## MANAGING INVESTMENT PORTFOLIOS

## A DYNAMIC PROCESS

## Third Edition

John L. Maginn, CFA

Donald L. Tuttle, CFA

Dennis W. McLeavey, CFA

Jerald E. Pinto, CFA



John Wiley & Sons, Inc.

## **CONTENTS**

Foreword	
Preface	xvii
Acknowledgments	xix
Introduction	xxi
CHAPTER 1 The Portfolio Management Process and the Investment Policy Statement	
<ul> <li>Introduction</li> <li>Investment Management</li> <li>The Portfolio Perspective</li> <li>Portfolio Management as a Process</li> <li>The Portfolio Management Process Logic</li> <li>The Planning Step</li> <li>The Execution Step</li> <li>The Feedback Step</li> <li>A Definition of Portfolio Management</li> <li>Investment Objectives and Constraints</li> <li>Objectives</li> <li>Constraints</li> <li>The Dynamics of the Process</li> <li>The Future of Portfolio Management</li> <li>The Ethical Responsibilities of Portfolio Managers</li> </ul>	1 2 4 4 5 5 8 9 10 11 11 15 18
CHAPTER 2 Managing Individual Investor Portfolios	20
1 Introduction 2 Case Study 2.1 The Inger Family 2.2 Inger Family Data 2.3 Jourdan's Findings and Personal Observations	20 21 21 22

VI Contents

	Investor Characteristics	24
	3.1 Situational Profiling	25
	3.2 Psychological Profiling	28
	Investment Policy Statement	34
	4.1 Setting Return and Risk Objectives	34
	4.2 Constraints	38
	An Introduction to Asset Allocation	50
	5.1 Asset Allocation Concepts	50
	5.2 Monte Carlo Simulation in Personal Retirement Planning	58
CHA	APTER 3	٨
M	anaging Institutional Investor Portfolios	63
1	Overview	63
2	Pension Funds •	64
	2.1 Defined-Benefit Plans: Background and Investment Setting	66
	2.2 Defined-Contribution Plans: Background and Investment Setting	79
	2.3 Hybrid and Other Plans	84
3	Foundations and Endowments	85
	3.1 Foundations: Background and Investment Setting	86
	3.2 Endowments: Background and Investment Setting	91
4	The Insurance Industry	101
	4.1 Life Insurance Companies: Background and Investment Setting	101
	4.2 Non—Life Insurance Companies: Background and Investment Setting	112
5	Banks and Other Institutional Investors	120
	5.1 Banks: Background and Investment Setting	120
	5.2 Other Institutional Investors: Investment Intermediaries	127
_	APTER 4	
C	apital Market Expectations	128
1	Introduction	128
2	Organizing the Task: Framework and Challenges	129
	2.1 A Framework for Developing Capital Market Expectations	.129
	2.2 Challenges in Forecasting ,.	135
3	Tools for Formulating Capital Market Expectations	146
	3.1 Formal Tools	146
	3.2 Survey and Panel Methods	171
	3.3 Judgment ~	173
4	Economic Analysis	174
	4.1 Business Cycle Analysis	174
	4.2 Economic Growth Trends	190
	4.3 Exogenous Shocks	196
	4.4 International Interactions	198
	4.5 Economic Forecasting	202
	4.6 Using Economic Information in Forecasting Asset Class Returns	210
	4.7 Information Sources for Economic Data and Forecasts	227

Contents

CHAPTER 5		
Asset Allocation		
1 Introduction	230	
2 What is Asset Allocation?	231	
2.1 The Role of Strategic Asset Allocation in Relation to System	natic Risk 232	
2.2 Strategic versus Tactical Asset Allocation	233	
2.3 The Empirical Debate on the Importance of Asset Allocation	on 234	
3 Asset Allocation and the Investor's Risk and Return Objectives	236	
3.1 Asset-Only and Asset/Liability Management Approaches to	_	
Allocation	236	
3.2 Return Objectives and Strategic Asset Allocation	239	
3.3 Risk Objectives and Strategic Asset Allocation	24^'	
3.4 Behavioral Influences on Asset Allocation	245	
4 The Selection of Asset Classes	248	
<ul><li>4.1 Criteria for Specifying Asset Classes</li><li>4.2 The Inclusion of International Assets (Developed and Emer</li></ul>	248 rging Markets) 251	
4.3 Alternative Investments	253	
5 The Steps in Asset Allocation	253 254	
6 Optimization	257	
6.1 The Mean-Variance Approach	257	
6.2 The Resampled Efficient Frontier	275	
6.3 The Black-Litterman Approach	276	
6.4 Monte Carlo Simulation	284	
6.5 Asset/Liability Management	286	
6.6 Experience-Based Approaches	295	
7 Implementing the Strategic Asset Allocation	296	
7.1 Implementation Choices	297	
7.2 Currency Risk Management Decisions	298	
7.3 Rebalancing to the Strategic Asset Allocation	298	
8 Strategic Asset Allocation for Individual Investors	299	
8.1 Human Capital	299	
8.2 Other Considerations in Asset Allocation for Individual Inv		
9 Strategic Asset Allocation for Institutional Investors 9.1 Defined-Benefit Plans	307 307	
9.2 Foundations and Endowments	312	
9.3 Insurance Companies	315	
9.4 Banks *	319	
10 Tactical Asset Allocation	320	
CHAPTER 6		
Fixed-Income Portfolio Management	328	
Tixed income Tottiono Munugement	320	
1 Introduction	328	
2 A Framework for Fixed-Income Portfolio Management	329	
3 Managing Funds Against a Bond Market Index	331	
3.1 Classification of Strategies	331	
3.2 Indexing (Pure and Enhanced)	332 344	
3.3 Active Strategies	Jii	

VIII Contents

	3.4 Monitoring/Adjusting the Portfolio and Performance Evaluation	. 346
4	Managing Funds Against Liabilities	346
	4.1 Dedication Strategies	346
	4.2 Cash-Flow Matching Strategies	365
5	Other Fixed-Income Strategies	369
	5.1 Combination Strategies	369
	5.2 Leverage	369
	5.3 Derivatives-Enabled Strategies	373
6	International Bond Investing	390
	6.1 Active versus Passive Management	391
	6.2 Currency Risk	,^» 393
	6.3 Breakeven Spread Analysis	398
	6.4 Emerging Market Debt	399
7	Selecting a Fixed-Income Manager	402
	7.1 Historical Performance as a Predictor of Future Performance	402
	7.2 Developing Criteria for the Selection	403
	7.3 Comparison with Selection of Equity Managers	403
CHA	APTER 7	
	quity Portfolio Management	407
1	Introduction	407
	The Role of the Equity Portfolio	408
3	Approaches to Equity Investment	410
4	Passive Equity Investing	412
	4.1 Equity Indices	413
	4.2 Passive Investment Vehicles	422
5	Active Equity Investing	. 429
3	5.1 Equity Styles	429
	5.2 Socially Responsible Investing	. 450
	5.3 Long-Short Investing	450
	5.4 Sell Disciplines/Trading	454
6		455
	Managing a Portfolio of Managers	458
,	7.1 Core Satellite *	461
	7.2 Completeness Fund	464
	7.3 Other Approaches: Alpha and Beta Separation	465
' 8		466
Ü	8.1 Developing a Universe of Suitable Manager Candidates	466
	8.2 The Predictive Power of Past Performance	466
	8.3 Fee Structures	467
	8.4 The Equity Manager Questionnaire	467
9	• • •	474
,	9.1 Top-Down versus Bottom-Up Approaches .	474
	9.2 Buy-Side versus Sell-Side Research	475
	9.3 Industry Classification	475
	7.5 maustry Classification	4/3

Contents

	APTER 8 Iternative Investments Portfolio Management	477
	_	4//
	Introduction	477
	Alternative Investments: Definitions, Similarities, and Contrasts	478
3	Real Estate	485
	3.1 The Real Estate Market	485
	3.2 Benchmarks and Historical Performance	487
	3.3 Real Estate: Investment Characteristics and Roles	490
4	Private Equity/Venture Capital	498
	4.1 The Private Equity Market	500
	4.2 Benchmarks and Historical Performance	507
	4.3 Private Equity: Investment Characteristics and Roles	5^9
5	Commodity Investments	516
	5.1 The Commodity Market	516
	5.2 Benchmarks and Historical Performance	517
	5.3 Commodities: Investment Characteristics and Roles	523
6	Hedge Funds	530
	6.1 The Hedge Fund Market	531
	6.2 Benchmarks and Historical Performance	535
	6.3 Hedge Funds: Investment Characteristics and Roles	545
	6.4 Performance Evaluation Concerns	552
7	Managed Futures	557
	7.1 The Managed Futures Market	557
	7.2 Benchmarks and Historical Performance	560
	7.3 Managed Futures: Investment Characteristics and Roles	563
8	Distressed Securities	568
	8.1 The Distressed Securities Market	568
	8.2 Benchmarks and HistoricabPerformance	570
	8.3 Distressed Securities: Investment Characteristics and Roles	571
CH/	APTER 9	
Ri	isk Management	579
1	Introduction ;	579
2	Risk Management as a Process	580
3	Risk Governance	583
4	Identifying Risks	585
	4.1 Market Risk	587
	4.2 Credit Risk	587
	4.3 Liquidity Risk	588
	4.4 Operational Risk	589
	4.5 Model Risk	590
	4.6 Settlement (Herstatt) Risk	591
	4.7 Regulatory Risk	591
	4.8 Legal/Contract Risk	592
	4.9 Tax Risk	593
	4.10 Accounting Risk	593
	4.11 Sovereign and Political Risks	594

$\sim$			
('')	nг	en	T C
-	$_{11}$	CII	LD

4.12 Other Risks	595
Measuring Risk	596
5.1 Measuring Market Risk	596
5.2 Value at Risk	598
5.3 The Advantages and Limitations of VaR	611
5.4 Extensions and Supplements to VaR	613
5.5 Stress Testing	614
5.6 Measuring Credit Risk	615
5.7 Liquidity Risk	622
5.8 Measuring Nonfinancial Risks	623
Managing Risk	624
6.1 Managing Market Risk	625
6.2 Managing Credit Risk	628
6.3 Performance Evaluation	632
6.4 Capital Allocation	634
6.5 Psychological and Behavioral Considerations	635
CHAPTER 10	
Execution of Portfolio Decisions	637
1 Introduction	637
2 The Context of Trading: Market Microstructure	638
2.1 Order Types	638
2.2 Types of Markets	640
2.3 The Roles of Brokers and Dealers	649
2.4 Evaluating Market Quality	650
3 The Costs of Trading	653
3.1 Transaction Cost Components	654
3.2 Pretrade Analysis: Econometric Models for Costs	661
4 Types of Traders and Their Preferred Order Types	663
4.1 The Types of Traders	664
4.2 Traders' Selection of Order Types	665
5 Trade Execution Decisions and Tactics	666
5.1 Decisions Related to the Handling of a Trade	666
5.2 Objectives in Trading and Trading Tactics	668
5.3 Automated Trading	670
6 Serving the Client's Interests	678
6.1 CFA Institute Trade Management Guidelines	679
6.2 The Importance of an Ethical Focus	680
7 Concluding Remarks	681
CHAPTER 11	
Monitoring And Rebalancing	682
1 Introduction	682
2 Monitoring	683
2.1 Monitoring Changes in Investor Circumstances and Constraints	684
2.2 Monitoring Market and Economic Changes	695

Contents

2.2 Manitaring the Doutfalia	<b>COO</b>
2.3 Monitoring the Portfolio	698
Rebalancing the Portfolio	701
3.1 The Benefits and Costs of Rebalancing	701
3.2 Rebalancing Disciplines	705
3.3 The Perold-Sharpe Analysis of Rebalancing Strategies	710
3.4 Execution Choices in Rebalancing	715
Concluding Remarks	716
CHAPTER 12	
	717
Evaluating Portfolio Performance	717
1 Introduction	7]
2 The Importance of Performance Evaluation	718
2.1 The Fund Sponsor's Perspective	718
2.2 The Investment Manager's Perspective	719
3 The Three Components of Performance Evaluation	719
4 Performance Measurement	720
4.1 Performance Measurement without Intraperiod External Cash Flows	720
4.2 Total Rate of Return	723
4.3 The Time-Weighted Rate of Return	724
4.4 The Money-Weighted^Rate of Return	726
4.5 TWR versus MWR	727
4.6 The Linked Internal Rate of Return	729
4.7 Annualized Return J "	730
4.8 Data Quality Issues	730
5 Benchmarks	731
5.1 Concept of a Benchmark	731
5.2 Properties of a Valid Benchmark *	733
5.3 Types of Benchmarks	734
5.4 Building Custom Security-Based Benchmarks	738
5.5 Critique of Manager Universes as Benchmarks	738
5.6 Tests of Benchmark Quality	740
5.7 Hedge Funds and Hedge Fund Benchmarks	742
6 Performance Attribution	744
6.1 Impact Equals Weight Times Return	745
6.2 Macro Attribution Overview	746
6.3 Macro Attribution Inputs	747
6.4 Conducting a Macro Attribution Analysis	749
6.5 Micro Attribution Overview .	753
6.6 Sector Weighting/Stock Selection Micro Attribution -	755 755
6.7 Fundamental Factor Model Micro Attribution	759
6.8 Fixed-Income Attribution	761
7 Performance Appraisal	761 766
**	
7.1 Risk-Adjusted Performance Appraisal Measures	767
7.2 Quality Control Charts	771
. 7.3 Interpreting the Quality Control Chart	773
8 The Practice of Performance Evaluation 8.1 Noisiness of Performance Data	775 776
6.1 INOISINESS OF PERFORMANCE 124(2)	//b

XII Contents

	8.2 Manager Continuation Policy,		778
	8.3 Manager Continuation Policy as a Filter		780
СНА	PTER 13		
	obal Investment Performance Standards		783
1	Introduction		783
_	Background of the GIPS Standards		784
	2.1 The Need for Global Investment Performance Standards		784
	2.2 The Development of Performance Presentation Standards		786
	2.3 Governance of the GIPS Standards		787
	2.4 Overview of the GIPS Standards	-•</td <td>788</td>	788
3 F	Provisions of the GIPS Standards		792
	3.1 Fundamentals of Compliance		792
	3.2 Input Data		795
	3.3 Calculation Methodology: Time-Weighted Total Return		798
	3.4 Return Calculations: External Cash Flows		801
	3.5 Additional Portfolio Return Calculation Standards		804
	3.6 Composite Return Calculation Standards		807
	3.7 Constructing Composites I—Defining Discretion		810
	3.8 Constructing Composites II—Defining.Investment Strategies		813
	3.9 Constructing Composites III—Including and Excluding Portfolios		815
	3.10 Constructing Composites IV— Carve-Out Segments 3.11 Disclosure Standards		819 822
	3.12 Presentation and Reporting Requirements		825
	3.13 Presentation and Reporting Recommendations		829
	3.14 Introduction to the Real Estate and Private Equity Provisions		832
	3.15 Real Estate Standards		832
	3.16 Private Equity Standards		837
4	Verification Verification		840
5	GIPS Advertising Guidelines		845
6	Other Issues		847
	6.1 After-Tax Return Calculation Methodology		847
	6.2 Keeping Current with the GIPS Standards		855
Appe	endix: GIPS Glossary		856
Glos	sary		864
Refe	rences ~		888
Abou	ut the CFA Program		903
Aboi	ut the Authors		904
Inde	X		913