Analysis	285

Transferring Excess Capital	288
Lifetime Gifts and Testamentary Bequests	288
Generation Skipping	296
Spousal Exemptions	297
Valuation Discounts	297
Deemed Dispositions	298
Charitable Gratuitous Transfers	298
Estate Planning Tools	299
Trusts	299
Foundations	302
Life Insurance	302
Companies and Controlled Foreign Corporations	303
Cross-Border Estate Planning	303
The Hague Conference	304
Tax System	305
Double Taxation	307
Transparency and Offshore Banking	310
<i>Summary</i>	311
<i>Practice Problems</i>	313
<i>Solutions</i>	315
Study Session 5	Private Wealth Management (2)
	319
Reading 11	Concentrated Single-Asset Positions
	321
Introduction	322
Concentrated Single-Asset Positions: Overview	323
Investment Risks of Concentrated Positions	324
General Principles of Managing Concentrated Single-Asset Positions	327
Objectives in Dealing with Concentrated Positions	327
Considerations Affecting All Concentrated Positions	328
Institutional and Capital Market Constraints	329
Psychological Considerations	331
Goal-Based Planning in the Concentrated-Position Decision-Making Process	334
Asset Location and Wealth Transfers	337
Concentrated Wealth Decision Making: A Five-Step Process	340
Managing the Risk of Concentrated Single-Stock Positions	340
Introduction to Key Tax Considerations	341
Introduction to Key Non-Tax Considerations	342
Strategies	343
Managing the Risk of Private Business Equity	356
Profile of a Typical Business Owned by a Private Client	357
Profile of a Typical Business Owner	358
Monetization Strategies for Business Owners	358
Considerations in Evaluating Different Strategies	362
Managing the Risk of Investment Real Estate	366
Monetization Strategies for Real Estate Owners	367

<i>Summary</i>	370
<i>Practice Problems</i>	372
<i>Solutions</i>	376
Lifetime Financial Advice: Human Capital, Asset Allocation, and Insurance	381
(3) Introduction	382
S The Changing Retirement Landscape	383
O Traditional Advice Model for Individual Investors	385
O Three Risk Factors and Hedges	386
O An Integrated Framework	389
Human Capital and Asset Allocation Advice	390
What Is Human Capital?	391
Role of Human Capital in Asset Allocation	391
Case Studies	395
<i>Summary</i>	401
Human Capital, Life Insurance, and Asset Allocation	402
Life Insurance and Asset Allocation Decisions	402
Human Capital, Life Insurance, and Asset Allocation	403
Description of the Model	404
Case Studies	406
<i>Summary</i>	411
Retirement Portfolio and Longevity Risk	412
Three Risk Factors in Retirement	412
Controlling the Three Risks	416
Longevity Risk and Sources of Retirement Income	417
Longevity Risk and Payout Annuities	418
Asset Allocation, Payout Annuities, and Disciplined Savings	421
<i>Summary</i>	422
<i>Practice Problems</i>	423
<i>Solutions</i>	427
Portfolio Management for Institutional Investors	431
Managing Institutional Investor Portfolios	433
Introduction	434
Pension Funds	434
Defined-Benefit Plans: Background and Investment Setting	436
Defined-Contribution Plans: Background and Investment Setting	449
Hybrid and Other Plans	455
Foundations and Endowments	456
Foundations: Background and Investment Setting	456
Endowments: Background and Investment Setting	461
The Insurance Industry	471
Life Insurance Companies: Background and Investment Setting	471
Non-Life Insurance Companies: Background and Investment Setting	483
Banks and Other Institutional Investors	491
Banks: Background and Investment Setting	491
Other Institutional Investors: Investment Intermediaries	498

<i>Summary</i>	499
<i>Practice Problems</i>	502
<i>Solutions</i>	509

Reading 14

Linking Pension Liabilities to Assets	517
Introduction	518
How to Define Risk?	519
Pension Liabilities Decomposed	519
Market Related Exposures	520
Non-Market Related Exposures: Liability Noise	525
Linking Assets and Liabilities via Fundamental Factors	526
Setting Asset and Liability Sensitivities	527
Results	530
Designing Investment Policies Relative to Liabilities	531
Conclusion	532
<i>Appendix 14</i>	533
<i>Practice Problems</i>	534
<i>Solutions</i>	538

Glossary	G-1
Index	I-1

ECONOMIC ANALYSIS AND ASSET ALLOCATION

CFA® Program Curriculum
2016 • LEVEL III • VOLUME 3

CONTENTS

How to Use the CFA Program Curriculum		v
Curriculum Development Process		v
Organization of the Curriculum		vi
Features of the Curriculum		vi
Designing Your Personal Study Program		vii
Feedback		ix
Portfolio Management		
Study Session 7	Applications of Economic Analysis to Portfolio Management	
Reading 15	Capital Market Expectations	5
	Introduction	6
	Organizing the Task: Framework and Challenges	7
	A Framework for Developing Capital Market Expectations	7
	Challenges in Forecasting	13
	Tools for Formulating Capital Market Expectations	23
	Formal Tools	23
	Survey and Panel Methods	48
	Judgment	50
	Economic Analysis	50
	Business Cycle Analysis	51
	Economic Growth Trends	66
	Exogenous Shocks	72
	International Interactions	73
	Economic Forecasting	78
	Using Economic Information in Forecasting Asset Class Returns	87
	Information Sources for Economic Data and Forecasts	102
	<i>Summary</i>	104
	<i>Practice Problems</i>	106
	<i>Solutions</i>	114
Reading 16	Equity Market Valuation	123
	Introduction	123
	Estimating a Justified P/E Ratio	124
	Neoclassical Approach to Growth Accounting	124
	The China Economic Experience	126
	Quantifying China's Future Economic Growth	128
	Equity Market Valuation	129
	Top-Down and Bottom-Up Forecasting	138
	Portfolio Suitability of Each Forecasting Type	140
	Using Both Forecasting Types	141
	Top-Down and Bottom-Up Forecasting of Market Earnings per Share	142
	Relative Value Models	145
	Earnings-Based Models	145

	Asset-Based Models	155
	<i>Summary</i>	159
	<i>Practice Problems</i>	162
	<i>Solutions</i>	169
Study Session 8	Asset Allocation and Related Decisions in Portfolio Management (1)	173
Reading 17	Asset Allocation	175
	Introduction	176
	What Is Asset Allocation?	177
	The Role of Strategic Asset Allocation in Relation to Systematic Risk	178
	Strategic versus Tactical Asset Allocation	179
	The Empirical Debate on the Importance of Asset Allocation	180
	Asset Allocation and the Investor's Risk and Return Objectives	182
	Asset-Only and Asset/Liability Management Approaches to	
	Strategic Asset Allocation	182
	Return Objectives and Strategic Asset Allocation	185
	Risk Objectives and Strategic Asset Allocation	187
	Behavioral Influences on Asset Allocation	191
	The Selection of Asset Classes	193
	Criteria for Specifying Asset Classes	194
	The Inclusion of International Assets (Developed and Emerging	
	Markets)	197
	Alternative Investments	207
	The Steps in Asset Allocation	208
	Optimization	211
	The Mean-Variance Approach	211
	The Resampled Efficient Frontier	230
	The Black-Litterman Approach	231
	Monte Carlo Simulation	239
	* Asset/Liability Management	241
	Experience-Based Approaches	249
	Implementing the Strategic Asset Allocation	251
	Implementation Choices	251
	Currency Risk Management Decisions	252
	Rebalancing to the Strategic Asset Allocation	252
	Strategic Asset Allocation for Individual Investors	253
	Human Capital	253
	Other Considerations in Asset Allocation for Individual Investors	259
	Strategic Asset Allocation for Institutional Investors	262
	Defined-Benefit Plans	262
	Foundations and Endowments	267
	Insurance Companies	270
	Banks	273
	Tactical Asset Allocation	275
	<i>Summary</i>	282
	<i>Practice Problems</i>	285
	<i>Solutions</i>	296

Asset Allocation and Related Decisions in Portfolio Management (2)	303
Currency Management: An Introduction	305
Introduction	305
Review of Foreign Exchange Concepts	306
Spot Markets	307
Forward Markets	309
FX Swap Markets	312
Currency Options	313
Currency Risk and Portfolio Return and Risk	313
Return Decomposition	313
Volatility Decomposition	316
Currency Management: Strategic Decisions	319
The Investment Policy Statement	319
The Portfolio Optimization Problem	320
Choice of Currency Exposures	321
Locating the Portfolio Along the Currency Risk Spectrum	324
Formulating a Client-Appropriate Currency Management Program	328
Currency Management: Tactical Decisions	331
Active Currency Management Based on Economic Fundamentals	331
Active Currency Management Based on Technical Analysis	333
Active Currency Management Based on the Carry Trade	334
Active Currency Management Based on Volatility Trading	336
Tools of Currency Management	341
Forward Contracts	342
Currency Options	349
Strategies to Reduce Hedging Costs and Modify a Portfolio's Risk Profile	352
Hedging Multiple Foreign Currencies	360
Basic Intuitions for Using Currency Management Tools	366
Currency Management for Emerging Market Currencies	370
Special Considerations in Managing Emerging Market Currency Exposures	370
Non-Deliverable Forwards	372
<i>Summary</i>	373
<i>Practice Problems</i>	377
<i>Solutions</i>	386
Market Indexes and Benchmarks	395
Introduction	395
Distinguishing between a Benchmark and a Market Index	397
Benchmark Uses and Types	398
Benchmarks: Investment Uses	398
Types of Benchmarks	400
Market Indexes Uses and Construction	403
Use of Market Indexes	403
Index Construction	405
Index Construction Tradeoffs	407

Index Weighting Schemes: Advantages and Disadvantages	409
Capitalization-Weighted Indexes	409
Price-Weighted Indexes	410
Equal-Weighted Indexes	410
Fundamental-Weighted Indexes	410
Choosing an Equity Index Weighting Scheme When an Index Is Used as a Benchmark	411
Market Indexes as Benchmarks	412
Benchmark Selection: An Example	413
<i>Summary</i>	415
<i>Practice Problems</i>	417
<i>Solutions</i>	418
Glossary	G-1
Index	1-1

FIXED INCOME AND EQUITY PORTFOLIO MANAGEMENT

CFA® Program Curriculum
2016 • LEVEL III • VOLUME 4

CONTENTS

How to Use the CFA Program Curriculum		v
	Curriculum Development Process	v
	Organization of the Curriculum	vi
	Features of the Curriculum	vi
	Designing Your Personal Study Program	vii
	Feedback	ix
Portfolio Management		
Study Session 10	Fixed-Income Portfolio Management (1)	3
Reading 20	Fixed-Income Portfolio Management—Part I	5
	Introduction	6
	A Framework for Fixed-Income Portfolio Management	6
	Managing Funds against a Bond Market Index	7
	Classification of Strategies	9
	Indexing (Pure and Enhanced)	10
	Active Strategies	27
	Monitoring/Adjusting the Portfolio and Performance Evaluation	29
	Managing Funds against Liabilities	29
	Dedication Strategies	29
	Cash Flow Matching Strategies	48
	<i>Summary</i>	52
	<i>Practice Problems</i>	55
	<i>Solutions</i>	61
Reading 21	1 Relative-Value Methodologies for Global Credit Bond Portfolio Management	65
	Introduction	65
	Credit Relative-Value Analysis	68
	Relative Value	70
	Classic Relative-Value Analysis	70
	Relative-Value Methodologies	72
	Total Return Analysis	72
	Primary Market Analysis	73
	The Effect of Market-Structure Dynamics	73
	The Effect of Product Structure	74
	Liquidity and Trading Analysis	74
	Secondary Trade Rationales	75
	Popular Reasons for Trading	75
	Trading Constraints	78
	Spread Analysis	79
	Alternative Spread Measures	79
	Closer Look at Swap Spreads	80
	Spread Tools	81

Structural Analysis	82
Bullets	83
Callables	84
Sinking Funds	85
Putables	85
Credit Curve Analysis	86
Credit Analysis	87
Asset Allocation/Sector Rotation	87
<i>Summary</i>	89
<i>Practice Problems</i>	91
<i>Solutions</i>	98
Fixed-Income Portfolio Management (2)	103
Fixed-Income Portfolio Management—Part II	105
Other Fixed-Income Strategies	106
Combination Strategies	106
Leverage	107
Derivatives-Enabled Strategies	111
International Bond Investing	128
Active versus Passive Management	129
Currency Risk	131
Breakeven Spread Analysis	136
Emerging Market Debt	137
Selecting a Fixed-Income Manager	139
Historical Performance as a Predictor of Future Performance	140
Developing Criteria for the Selection	140
Comparison with Selection of Equity Managers	141
<i>Summary</i>	143
<i>Practice Problems</i>	145
<i>Solutions</i>	153
Equity Portfolio Management	159
Equity Portfolio Management	161
Introduction	162
The Role of the Equity Portfolio	163
Approaches to Equity Investment	165
Passive Equity Investing	166
Equity Indices	168
Passive Investment Vehicles	175
Active Equity Investing	184
Equity Styles	184
Socially Responsible Investing	204
Long-Short Investing	205
Sell Disciplines/Trading	210
Semiactive Equity Investing	211
Managing a Portfolio of Managers	214
Core-Satellite	217

Completeness Fund	220
Other Approaches: Alpha and Beta Separation	221
Identifying, Selecting, and Contracting with Equity Portfolio Managers	222
Developing a Universe of Suitable Manager Candidates	222
The Predictive Power of Past Performance	222
Fee Structures	223
The Equity Manager Questionnaire	223
Structuring Equity Research and Security Selection	230
Top-Down versus Bottom-Up Approaches	230
Buy-Side versus Sell-Side Research	231
Industry Classification	231
<i>Summary</i>	232
<i>Practice Problems</i>	235
<i>Solutions</i>	242
Glossary	G-1
Index	1-1

ALTERNATIVE INVESTMENTS, RISK MANAGEMENT, AND THE APPLICATION OF DERIVATIVES

**CFA® Program Curriculum
2016 • LEVEL III • VOLUME 5**

CONTENTS

How to Use the CFA Program Curriculum		v
Curriculum Development Process		v
Organization of the Curriculum		vi
Features of the Curriculum		vi
Designing Your Personal Study Program		vii
Feedback		ix
Portfolio Management		
Study Session 13	Alternative Investments for Portfolio Management	3
Reading 24	Alternative Investments Portfolio Management	5
	Introduction	6
	Alternative Investments: Definitions, Similarities, and Contrasts	7
	Real Estate	13
	The Real Estate Market	13
	Benchmarks and Historical Performance	15
	Real Estate: Investment Characteristics and Roles	19
	Private Equity/Venture Capital	27
	The Private Equity Market	29
	Benchmarks and Historical Performance	36
	Private Equity: Investment Characteristics and Roles	37
	Commodity Investments	44
	The Commodity Market	45
	Benchmarks and Historical Performance	46
	Commodities: Investment Characteristics and Roles	51
	Hedge Funds	57
	The Hedge Fund Market	58
	Benchmarks and Historical Performance	62
	Hedge Funds: Investment Characteristics and Roles	72
	Performance Evaluation Concerns	79
	Managed Futures	86
	The Managed Futures Market	86
	Benchmarks and Historical Performance	87
	Managed Futures: Investment Characteristics and Roles	90
	Distressed Securities	95
	The Distressed Securities Market	95
	Benchmarks and Historical Performance	97
	Distressed Securities: Investment Characteristics and Roles	98
	<i>Summary</i>	105
	<i>Practice Problems</i>	108
	<i>Solutions</i>	122

Risk Management

Risk Management

Introduction	
Risk Management as a Process	134
Risk Governance	138
Identifying Risks	140
Market Risk	142
Credit Risk	142
Liquidity Risk	143
Operational Risk	144
Model Risk	145
Settlement (Herstatt) Risk	146
Regulatory Risk	146
Legal/Contract Risk	147
Tax Risk	148
Accounting Risk	148
Sovereign and Political Risks	149
Other Risks	150
Measuring Risk	151
Measuring Market Risk	151
Value at Risk	153
The Advantages and Limitations of VaR	168
Extensions and Supplements to VaR	170
Stress Testing	171
Measuring Credit Risk	173
Liquidity Risk	180
Measuring Nonfinancial Risks	180
Managing Risk	182
Managing Market Risk	182
Managing Credit Risk	186
Performance Evaluation	189
Capital Allocation	191
Psychological and Behavioral Considerations	193
<i>Summary</i>	193
<i>Practice Problems</i>	196
<i>Solutions</i>	204

Risk Management Applications of Derivatives **211**

Risk Management Applications of Forward and Futures Strategies	213
Introduction	213
E1 Strategies and Applications for Managing Interest Rate Risk	215
(3 Managing the Interest Rate Risk of a Loan Using an FRA	215
E1 Strategies and Applications for Managing Bond Portfolio Risk	219
Strategies and Applications for Managing Equity Market Risk	227
Measuring and Managing the Risk of Equities	228
Managing the Risk of an Equity Portfolio	230
Creating Equity out of Cash	232

	Creating Cash out of Equity	237
	Asset Allocation with Futures	241
	" Adjusting the Allocation among Asset Classes	241
	Pre-Investing in an Asset Class	248
	Strategies and Applications for Managing Foreign Currency Risk	250
	Managing the Risk of a Foreign Currency Receipt	252
	Managing the Risk of a Foreign Currency Payment	252
	Managing the Risk of a Foreign-Market Asset Portfolio	254
	Futures or Forwards?	258
	Final Comments	260
	<i>Summary</i>	261
	<i>Practice Problems</i>	264
	<i>Solutions</i>	266
Reading 27	Risk Management Applications of Option Strategies	271
	Introduction	271
	Option Strategies for Equity Portfolios	273
	G) Standard Long and Short Positions	275
	Risk Management Strategies with Options and the Underlying	282
	Money Spreads	289
	Combinations of Calls and Puts	300
	Interest Rate Option Strategies	308
	Using Interest Rate Calls with Borrowing	309
	Using Interest Rate Puts with Lending	314
	Using an Interest Rate Cap with a Floating-Rate Loan	319
	Using an Interest Rate Floor with a Floating-Rate Loan	323
	Using an Interest Rate Collar with a Floating-Rate Loan	325
	Option Portfolio Risk Management Strategies	329
	Delta Hedging an Option over Time	331
	Gamma and the Risk of Delta	338
	Vega and Volatility Risk	339
	" Final Comments	340
	<i>Summary</i>	341
	<i>Practice Problems</i>	344
	<i>Solutions</i>	348
Reading 28	Risk Management Applications of Swap Strategies	353
	Introduction	354
	Strategies and Applications for Managing Interest Rate Risk	355
	Using Interest Rate Swaps to Convert a Floating-Rate Loan to a	
	Fixed-Rate Loan (and Vice Versa)	355
	Using Swaps to Adjust the Duration of a Fixed-Income Portfolio	359
	Using Swaps to Create and Manage the Risk of Structured Notes	362
	Strategies and Applications for Managing Exchange Rate Risk	366
	Converting a Loan in One Currency into a Loan in Another Currency	366
	Converting Foreign Cash Receipts into Domestic Currency	371
	Using Currency Swaps to Create and Manage the Risk of a Dual-	
	Currency Bond	373

Strategies and Applications for Managing Equity Market Risk	376
Diversifying a Concentrated Portfolio	376
Achieving International Diversification	378
Changing an Asset Allocation between Stocks and Bonds	380
Reducing Insider Exposure	383
Strategies and Applications Using Swaptions	385
Using an Interest Rate Swaption in Anticipation of a Future Borrowing	386
Using an Interest Rate Swaption to Terminate a Swap	390
Synthetically Removing (Adding) a Call Feature in Callable (Noncallable) Debt	394
A Note on Forward Swaps	400
Conclusions	400
<i>Summary</i>	400
<i>Practice Problems</i>	403
<i>Solutions</i>	412
Glossary	G-1
Index	1-1

TRADING AND REBALANCING, PERFORMANCE EVALUATION, AND GLOBAL INVESTMENT PERFORMANCE STANDARDS

CFA® Program Curriculum
2016'LEVEL III* VOLUME 6

CONTENTS

How to Use the CFA Program Curriculum		v
	Curriculum Development Process	v
	Organization of the Curriculum	vi
	Features of the Curriculum	vi
	Designing Your Personal Study Program	vii
	Feedback	ix
Portfolio Management		
Study Session 16	Trading, Monitoring, and Rebalancing	3
Reading 29	Execution of Portfolio Decisions	5
	Introduction	6
	The Context of Trading: Market Microstructure	7
	Order Types	7
	Types of Markets	9
	The Roles of Brokers and Dealers	18
	Evaluating Market Quality	19
	The Costs of Trading	21
	Transaction Cost Components	22
	Pretrade Analysis: Econometric Models for Costs	30
	Types of Traders and Their Preferred Order Types	33
	The Types of Traders	33
	Traders' Selection of Order Types	35
	Trade Execution Decisions and Tactics	36
	Decisions Related to the Handling of a Trade	36
	Objectives in Trading and Trading Tactics	37
	Automated Trading	40
	Serving the Client's Interests	47
	CFA Institute Trade Management Guidelines	48
	The Importance of an Ethical Focus	49
	Concluding Remarks	50
	<i>Summary</i>	50
	<i>Practice Problems</i>	52
	<i>Solutions</i>	58
Reading 30	Monitoring and Rebalancing	65
	Introduction	66
	Monitoring	66
	Monitoring Changes in Investor Circumstances and Constraints	67
	Monitoring Market and Economic Changes	79
	Monitoring the Portfolio	82
	Rebalancing the Portfolio	84
	The Benefits and Costs of Rebalancing	85
	Rebalancing Disciplines	90

	The Peroki-Sharpe Analysis of Rebalancing Strategies	94
	Execution Choices in Rebalancing	99
	Concluding Remarks	100
	<i>Summary</i>	100
	<i>Practice Problems</i>	102
	<i>Solutions</i>	112
Study Session 17	Performance Evaluation	117
Reading 31	Evaluating Portfolio Performance	119
	Introduction	120
	The Importance of Performance Evaluation	121
	The Fund Sponsor's Perspective	121
	The Investment Manager's Perspective	122
	The Three Components of Performance Evaluation	122
	Performance Measurement	123
	Performance Measurement without Intraproduct External Cash Flows	123
	Total Rate of Return	126
	The Time-Weighted Rate of Return	126
	The Money-Weighted Rate of Return	128
	TWR versus MWR	129
	The Linked Internal Rate of Return	131
	Annualized Return	132
	Data Quality Issues	133
	Benchmarks	133
	Concept of a Benchmark	134
	Properties of a Valid Benchmark	135
	Types of Benchmarks	136
	Building Custom Security-Based Benchmarks	139
	Critique of Manager Universes as Benchmarks	140
	Tests of Benchmark Quality	142
	Hedge Funds and Hedge Fund Benchmarks	143
	Performance Attribution	146
	Impact Equals Weight Times Return	147
	Macro Attribution Overview	148
	Macro Attribution Inputs	148
	Conducting a Macro Attribution Analysis	150
	Micro Attribution Overview	154
	Sector Weighting/Stock Selection Micro Attribution	157
	Fundamental Factor Model Micro Attribution	160
	Fixed-Income Attribution	162
	Performance Appraisal	167
	Risk-Adjusted Performance Appraisal Measures	168
	Quality Control Charts	172
	Interpreting the Quality Control Chart	174
	The Practice of Performance Evaluation	176
	Noisiness of Performance Data	177
	Manager Continuation Policy	179
	Manager Continuation Policy as a Filter	181

	<i>Summary</i>	183
	<i>Practice Problems</i>	187
	<i>Solutions</i>	194
Study Session 18	Global Investment Performance Standards	203
Reading 32	Overview of the Global Investment Performance Standards	205
	Introduction	206
	Background of the GIPS Standards	207
	The Need for Global Investment Performance Standards	207
	The Development of Performance Presentation Standards	210
	Governance of the GIPS Standards	212
	Overview of the GIPS Standards	212
	Provisions of the GIPS Standards	215
	Fundamentals of Compliance	217
	Input Data	220
	Calculation Methodology: Time-Weighted Total Return	223
	Return Calculations: External Cash Flows	226
	Additional Portfolio Return Calculation Provisions	229
	Composite Return Calculation Provisions	232
	Constructing Composites I—Qualifying Portfolios	235
	Constructing Composites II—Defining Investment Strategies	238
	Constructing Composites III—Including and Excluding Portfolios	241
	Constructing Composites IV—Carve-Out Segments	244
	Disclosure	245
	Presentation and Reporting Requirements	251
	Presentation and Reporting Recommendations	257
	Introduction to the Real Estate and Private Equity Provisions	258
	Real Estate Provisions	259
v.	Private Equity Provisions	266
	Wrap Fee/Separately Managed Account (SMA) Provisions	268
	GIPS Valuation Principles	270
	GIPS Advertising Guidelines	273
	Verification	275
	Other Issues	280
	After-Tax Return Calculation Challenges	280
	Keeping Current with the GIPS Standards	283
	<i>Summary</i>	284
	<i>Appendix: GIPS Glossary</i>	287
	<i>Practice Problems</i>	294
	<i>Solutions</i>	305
	Glossary	G-1
	Index	1-1