Preface ........................................ xvii
Acknowledgments ................................... xxi
About the Authors .................................... xxv

PART 1 The Investment Background 1

CHAPTER 1
An Overview of the Investment Process ............ 3
What Is an Investment 3
Investment Defined 4
Measures of Return and Risk 5
Measures of Historical Rates of Return 5, Computing
Mean Historical Returns 7, Calculating Expected Rates of
Return 9, Measuring the Risk of Expected Rates of
Return 12, Risk Measures for Historical Returns 14
Determinants of Required Rates of Return 14
The Real Risk-Free Rate 15, Factors Influencing the
Nominal Risk-Free Rate (NRFR) 15, Risk Premium 17,
Risk Premium and Portfolio Theory 20, Fundamental
Risk versus Systematic Risk 20, Summary of Required
Rate of Return 20
Relationship between Risk and Return 21
Movements along the SML 22, Changes in the Slope of
the SML 22, Changes in Capital Market Conditions or
Expected Inflation 24, Summary of Changes in the
Required Rate of Return 24

CHAPTER 2
The Asset Allocation Decision ....................... 31
Individual Investor Life Cycle 32
The Preliminaries 32, Investment Strategies over an
Investor’s Lifetime 33, Life Cycle Investment Goals 35
The Portfolio Management Process 35
The Need for a Policy Statement 36
Understand and Articulate Realistic Investor Goals 36,
Standards for Evaluating Portfolio Performance 37, Other
Benefits 38
Input to the Policy Statement 39
Investment Objectives 39, Investment Constraints 43
Constructing the Policy Statement 47
General Guidelines 47, Some Common Mistakes 47
The Importance of Asset Allocation 47
Investment Returns after Taxes and Inflation 49, Returns
and Risks of Different Asset Classes 50, Asset Allocation
Summary 51

CHAPTER 3
The Global Market Investment Decision ........... 57
The Case for Global Investments 58
Relative Size of U.S. Financial Markets 59, Rates of Return
on U.S. and Foreign Securities 60, Risk of Combined
Country Investments 60
Global Investment Choices 65
Fixed-Income Investments 66, International Bond
Investing 69, Equity Instruments 70, Special Equity
Instruments: Options 72, Futures Contracts 72,
Investment Companies 73, Real Estate 75,
Low-Liquidity Investments 76
Historical Risk-Returns on Alternative
Investments 77
World Portfolio Performance 77, Art and Antiques 81,
Real Estate 81

CHAPTER 4
Securities Markets: Organization and Operation 87
What Is a Market 88
Characteristics of a Good Market 88, Decimal Pricing 89,
Organization of the Securities Market 90
Primary Capital Markets 90
Government Bond Issues 90, Municipal Bond Issues 90,
Corporate Bond Issues 91, Corporate Stock Issues 91,
Private Placements and Rule 144A 93
Secondary Financial Markets 93
Why Secondary Markets Are Important 93, Secondary
Bond Markets 94, Financial Futures 94, Secondary Equity
Markets 94
Classification of U.S. Secondary Equity Markets 97
Primary Listing Markets 97, Regional Stock Exchanges
101, The Third Market 101, The Significant Transition of
the U.S. Equity Markets 101
Alternative Types of Orders Available 104
Market Orders 104, Limit Orders 104, Special Orders 105,
Margin Transactions 105, Short Sales 107, Exchange
Market-Makers 109, New Trading Systems 109, Exchange
Merger Mania 110

CHAPTER 5
Security-Market Indexes ......................... 115
Uses of Security-Market Indexes 116
Differentiating Factors in Constructing Market
Indexes 117
The Sample 117, Weighting Sample Members 117,
Computational Procedure 117
PART 2  Developments in Investment Theory 137

CHAPTER 6  Efficient Capital Markets 139
Why Should Capital Markets Be Efficient? 140
Alternative Efficient Market Hypotheses 141
Strong-Form Efficient Market Hypothesis 142
Tests and Results of Efficient Market Hypotheses 142
Weak-Form Hypothesis: Tests and Results 142
Semistrong-Form Hypothesis: Tests and Results 145
Strong-Form Hypothesis: Tests and Results 155
Behavioral Finance 159
Explaining Biases 160, Fusion Investing 161
Implications of Efficient Capital Markets 161
Efficient Markets and Technical Analysis 161, Efficient Markets and Fundamental Analysis 162, Efficient Markets and Portfolio Management 164

CHAPTER 7  An Introduction to Portfolio Management 171
Some Background Assumptions 171
Risk Aversion 172, Definition of Risk 172
Markowitz Portfolio Theory 172

CHAPTER 8  An Introduction to Asset Pricing Models 195
Capital Market Theory: An Overview 195
Background for Capital Market Theory 196, Developing the Capital Market Line 196, Risk, Diversification, and the Market Portfolio 200, Investing with the CML: An Example 203
The Capital Asset Pricing Model 204
A Conceptual Development of the CAPM 205, The Security Market Line 206
Relaxing the Assumptions 213
Additional Empirical Tests of the CAPM 217
Stability of Beta 217, Relationship between Systematic Risk and Return 217, Summary of CAPM Risk-Return Empirical Results 219
The Market Portfolio: Theory versus Practice 220

CHAPTER 9  Multifactor Models of Risk and Return 229
Arbitrage Pricing Theory 230
Using the APT 232, Security Valuation with the APT: An Example 233, Empirical Tests of the APT 235
Multifactor Models and Risk Estimation 238
Multifactor Models in Practice 238, Estimating Risk in a Multifactor Setting: Examples 244

PART 3  Valuation Principles and Practices 257

CHAPTER 10  Analysis of Financial Statements 259
Major Financial Statements 260
Analysis of Financial Ratios 265
Importance of Relative Financial Ratios 266
Computation of Financial Ratios 267
Common Size Statements 267
Evaluating Internal Liquidity 267
Internal Liquidity Ratios 268, Inventory Turnover 271
Evaluating Operating Performance 272
Operating Efficiency Ratios 273, Operating Profitability Ratios 275

Risk Analysis 281

Analysis of Growth Potential 292
Importance of Growth Analysis 292, Determinants of Growth 293

Comparative Analysis of Ratios 295
Internal Liquidity 295, Operating Performance 295, Risk Analysis 297, Growth Analysis 297

Analysis of Non-U.S. Financial Statements 297
The Quality of Financial Statements 297
Balance Sheet 297, Income Statement 298, Footnotes 298

The Value of Financial Statement Analysis 298
Specific Uses of Financial Ratios 299
Stock Valuation Models 299, Estimating the Ratings on Bonds 300, Predicting Insolvency (Bankruptcy) 301, Limitations of Financial Ratios 301

CHAPTER 11
Security Valuation Principles 309

An Overview of the Valuation Process 311
Why a Three-Step Valuation Process? 311
General Economic Influences 311, Industry Influences 313, Company Analysis 314, Does the Three-Step Process Work? 314

Theory of Valuation 315
Stream of Expected Returns (Cash Flows) 315, Required Rate of Return 315, Investment Decision Process: A Comparison of Estimated Values and Market Prices 316

Valuation of Alternative Investments 316
Valuation of Bonds 316, Valuation of Preferred Stock 317, Approaches to the Valuation of Common Stock 318

Relative Valuation Techniques 329

Estimating the Inputs: The Required Rate of Return and the Expected Growth Rate of Valuation Variables 334
Required Rate of Return (k) 334, Estimating the Required Return for Foreign Securities 336, Expected Growth Rates 338, Estimating Dividend Growth for Foreign Stocks 341

PART 4 Analysis and Management of Common Stocks 347

CHAPTER 12
Macroanalysis and Microvaluation of the Stock Market 349

The Components of Market Analysis 349
Macromarket Analysis 350

Microvaluation Analysis 359
Applying the DDM Valuation Model to the Market 359, Market Valuation Using the Free Cash Flow to Equity (FCFE) Model 366

Valuation Using the Earnings Multiplier Approach 369
Two-Part Valuation Procedure 369, Importance of Both Components of Value 369

Estimating Expected Earnings per Share 372

Estimating the Stock Market Earnings Multiplier 381
Determinants of the Earnings Multiplier 382, Estimating the Required Rate of Return (k) 382, Estimating the Growth Rate of Dividends (g) 382, Estimating the Dividend-Payout Ratio (D/E) 383, Estimating an Earnings Multiplier: An Example 384, Calculating an Estimate of the Value for the Market Series 387, Using Other Relative Valuation Ratios 388

Microvaluation of World Markets 390
CHAPTER 13

Industry Analysis ............................................ 395

Why Do Industry Analysis?  396

The Business Cycle and Industry Sectors 399
Inflation 401, Interest Rates 401, International Economics 401, Consumer Sentiment 401

Structural Economic Changes and Alternative Industries 402
Demographics 402, Lifestyles 420, Technology 402, Politics and Regulations 403

Evaluating the Industry Life Cycle 404

Analysis of Industry Competition 405
Competition and Expected Industry Returns 405

Estimating Industry Rates of Return 407
Valuation Using the Reduced Form DDM 408, Industry Valuation Using the Free Cash Flow to Equity (FCFE) Model 415

Industry Analysis Using the Relative Valuation Approach 417
The Earnings Multiple Technique 417

Other Relative Valuation Ratios 428

Global Industry Analysis 433

CHAPTER 14

Company Analysis and Stock Valuation ........ 437

Company Analysis versus Stock Valuation 438
Growth Companies and Growth Stocks 438, Defensive Companies and Stocks 439, Cyclical Companies and Stocks 439, Speculative Companies and Stocks 440, Value versus Growth Investing 440

Economic, Industry, and Structural Links to Company Analysis 440
Economic and Industry Influences 440, Structural Influences 441

Company Analysis 441
Firm Competitive Strategies 442, Focusing a Strategy 443, SWOT Analysis 444, Some Lessons from Lynch 444, Tenets of Warren Buffett 445

Estimating Intrinsic Value 445
Present Value of Dividends 446, Present Value of Dividends Model (DDM) 449, Present Value of Free Cash Flow to Equity 450, Present Value of Operating Free Cash Flow 452, Relative Valuation Ratio Techniques 455

Estimating Company Earnings per Share 458
Company Sales Forecast 458, Estimating the Company Profit Margin 461

Walgreen Co.'s Competitive Strategies 461
The Internal Performance 461, Importance of Quarterly Estimates 463

Estimating Company Earnings Multipliers 465
Macroanalysis of the Earnings Multiple 465, Microanalysis of the Earnings Multiplier 466, Making the Investment Decision 470

Additional Measures of Relative Value 472
Price/Book Value (P/BV) Ratio 472, Price/Cash Flow (P/CF) Ratio 474, Prices/Sales (P/S) Ratio 475, Summary of Relative Valuation Ratios 477

Analysis of Growth Companies 477
Growth Company Defined 478, Actual Returns above Required Returns 478, Growth Companies and Growth Stocks 478, Alternative Growth Models 479, No-Growth Firm 479, Long-Run Growth Models 479, The Real World 482

Measures of Value Added 482
Economic Value Added (EVA) 483, Market Value Added (MVA) 485, Relationships between EVA and MVA 485, The Franchise Factor 485, Growth Duration Model 486

Site Visits and the Art of the Interview 490

When to Sell 490

Influences on Analysts 491
Efficient Markets 491, Paralysis of Analysis 492, Analyst Conflicts of Interest 492

Global Company and Stock Analysis 492
Availability of Data 492, Differential Accounting Conventions 493, Currency Differences (Exchange Rate Risk) 493, Political (Country) Risk 493, Transaction Costs and Liquidity 493, Valuation Differences 493, Summary 493

CHAPTER 15

Equity Portfolio Management Strategies ........... 503

Passive versus Active Management 504
An Overview of Passive Equity Portfolio Management Strategies 505
Index Portfolio Construction Techniques 506, Tracking Error and Index Portfolio Construction 507, Methods of Index Portfolio Investing 509

An Overview of Active Equity Portfolio Management Strategies 512
Fundamental Strategies 513, Technical Strategies 516, Anomalies and Attributes 517, Forming Momentum-Based Stock Portfolios: Two Examples 519, Tax Efficiency and Active Equity Management 522

Value versus Growth Investing: A Closer Look 523

An Overview of Style Analysis 527

Asset Allocation Strategies 531
  Integrated Asset Allocation 532, Strategic Asset Allocation 534, Tactical Asset Allocation 535, Insured Asset Allocation 536, Selecting an Active Allocation Method 537

CHAPTER 16

Technical Analysis .......................... 543

Underlying Assumptions of Technical Analysis 544

Advantages of Technical Analysis 545

Challenges to Technical Analysis 546
  Challenges to the Assumptions of Technical Analysis 546, Challenges to Technical Trading Rules 547

Technical Trading Rules and Indicators 547
  Contrary-Opinion Rules 548, Follow the Smart Money 550, Momentum Indicators 551, Stock Price and Volume Techniques 552

Technical Analysis of Foreign Markets 559
  Foreign Stock Market Indexes 559, Technical Analysis of Foreign Exchange Rates 560

Technical Analysis of Bond Markets 560

PART 5 Analysis and Management of Bonds 567

CHAPTER 17

Bond Fundamentals ................................ 569

Basic Features of a Bond 569
  Bond Characteristics 570, Rates of Return on Bonds 572

The Global Bond Market Structure 572
  Participating Issuers 573, Participating Investors 575, Bond Ratings 575

Alternative Bond Issues 576

Obtaining Information on Bond Prices 592
  Interpreting Bond Quotes 593

CHAPTER 18

The Analysis and Valuation of Bonds ............ 601

The Fundamentals of Bond Valuation 602
  The Present Value Model 602, The Yield Model 604

Computing Bond Yields 605
  Nominal Yield 605, Current Yield 606, Promised Yield to Maturity 606, Promised Yield to Call 608, Realized (Horizon) Yield 609

Calculating Future Bond Prices 610
  Realized (Horizon) Yield with Differential Reinvestment Rates 611, Price and Yield Determination on Noninterest Rates 613, Yield Adjustments for Tax-Exempt Bonds 613, Bond Yield Books 614

Bond Valuation Using Spot Rates 614

What Determines Interest Rates? 616
  Forecasting Interest Rates 617, Fundamental Determinants of Interest Rates 618, The Term Structure of Interest Rates 621

Calculating Forward Rates from the Spot Rate Curve 625

Term Structure Theories 628
  Expectations Hypothesis 628, Liquidity Preference (Term Premium) Hypothesis 630, Segmented Market Hypothesis 630, Trading Implications of the Term Structure 631, Yield Spreads 631

What Determines the Price Volatility for Bonds? 632
  Trading Strategies 635, Duration Measures 635, Modified Duration and Bond Price Volatility 639, Bond Convexity 640, Duration and Convexity for Callable Bonds 645, Limitations of Macaulay and Modified Duration 648

Yield Spreads with Embedded Options 656
  Static Yield Spreads 656, Option-Adjusted Spread 657

CHAPTER 19

Bond Portfolio Management Strategies ............. 669

Bond Portfolio Performance, Style, and Strategy 669

Passive Management Strategies 672
  Buy-and-Hold Strategy 672, Indexing Strategy 673, Bond Indexing in Practice: An Example 674

Active Management Strategies 675
  Interest Rate Anticipation 676, Valuation Analysis 678, Credit Analysis 678, Yield Spread Analysis 683, Implementing an Active Bond Transaction 683, Active Global Bond Investing: An Example 687

Core-Plus Management Strategies 689

Matched-Funding Management Strategies 691
  Dedicated Portfolios 691, Immunization Strategies 693, Horizon Matching 701

Contingent and Structured Management Strategies 702
  Contingent Immunization 702
PART 6 Derivative Security Analysis 715

CHAPTER 20
An Introduction to Derivative Markets and Securities .......................... 717

Overview of Derivative Markets ................................. 718
The Language and Structure of Forward and Futures Markets 719, Interpreting Futures Price Quotations: An Example 720, The Language and Structure of Option Markets 723, Interpreting Option Price Quotations: An Example 724

Investing with Derivative Securities .......................... 726
The Basic Nature of Derivative Investing 726, Basic Payoff and Profit Diagrams for Forward Contracts 730, Basic Payoff and Profit Diagrams for Call and Put Options 731, Option Profit Diagrams: An Example 734

The Relationship between Forward and Option Contracts 736
Put-Call Spot Parity 736, Put-Call Parity: An Example 738, Creating Synthetic Securities Using Put-Call Parity 739, Adjusting Put-Call-Spot Parity for Dividends 740, Put-Call-Forward Parity 741

An Introduction to the Use of Derivatives in Portfolio Management 743
Restructuring Asset Portfolios with Forward Contracts 743, Protecting Portfolio Value with Put Options 744, An Alternative Way to Pay for a Protective Put 747

CHAPTER 21
Forward and Futures Contracts ......................... 757

An Overview of Forward and Futures Trading ........................... 758
Futures Contract Mechanics 759, Comparing Forward and Futures Contracts 761

Hedging with Forwards and Futures 762
Hedging and the Basis 762, Understanding Basis Risk 763, Calculating the Optimal Hedge Ratio 763

Forward and Futures Contracts: Basic Valuation Concepts 764
Valuing Forwards and Futures 765, The Relationship between Spot and Forward Prices 766

Financial Forwards and Futures: Applications and Strategies 767
Interest Rate Forwards and Futures 768, Long-Term Interest Rate Futures 768, Short-Term Interest Rate Futures 772, Stock Index Futures 776, Currency Forwards and Futures 782

CHAPTER 22
Option Contracts ............................................. 795
An Overview of Option Markets and Contracts ......................... 796
Option Market Conventions 796, Price Quotations for Exchange-Traded Options 797

The Fundamentals of Option Valuation ........................................ 804

Option Valuation: Extensions and Advanced Topics 819
Valuing European-Style Put Options 819, Valuing Options on Dividend-Bearing Securities 819, Valuing American-Style Options 821, Other Extensions of the Black-Scholes Model 822

Option Trading Strategies 824
Protective Put Options 824, Covered Call Options 826, Straddles, Strips, and Strangles 827, Strangles 829, Chooser Options 830, Spreads 831, Range Forwards 833

CHAPTER 23
Swap Contracts, Convertible Securities, and Other Embedded Derivatives ........................................ 841
OTC Interest Rate Agreements ........................................ 842
Forward-Based Interest Rate Contracts 842, Option-Based Interest Rate Contracts 849
Swap Contracting Extensions 852
Equity Index-Linked Swaps 852, Credit-Related Swaps 853

Warrants and Convertible Securities 857
Warrants 857, Convertible Securities 859, Convertible Preferred Stock 859, Convertible Bonds 860

Other Embedded Derivatives 864
Dual Currency Bonds 865, Equity-Index Linked Notes 866, Commodity-Linked Bull and Bear Bonds 868, Swap-Linked Notes 870

Valuing Flexibility: An Introduction to Real Options 872
Company Valuation with Real Options 873

PART 7 Specification and Evaluation of Asset Management 883

CHAPTER 24
Professional Money Management, Alternative Assets, and Industry Ethics ........................................ 885
The Asset Management Industry: Structure and Evolution 886
Private Management and Advisory Firms 890
Investment Strategy at a Private Money Management Firm 892
Organization and Management of Investment Companies 893
Valuing Investment Company Shares 893, Closed-End versus Open-End Investment Companies 894,
Fund Management Fees 897, Investment Company Portfolio Objectives 897, Breakdown by Fund Characteristics 898, Global Investment Companies 901, Mutual Fund Organization and Strategy: An Example 901
Investing in Alternative Asset Classes 903
Hedge Funds 905, Characteristics of a Hedge Fund 906, Hedge Fund Strategies 907, Risk Arbitrage Investing: A Closer Look 909, Hedge Fund Performance 910, Private Equity 912
Ethics and Regulation in the Professional Asset Management Industry 920
Regulation in the Asset Management Industry 920, Standards for Ethical Behavior 922, Examples of Ethical Conflicts 923
What Do You Want from a Professional Asset Manager? 924

CHAPTER 25
Evaluation of Portfolio Performance 933
What Is Required of a Portfolio Manager? 934
Early Performance Measurement Techniques 935
Portfolio Evaluation before 1960 935, Peer Group Comparisons 935
Composite Portfolio Performance Measures 935
Treynor Portfolio Performance Measure 937, Sharpe Portfolio Performance Measure 939, Jensen Portfolio Performance Measure 941, The Information Ratio Performan...
aspects of investment decisions: 1. Investment environment and investment process; 2. Quantitative methods of investment analysis; 3. Theory of investment portfolio formation; 4. Investment in stocks; 5. Investment Analysis and Portfolio Management. 5. Investment in bonds; 6. Psychological aspects in investment decision making; 7. Using options as investments; 8. Portfolio management and evaluation. Our focus in developing this course is on the management of individual investors’ portfolios. But the basic principles of investment management are applicable both for individual and institutional investors. 1.2. Direct versus indirect investing Investors can use direct or indirect type of investing.