Course Overview and Philosophy.

This course covers the valuation of fixed income securities. The course begins with a treatment of basic bond math and term structure theory concepts. The initial material provides the student with a strong background in the valuation of “plain vanilla” bonds. The remainder of the course considers the effects of attached options and default risk on the valuation of bonds.

The valuation of fixed income securities is done on a relative value basis. The idea is to determine the value of a security given the valuation(s) of other securities. If your valuation is higher (lower) than the market price of the security, then the security is “cheap” (“rich”). The relative value approach is common since so many investment managers are benchmarked against an index rather than on a total return basis.

Relative value investing translates the investor’s views into portfolio strategies. There are three basic views an investor can have: the direction of future interest rate changes, the volatility of interest rates and the credit quality of the issuer.

Investors bet their views on the direction of future interest rate changes by the maturity mix of bonds in the portfolio. Investors bet their views on volatility of interest rates by the extent they hold bonds with embedded options. Investors bet their views on issuer credit quality by both the extent of corporate bonds contained in the portfolio and the specific names in the corporate bond portfolio.

The materials covered in this class naturally also provide insights into two related areas. First, the course is useful for thinking about the kinds of bonds an issuer might issue. The valuation problem from the standpoint of the investor is the mirror image of the issuer’s problem. A good (bad) bond to buy is a bad (good) bond to issue. Second, the exposure of a bond portfolio to market factors can be easily quantified given the material learned in this course.

Students are expected to have read the assigned readings and lecture notes prior to class. The class will move along at a rapid pace and cover some very advanced topics. If you have trouble understanding any material it is your responsibility to ask questions in class or seek outside help from the instructor.Absent any feedback from the class otherwise, I will assume that all students are comfortable with the material and the pace of the course.
Readings.


Students should also follow the U.S. dollar market on a daily basis at http://www.bloomberg.com/markets/rates/index.html

Grading.

Your course grade will depend on your score on four assignments and a final exam detailed below. All five graded exercises are individual work. It is a violation of the University of Florida Honor Code to consult other students on these assignments.

Assignment One: Bond Math Problem Set 15% of course grade
due at start of class on 9/7

Assignment Two: Term Structure Problem Set 15% of course grade
due at start of class on 9/19

Assignment Three: Term Structure Models Problem Set 15% of course grade
due at start of class on 9/26

Assignment Four: Callable Bonds Problem Set 15% of course grade
due at start of class on 10/5

Final Exam 40% of course grade
Course Outline

8/22/05

**Course Overview**

Lecture Outline: OVERVIEW

Readings for 8/24, 8/26 and 8/31 classes

Fabozzi Chapters 1, 2 and 3

Sundaresan Chapters 1, 2, 4 and 5

8/24/05

**Bond Math Part I.**

Brown Chapter 1: Pages 1-10

Salomon Brothers Overview of Forward Rate Analysis

Lecture Outline: BASIC ONE

8/29/05

**Bond Math Part II.**

Brown Chapter 1: Pages 11-25

Salomon Brothers Market’s Rate Expectations and Forward Rates

Lecture Outlines: BASIC TWO

ZV

8/31/05

**Duration and Convexity.**

Brown Chapter 3: Pages 1-7.

Lecture Outline: DURATION

Fabozzi Chapter 4

Sundaresan Chapter 4 provides a very good treatment of Excel bond functions for duration and in general.

9/7/05

**Term Structure Theory and Evidence**

“Treasury Bill Versus Private Money Market Yield Curves” Rowe, Lawler and Cook

Brown Chapter 2

Salomon Brothers Does Duration Extension Enhance Long Term Expected Returns

Salomon Brothers Forecasting U.S. Bond Returns

Lecture Outline TERM STRUCTURE

Fabozzi Chapter 5

Sundaresan Chapter 6

9/12/05

**Interest Rate Determination**

Lecture Outline RATES

9/14/05

**Term Structure Models**

Lecture Outline TERM STRUCTURE MODELS

Sundaresan Chapter 17
9/19/05  **Curve Strategies**  
Salomon Brothers  
Lecture Outline  
A Framework for Analyzing Curve Trades  
CURVE STRATEGIES

9/21/05  **Callable Bonds**  
Brown  
Lecture Outlines:  
CALLABLE  
USING BLOOMBERG TO EVALUATE CALLABLE BONDS  
Fabozzi,  
Chapter 16

9/26/05  **Mortgage-Backed Securities: Mechanics, Prepayments and Valuation**  
Lecture Outline:  
MBS PART I  
Fabozzi  
Chapters 10, 11 and 17  
Sundaresan  
Chapter 9

9/28/05  **Mortgage-Backed Securities: CMOs**  
Lecture Outlines:  
MBS PART II  
Fabozzi  
Chapter 12

10/3/05  **Bloomberg Mortgage Applications**  
Lecture Outlines:  
USING BLOOMBERG TO EVALUATE MBS  
BLOOMBERG CMO ANALYSIS

10/5/05  **Default Risk**  
Lecture Outline:  
CREDIT RISK  
Fabozzi,  
Chapter 7  
Sundaresan  
Chapter 18

10/10/05  **Final Exam**