

# FIXED INCOME ANALYSIS WORKBOOK

*Second Edition*

Frank J. Fabozzi, PhD, CFA

HOCHSCHULE  
°\* LIECHTENSTEIN  
Bibliothek

1 8 0 7  
©WILEY  
2 0 0 7

John Wiley & Sons, Inc.

# CONTENTS

Learning Outcomes, Summary Overview, and Problems

## CHAPTER 1

Features of Debt Securities

- Learning Outcomes
- Summary Overview
- Problems

## CHAPTER 2

Risks Associated with Investing in Bonds

- Learning Outcomes
- Summary Overview 9
- Problems 11

## CHAPTER 3

Overview of Bond Sectors and Instruments 15

- Learning Outcomes 15
- Summary Overview 16
- Problems 19

## CHAPTER 4

Understanding Yield Spreads **22**

- Learning Outcomes 22
- Summary Overview — 23
- Problems 25

## CHAPTER 5

Introduction to the Valuation of Debt Securities 29

- Learning Outcomes 29
- Summary Overview 29
- Problems 31

<b>CHAPTER 6</b>	
Yield Measures, Spot Rates, and Forward Rates	33
Learning Outcomes	33
Summary Overview	34
Problems	35
<b>CHAPTER 7</b>	
Introduction to the Measurement of Interest Rate Risk	- 41
Learning Outcomes	41
Summary Overview	42
Problems	44
<b>CHAPTER 8</b>	
Term Structure and Volatility of Interest Rates	49
Learning Outcomes	49
Summary Overview	49
Problems	52
<b>CHAPTER 9</b>	
Valuing Bonds with Embedded Options	55
Learning Outcomes	55
Summary Overview	55
Problems	58
<b>CHAPTER 10</b>	
Mortgage-Backed Sector of the Bond Market	63
Learning Outcomes	63
Summary Overview	63
Problems	65
<b>CHAPTER 11</b>	
Asset-Backed Sector of the Bond Market	73
Learning Outcomes	73
Summary Overview	73
Problems	78
<b>CHAPTER 12</b>	
Valuing Mortgage-Backed and Asset-Backed Securities	83
Learning Outcomes	83
Summary Overview	83
Problems	86

**CHAPTER 13**  
**Interest Rate Derivative Instruments** 92

- Learning Outcomes 92
- Summary Overview 92
- Problems 94

**CHAPTER 14**  
**Valuation of Interest Rate Derivative Instruments** 98

- Learning Outcomes 98
- Summary Overview 99
- Problems " ^" 100

**CHAPTER 15**  
**General Principles of Credit Analysis** 106

- Learning Outcomes 106
- Summary Overview 107
- Problems 109

**CHAPTER 16**  
**Introduction to Bond Portfolio Management** 114

- Learning Outcomes 114
- Summary Overview 114
- Problems 116

**CHAPTER 17**  
**Measuring a Portfolio's Risk Profile** 119

- Learning Outcomes 119
- Summary Overview 120
- Problems 122

**CHAPTER 18**  
**Managing Funds Against a Bond Market Index** 129

- Learning Outcomes 129
- Summary Overview - 130
- Problems 132

**CHAPTER 19**  
**Portfolio Immunization and Cash Flow Matching** 140

- Learning Outcomes 140
- Summary Overview 140
- Problems ( 142

CHAPTER 20		
Relative-Value Methodologies for Global Credit Bond Portfolio Management		144
Learning Outcomes		144
Summary Overview		144
Problems		146
CHAPTER 21		
International Bond Portfolio Management		151
Learning Outcomes	•	151
Summary Overview	•^J-'	152
Problems		155
CHAPTER 22		
Controlling Interest Rate Risk with Derivatives		159
Learning Outcomes		159
Summary Overview		160
Problems	•	162
CHAPTER 23		
Hedging Mortgage Securities-to Capture Relative Value		167
Learning Outcomes		167
Summary Overview		167
Problems		169
CHAPTER 24		
Credit Derivatives in Bond Portfolio Management		172
Learning Outcomes		172
Summary Overview		172
Problems		174
PART TT		
Solutions		
CHAPTER 1		
Features of Debt Securities		183
Solutions		183
CHAPTER 2		
Risks Associated with Investing in Bonds		186
Solutions	"	186

CHAPTER 3	
Overview of Bond Sectors and Instruments	191
Solutions	191
CHAPTER 4	
Understanding Yield Spreads	197
Solutions	197
CHAPTER 5	
Introduction to the Valuation of Debt Securities	201
Solutions	201
CHAPTER 6	
Yield Measures, Spot Rates, and Forward Rates	207
Solutions	207
CHAPTER 7	
Introduction to the Measurement of Interest Rate Risk	219
Solutions	219
CHAPTER 8	
Term Structure and Volatility of Interest Rates	225
Solutions	225
CHAPTER 9	
Valuing Bonds with Embedded Options	231
Solutions	231
CHAPTER 10	
Mortgage-Backed Sector of the Bond Market	238
Solutions	238
CHAPTER 11	
Asset-Backed Sector of the Bond Market	251
Solutions	251
CHAPTER 12	
Valuing Mortgage-Backed and Asset-Backed Securities	258
Solutions	258

CHAPTER 13		
Interest Rate Derivative Instruments		264
Solutions	,	264
CHAPTER 14		
Valuation of Interest Rate Derivative Instruments		270
Solutions		270
CHAPTER 15		
General Principles of Credit Analysis		281
Solutions		281
CHAPTER 16		
Introduction to Bond Portfolio Management		287
Solutions		287
CHAPTER 17		
Measuring a Portfolio's Risk Profile		290
Solutions		290
CHAPTER 18		
Managing Funds Against a Bond Market Index		298
Solutions		298
CHAPTER 19		
Portfolio Immunization and Cash Flow Matching		307
Solutions		307
CHAPTER 20		
Relative-Value Methodologies for Global Credit Bond "		
Portfolio Management		311
Solutions	•	311
CHAPTER 21		
International Bond Portfolio Management		316
Solutions		316

<b>CHAPTER 22</b>	
Controlling Interest Rate Risk with Derivatives	324
Solutions	324
*	
<b>CHAPTER 23</b>	
Hedging Mortgage Securities to Capture Relative Value	331
Solutions	331
<b>CHAPTER 24</b>	
Credit Derivatives in Bond Portfolio Management	335
Solutions	335
About the CFA Program	343