

August 28, 2003

Syllabus
FIN 5713
Fixed Income Fund
Fall 2003

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Office Hours:
Tues: 2:30-3:30
& before class

Course Objectives:

- Learn to analyze and evaluate fixed income securities.
- Learn principles and techniques of risk management for a portfolio of fixed income securities.
- Study the determinants of interest rate levels and structure.
- Make recommendations on a \$5 million portfolio of fixed income securities.

Text: Bond Markets, Analysis and Strategies, by Frank Fabozzi (4th edition, Prentice Hall).

Course Requirements:

Problem Sets: Most weeks there will be problem sets which are a important part of the course. While I do not intend to take up and grade these, you are expected to work them on schedule and to be prepared to present your answer in class. Group work is encouraged but individuals, not groups, will be called on to present their answers.

Group Work: The class will be divided into teams of 4-5 with each team focusing on one of the following sectors of the bond market: US treasury securities, agency securities, and corporate securities. All teams will analyze and make recommendations regarding mortgage backed securities. If possible, each team should have one or more members with access to a Bloomberg terminal. Each group will make the following four reports (grade percentage in parentheses):

1. Review of economic conditions and monetary policy and a forecast of likely future interest rates. (15%)
2. A evaluation of the existing bond sub-portfolio, i.e., the one chosen last semester (Treasuries, agencies, or corporates) (15%)
3. Recommendations for bond purchases and sales in your sector. (20%)
4. Recommendations for mortgage backed security sales and purchases. (20%)
5. Final report (30%)

Presentation is important. I will deduct severely for poor grammar, misspelled words, and awkward sentences and reward concise, clear, eye-catching presentations. The reports should be submitted via the digital drop box in Blackboard; please do not email.

For the final report and portfolio recommendations , the teams will be reorganized into new teams groups responsible for the following sections: Interest rate outlook, US Treasury securities, Agencies, Corporates, and Mortgage Backed Securities. I am also looking for a couple of volunteers to coordinate the preparation of the final report.

Bond Portfolio. The class will make recommendations to the Bank of Oklahoma for purchases and sales on a bond portfolio of about \$5 million. Since the bank does not invest in corporate bonds, that group's recommendations are hypothetical. The reasoning behind the class's recommendations and an analysis of the portfolio will be presented on the last day of class, December 11. Senior executives of the Bank of Oklahoma will be invited to attend.

Exams: There will be both a midterm and a comprehensive exam. You are allowed one 8.5 x 11 sheet of formulae/notes.

Grading:

Class participation and problem sets	10%
Group Work - group graded portion	15%
Group Work - Peer Evaluation	10%*
Midterm exam	30%
Final	35%

*For the Peer Evaluation portion of the grade, each group member will be asked to divide 100 points among the other members of the group based on their contribution to the group work. These will then be adjusted for differences in group size and standardized so that an average person receives 10%. For example suppose there are four members of a group and the other four members evaluate person X as follows: 30%, 50%, and 40% for an average of 40%. Since the base for a four person group if all performed equally would be 33.33%, this person would receive $(.40/.333) (.1) = 12\%$ for this portion of their grade. Note that for this portion of your grade, 10% represents the average grade, not the maximum. Therefore 10% will be viewed as a B level grade.

Bloomberg: I have put links to web sites with information on bonds and fixed income securities on Blackboard. Nonetheless, the best source for information on fixed income securities is the Bloomberg system. Those of you with access to a Bloomberg terminal but without experience using it should use this class to become familiar with the Bloomberg system and its capabilities. For those who can attend during the day, an introductory session by a Bloomberg representative will be arranged.

Accommodation of Students with Disabilities: Any student in this course who has a disability that may prevent him or her from fully demonstrating his or her abilities should contact me personally as soon as possible so we can discuss accommodations necessary to ensure full participation and facilitate your educational opportunities.

Food and Drink in the Classroom: It is against Price College policy to bring food or drink into the classrooms.

Communications: We will use Blackboard at <http://blackboard.ou.edu> or <http://ou.blackboard.com> as the main communications device. I will post problem sets, readings, and other materials there. Link to fixed income websites are also provided there. Assignments should be submitted using Blackboard's digital drop box. You can send email messages to me directly at the address shown above or using Blackboard but please use Blackboard for all assignment submissions. Blackboard sends all email messages to your OUNet address. If you wish to have these forwarded to another email address, you need to set up forwarding at <http://account.ou.edu>.

Software and/or Calculator: Everyone needs software or a calculator capable of calculating present values when the payments are not evenly spaced, e.g., a bond with the first coupon payment in two months and every six months thereafter. Also you need to be able to calculate internal rates of return, or yields for such bonds. Excel has these functions but they are not installed automatically. If the functions PRICE and YIELD don't show up in the Excel function list on your computer go to "Add-Ins" under the "Tools" menu and install the Analysis Toolpack. A financial calculator such as the HP 12C is another possibility but I will be using Excel since I can show it on the screen.

COURSE OUTLINE AND READING LIST

Note: The dates indicated are approximate. Because of uncertainty about how long topics will take and the possibility of guest speakers, adjustments are possible. Required non-text readings may added later.

Note: Because the class only meets once a week, and I think there is a limit to how much technical material one can effectively absorb, I have interspersed technical and less technical topics.

- **August 28**
 - **Interest Rate Math and Interest Rate Determination**
 - Determinants of the level of Interest Rates
 - Nominal and Real Rates
 - International Rate Relationships and Interest Rate Parity
 - Bond pricing
 - Yield measures
 - Readings:**
 - Fabozzi, chapters 1-3

- **September 4**
 - **Monetary Policy and Interest Rate Math continued**
 - Monetary Policy Procedures
 - Money market rates
 - Interest rate conventions

- **Readings:**
 - “Modern Money Mechanics’ (thru page 19)
 - “Overview of the Federal Reserve” on Blackboard
 - “Understanding Open Market Operations” on Blackboard

- **September 11**
 - **Monetary Policy and Duration**
 - Current Monetary Policy
 - Bond price volatility
 - Duration
 - **Readings:**
 - Fabozzi, chapter 4 (thru page 68)
 - “Monetary Policy Report to Congress” of July 2003 - on Blackboard and at www.federalreserve.gov/boarddocs
 - Most recent minutes of FOMC meeting - at www.federalreserve.gov/fomc.
 - “Recent Trends in Monetary Policy” - on Blackboard

- Group Reports reviewing the current economic environment and making interest rate forecasts for the next year are due **September 18**

- **September 18**
 - **Duration and Convexity continued**
 - Duration
 - Convexity
 - **Readings:**
 - Fabozzi, chapter 4

- **September 25**
 - **Term Structure of Interest Rates**
 - Forward rates
 - Determinants of the term structure
 - Ladder, barbell and bullet strategies
 - **Readings:**
 - Fabozzi, chapters 5 and 17

- Group reports evaluating the inherited sub-portfolios in each area are due **October 2**.

- **October 2**
 - **Government Bonds and Markets**
 - T-Bills, Notes, and Bonds
 - Auction Procedures
 - Agency issues
 - Munis

- **Readings:**
Fabozzi, chapters 6, and 8
- **October 9 - Midterm exam** (covers through chapters 1-6 and 8&17 in Fabozzi and readings and problem sets through October 2)
- Recommendations on portfolio changes for Treasuries, and Agencies, are due **October 16**.
- **October 16**
 - **Corporate and International Bonds**
Risk structure of interest rates
Default and Bankruptcy
Bond Ratings
Corporate Bonds
Commercial Paper
Sovereign and International Bonds
 - **Readings:**
Fabozzi, chapters 7, and 9
- Recommendations on portfolio changes in the Corporate for Treasuries, and Agencies, are due **October 23**
- **October 23**
 - **Mortgage Loans and Passthroughs**
Mortgage types and rates
Mortgage prepayments
Fannie Mae, Freddie Mac, and Ginnie Mae
Pass through certificates
 - **Readings:**
Fabozzi, chapters 10 and 11
- **October 30**
 - **Passthroughs (continued) and Mortgage Backed Securities.**
Analysis of Passthroughs
MBS and CMO structures
Sequential CMOs
 - **Readings:**
Fabozzi, chapter 12.

- **November 6**
 - **Mortgage Backed Securities.**
 - PACs and other CMO's
 - MBS structures
 - Information and analysis
 - Other Asset backed securities
 - **Readings:**
 - Fabozzi, chapter 12 and 13.

- Group recommendations on changes in the MBS portfolio are due **November 20**

- **November 13**
 - **Embedded Options and Analysis**
 - Call provisions
 - Option adjusted spreads
 - Effective duration and convexity
 - **Readings:**
 - Fabozzi, chapters 14 & 15

- **November 20 - Final Exam.** Exam will be cumulative.

- **November 27 - Thanksgiving Break - no class**

- **December 4 - Final Reports due and Mock Presentation**

- **December 11 - Presentation to BOK Officials and Guests**