

Contents

Preface		xi
Chapter 1 INTRODUCTION		1
<i>Sectors of the U.S. Bond Market</i>	2	
<i>Overview of Bond Features</i>	3	
<i>Risks Associated with Investing in Bonds</i>	5	
<i>Financial Innovation and the Bond Market</i>	8	
<i>Overview of the Book</i>	9	
<i>Questions</i>	10	
Chapter 2 PRICING OF BONDS		11
<i>Review of Time Value of Money</i>	11	
<i>Pricing a Bond</i>	18	
<i>Complications</i>	24	
<i>Pricing Floating-Rate and Inverse-Floating-Rate Securities</i>	26	
<i>Price Quotes and Accrued Interest</i>	28	
<i>Summary</i>	29	
<i>Questions</i>	30	
Chapter 3 MEASURING YIELD		33
<i>Computing the Yield or Internal Rate of Return on Any Investment</i>	33	
<i>Conventional Yield Measures</i>	37	
<i>Potential Sources of a Bond's Dollar Return</i>	43	

<i>Total Return</i>	45
<i>Summary</i>	50
<i>Questions</i>	51

Chapter 4 BOND PRICE VOLATILITY 53

<i>Review of the Price-Yield Relationship for Option-Free Bonds</i>	53
<i>Price Volatility Characteristics of Option-Free Bonds</i>	55
<i>Measures of Bond Price Volatility</i>	57
<i>Convexity</i>	65
<i>Additional Concerns When Using Duration</i>	74
<i>Don't Think of Duration as a Measure of Time</i>	74
<i>Approximating a Bond's Duration and Convexity</i>	75
<i>Summary</i>	77
<i>Questions</i>	77

Chapter 5 FACTORS AFFECTING BOND YIELDS AND THE TERM STRUCTURE OF INTEREST RATES 80

<i>Base Interest Rate</i>	81
<i>Risk Premium</i>	82
<i>Term Structure of Interest Rates</i>	85
<i>Summary</i>	102
<i>Questions</i>	103

Chapter 6 TREASURY AND AGENCY SECURITIES MARKETS 109

<i>Treasury Securities</i>	110
<i>Stripped Treasury Securities</i>	121
<i>Federal Agency Securities</i>	125
<i>Summary</i>	128
<i>Questions</i>	129
<i>Appendix: Repurchase Agreements</i>	131

Chapter 7 CORPORATE DEBT INSTRUMENTS 136

<i>Corporate Bonds</i>	137
<i>Medium-Term Notes</i>	153
<i>Commercial Paper</i>	157
<i>Bankruptcy and Creditor Rights</i>	161
<i>Summary</i>	164
<i>Questions</i>	165

Chapter 8	MUNICIPAL SECURITIES	167
	<i>Investors in Municipal Securities</i>	168
	<i>Types and Features of Municipal Securities</i>	169
	<i>Municipal Money Market Products</i>	175
	<i>Municipal Derivative Securities</i>	176
	<i>Credit Risk</i>	179
	<i>Risks Associated with Investing in Municipal Securities</i>	181
	<i>Yields on Municipal Bonds</i>	182
	<i>Municipal Bond Market</i>	185
	<i>Summary</i>	187
	<i>Questions</i>	188
Chapter 9	NON-U.S. BONDS	189
	<i>Classification of Global Bond Markets</i>	190
	<i>Foreign Exchange Risk and Bond Returns</i>	191
	<i>Size of the World Bond Market</i>	192
	<i>Eurobond Market</i>	194
	<i>Overview of Several Non-U.S.</i>	
	<i>Government Bond Markets</i>	198
	<i>Japanese and German Bond Markets</i>	203
	<i>Emerging Bond Markets</i>	208
	<i>Clearing Systems</i>	209
	<i>Summary</i>	210
	<i>Questions</i>	211
Chapter 10	MORTGAGE LOANS	214
	<i>What Is a Mortgage?</i>	215
	<i>Participants in the Mortgage Market</i>	215
	<i>Alternative Mortgage Instruments</i>	218
	<i>Risks Associated with Investing in Mortgages</i>	224
	<i>Summary</i>	230
	<i>Questions</i>	230
Chapter 11	MORTGAGE PASS-THROUGH SECURITIES	232
	<i>Cash Flow Characteristics</i>	233
	<i>WAC and WAM</i>	233
	<i>Agency Pass-Throughs</i>	233
	<i>Private-Label Pass-Throughs</i>	236
	<i>Prepayment Conventions and Cash Flow</i>	238
	<i>Factors Affecting Prepayment Behavior</i>	246
	<i>Cash Flow for Private-Label Pass-Throughs</i>	249

	<i>Cash Flow Yield</i>	250	
	<i>Prepayment Risk and Asset/Liability Management</i>	252	
	<i>Secondary Market Trading</i>	254	
	<i>Summary</i>	255	
	<i>Questions</i>	256	
Chapter 12	COLLATERALIZED MORTGAGE OBLIGATIONS AND STRIPPED MORTGAGE-BACKED SECURITIES		259
	<i>Collateralized Mortgage Obligations</i>	260	
	<i>Stripped Mortgage-Backed Securities</i>	283	
	<i>Summary</i>	285	
	<i>Questions</i>	286	
Chapter 13	ASSET-BACKED SECURITIES		315
	<i>Issuers of and Collateral for Asset-Backed Securities</i>	315	
	<i>Cash Flow of Asset-Backed Securities</i>	316	
	<i>Credit Risk</i>	318	
	<i>Summary</i>	319	
	<i>Questions</i>	320	
Chapter 14	ANALYSIS OF BONDS WITH EMBEDDED OPTIONS		322
	<i>Drawbacks of Traditional Yield Spread Analysis</i>	323	
	<i>Static Spread: An Alternative to Yield Spread</i>	323	
	<i>Callable Bonds and Their Investment Characteristics</i>	324	
	<i>Components of a Bond with an Embedded Option</i>	330	
	<i>Valuation Model</i>	331	
	<i>Option-Adjusted Spread</i>	343	
	<i>Effective Duration and Convexity</i>	343	
	<i>Summary</i>	345	
	<i>Questions</i>	346	
Chapter 15	ANALYSIS OF MORTGAGE-BACKED SECURITIES		350
	<i>Static Cash Flow Yield Methodology</i>	351	
	<i>Monte Carlo Simulation Methodology</i>	358	
	<i>Total Return Analysis</i>	368	
	<i>Summary</i>	369	
	<i>Questions</i>	370	

Chapter 16	ANALYSIS OF CONVERTIBLE BONDS	373
	<i>Convertible Bond Provisions</i>	374
	<i>Minimum Value of a Convertible Bond</i>	375
	<i>Market Conversion Price</i>	376
	<i>Current Income of Convertible Bond Versus Stock</i>	377
	<i>Downside Risk with a Convertible Bond</i>	378
	<i>Investment Characteristics of a Convertible Bond</i>	378
	<i>Pros and Cons of Investing in a Convertible Bond</i>	379
	<i>Options Approach</i>	380
	<i>Summary</i>	381
	<i>Questions</i>	382
Chapter 17	ACTIVE BOND PORTFOLIO MANAGEMENT STRATEGIES	385
	<i>Overview of the Investment Management Process</i>	386
	<i>Active Portfolio Strategies</i>	389
	<i>Summary</i>	406
	<i>Questions</i>	407
Chapter 18	INDEXING	411
	<i>Objective of and Motivation for Bond Indexing</i>	411
	<i>Factors to Consider in Selecting an Index</i>	414
	<i>Bond Indexes</i>	414
	<i>Diversification and Portfolio Size</i>	416
	<i>Indexing Methodologies</i>	419
	<i>Logistical Problems in Implementing an Indexing Strategy</i>	423
	<i>Enhanced Indexing</i>	423
	<i>Summary</i>	424
	<i>Questions</i>	424
Chapter 19	LIABILITY FUNDING STRATEGIES	426
	<i>General Principles of Asset/Liability Management</i>	427
	<i>Immunitization of a Portfolio to Satisfy a Single Liability</i>	432
	<i>Structuring a Portfolio to Satisfy Multiple Liabilities</i>	446
	<i>Extensions of Liability Funding Strategies</i>	450
	<i>Combining Active and Immunization Strategies</i>	450
	<i>Summary</i>	451
	<i>Questions</i>	452

Chapter 20	BOND PERFORMANCE MEASUREMENT AND EVALUATION	458
	<i>Requirements for a Bond Performance and Attribution Analysis Process</i>	459
	<i>Performance Measurement</i>	459
	<i>Return Attribution Analysis</i>	468
	<i>Summary</i>	474
	<i>Questions</i>	475
Chapter 21	INTEREST-RATE FUTURES CONTRACTS	478
	<i>Mechanics of Futures Trading</i>	479
	<i>Futures Versus Forward Contracts</i>	481
	<i>Risk and Return Characteristics of Futures Contracts</i>	482
	<i>Currently Traded Interest-Rate Futures Contracts</i>	482
	<i>Pricing and Arbitrage in the Interest-Rate Futures Market</i>	489
	<i>Bond Portfolio Management Applications</i>	496
	<i>Summary</i>	504
	<i>Questions</i>	504
Chapter 22	INTEREST-RATE OPTIONS	507
	<i>Options Defined</i>	508
	<i>Types of Interest-Rate Options</i>	508
	<i>Exchange-Traded Futures Options</i>	509
	<i>The Intrinsic Value and Time Value of an Option</i>	511
	<i>Profit and Loss Profiles for Simple Naked Option Strategies</i>	512
	<i>Put-Call Parity Relationship and Equivalent Positions</i>	524
	<i>Option Price</i>	526
	<i>Option Pricing Models</i>	527
	<i>Sensitivity of Option Price to Change in Factors</i>	534
	<i>Hedge Strategies</i>	538
	<i>Summary</i>	543
	<i>Questions</i>	544
Chapter 23	INTEREST-RATE SWAPS AND AGREEMENTS	548
	<i>Interest-Rate Swaps</i>	549
	<i>Interest-Rate Agreements (Caps and Floors)</i>	568
	<i>Summary</i>	570
	<i>Questions</i>	571