

BF308 FIXED INCOME SECURITIES ANALYSIS

Course Description and Scope

The objective of this course is to provide an overview of the fixed income securities and their analyses. Because of the complex nature of the fixed income securities, this course places an extra emphasis on the understanding of the economic forces driving the fixed income securities markets and the techniques for analyzing the securities.

The types of fixed income securities covered in the course include treasury securities and municipal bonds, corporate and international bonds, and structured securities. The risk-return characteristics of these fixed income securities will be explained in terms of price-yield relationship, various yield and return measures, and various price volatility measures. Various techniques for the valuation of these fixed income securities will be illustrated in details. The topics on fixed-income portfolio management include: yield curve and yield spread strategies, indexing and cash flow matching strategies, immunization strategies, and techniques for bond performance measurement and evaluation.

Proposed Lecture Schedule

| Week No. | Topics | Readings |
|-------------------------------------|--|---|
| 1 Joseph Kang Choong Seok | 1 INTRODUCTION 1.1 Overview of the fixed income securities market 1.2 Risks in bond investment 1.3 Financial innovation and the bond market 2 PRICING OF BONDS 2.1 Bond valuation 2.2 Complications in bond price determination 2.3 Bond price quotes and invoice price | Syllabus Fabozzi 1 Fabozzi 2 |
| 2 Joseph Kang Choong Seok | 3 MEASURING YIELD 3.1 Computing the internal rate of return 3.2 Conventional yield measures 3.3 Sources of a bond's dollar return 3.4 Realized compound yield 4 BOND PRICE VOLATILITY 4.1 Price/yield relationship for bonds 4.2 Price/volatility characteristics of bonds 4.3 Price value of a basis point and yield value of a price change 4.4 Duration and convexity 4.5 Limitations of duration and convexity | Fabozzi 3 Fabozzi 4 |
| 3 Joseph Kang Choong Seok | 5 ANALYSIS OF TREASURY SECURITIES 5.1 Base interest rate and risk premium 5.2 Term structure of interest rates | Fabozzi 5 |

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| | 6 TREASURY AND STRIPPED TREASURY SECURITIES MARKETS 6.1 Treasury securities 6.2 Stripped treasury securities 6.3 Strips and federal agency securities | Fabozzi 6 |
| 4 Joseph Kang Choong Seok | 7 CORPORATE DEBT INSTRUMENTS 7.1 Corporate bonds 7.2 Medium-term notes 7.3 Commercial paper 7.4 Credit Analysis 8 MUNICIPAL SECURITIES 8.1 Types and features of municipal securities 8.2 Municipal money market and derivatives products 8.3 Credit and other risks 8.4 Municipal bond market 9 INTERNATIONAL BONDS 9.1 Global bond markets 9.2 Foreign exchange risk and bond returns 9.3 Eurobond market 9.4 Non-US government bond markets 9.5 Emerging bond markets 9.6 Clearing systems 9.7 International bond investing: theory and practice | Fabozzi 7 Fabozzi 8 Fabozzi 9 |
| 5 Joseph Kang Choong Seok | • First Quiz 10 MORTGAGE LOANS 10.1 Mortgage and mortgage market 10.2 Alternative mortgage instruments 10.3 Risks in mortgage investment | Fabozzi 10 |
| 6 Joseph Kang Choong Seok | 11 MORTGAGE PASS-THROUGH SECURITIES 11.1 Cash flow characteristics 11.2 Agency and private-label pass-throughs 11.3 Analysis of prepayment behavior 11.4 Cash flow yield and cashflow analysis 11.5 Prepayment risk and asset/liability management 11.6 Secondary market trading | Fabozzi 11 |
| 7 Robin Grieves | 12 CMO AND STRIPPED MORTGAGE-BACKED SECURITIES 12.1 Collateralized mortgage obligations 12.2 Stripped mortgage-backed securities 13 ASSET-BACKED SECURITIES 13.1 Overview of asset-backed securities 13.2 Cash flow of asset-backed securities 13.3 Credit risk | Fabozzi 12 Fabozzi 13 |
| 8 | Recess Week | |
| 9 & 10 Robin Grieves | 14 ANALYSIS OF BONDS WITH EMBEDDED OPTIONS 14.1 Yield spread and static spread 14.2 Price/yield relationship for a callable bond | Fabozzi 14 |

Optional Reference

Handbook Frank J. Fabozzi, Eds. *The Handbook of Fixed Income Securities*
Fifth Edition, Irwin/McGraw-Hill Publishing, 1997.
(Library call number: r HG4651.H236 1997)

Method of Instruction

Lecturers : 2 hours per week
Tutorials : 2 hours per week

Lectures commence in Week 1 and end in Week 13
Tutorials commence in Week 2 and end in Week 14

Course Assessment*

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| Tutorial Assignments (written and oral presentation, and participation): | 10% |
| Two Non-cumulative Quizzes during Lectures (10% x 2): | 20% |
| Final Examination (closed book): | <u>70%</u> |
| | 100% |

*Detailed guidelines will be provided by the lecturers during lectures.

| <i>Lecturer/Tutor</i> | <i>Office Room No.</i> | <i>DID</i> | <i>E-mail Address</i> |
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