Debt and Money Markets
Finance 4243
Spring 2004

Professor: Andy Naranjo, Emerson-Merrill Lynch Associate Professor of Finance

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Office Hours: Tues. & Thurs.: 3:45-4:30 P.M.; also after class & by appointment

Required Texts:
1. Miles Livingston, Bonds and Bond Derivatives, 1999
2. A packet of handouts and old exams (available at Custom Copies and Textbooks)
3. Class handouts will also occasionally be given throughout the semester.

Course Description: (undergraduate catalog)
Financial Markets; institutions and instruments associated with debt funds; the determinants of the general level and structure of interest rates.

Course Requirements and Evaluation:
All assigned readings in the attached course outline are required. These reading assignments will serve as background material for the lectures and should be read prior to the lectures. Class attendance and accompanying participation are therefore critical components of the course.

There will be a total of 350 possible points that can be earned during the semester. These points are distributed among classroom participation (which also includes some in and out of class assignments), two homework assignments, a midterm exam, and a final exam.

Classroom participation is worth a total of 40 points and will be determined by relevant and meaningful classroom participation during the course lectures and other assignments. The midterm exam is worth 140 points, and the final exam is worth 150 points. The homework assignments are worth 10 points each, for a total of 20 possible homework points. The homework assignments will be given before the midterm and the final exam to help prepare you for each exam.
Course Grade Scale:
Your course grade will be based on the following *accumulative* point scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Accumulative Course Points</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>310 - 350</td>
</tr>
<tr>
<td>B+</td>
<td>303 - 309</td>
</tr>
<tr>
<td>B</td>
<td>273 - 302</td>
</tr>
<tr>
<td>C+</td>
<td>266 - 272</td>
</tr>
<tr>
<td>C</td>
<td>238 - 265</td>
</tr>
<tr>
<td>D+</td>
<td>231 - 237</td>
</tr>
<tr>
<td>D</td>
<td>210 - 230</td>
</tr>
<tr>
<td>F</td>
<td>0 - 209</td>
</tr>
</tbody>
</table>

Exam Note Sheet:
You are allowed to bring in one 8 1/2 X 11 note sheet into each exam. You may *write* anything that helps you for the exam on *one side* of this note sheet. You may not attach anything else to this page. The purpose of this sheet is for you to have access to the many formulas that we will encounter without having to memorize all of them. This note sheet will be turned in with each of your exams. If you violate any of these rules, you will receive a zero for that exam.


**Regrade Policy:**

Please note that for me to reconsider your grade, you must provide me with the following material within 3-weeks of the end of the term.

If you believe that *incorrectly summed-up* your course points, please do the following:
1. Turn in *all* of your graded course material with corresponding points.
2. Clearly show me in writing where you believe the summation error has occurred.
3. Provide me with your contact information – where I can reach you once I have evaluated your case (phone and email).

If you believe that you received *incorrect credit* for a particular portion of your graded material, please do the following:
1. Turn in *all* of your graded course material with corresponding points.
2. Provide me with a *clear*, type-written case (along with *very strong* supporting documentation) that *clearly* shows me why you believe that you received insufficient credit. Note that I will only give you *1 opportunity* to make your case – so make it as clear and strong as possible. Also, please note that non-sense cases can result in your course grade being downgraded once all of your graded course material has been re-evaluated.
3. Provide me with your contact information – where I can reach you once I have evaluated your case (phone and email).

**Make-up Examinations and Late Assignments:**

Late assignments will not be accepted. Make-up exams will be offered only under *extremely* extenuating circumstances and only if the student notifies me well in advance of the conflict. Students who miss an exam without satisfying the above *two* criteria will receive a zero for that exam.
Miscellaneous University Issues:

1. Document Retention Policy:
   Student course material will be retained for two weeks beyond the end of the term.

2. Accommodations for students with disabilities:
   "Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation."

3. The University’s honesty policy regarding cheating and use of copyrighted materials:
   All students are required to abide by the Academic Honesty Guidelines set forth in the University of Florida Rules - 6C1-4 Student Affairs, 6Cl-4.017 Student Affairs: Academic Honesty Guidelines. The following website contains details covering the academic honesty guidelines: http://www.aa.ufl.edu/aa/Rules/4017.htm.
Brief Course Outline

Part 1: Introduction to Debt and Money Markets
Part 2: Interest Rates
Part 3: Bond Valuation
Part 4: Managing Bond Risk
Part 5: Bonds with Embedded Options

Exam Dates

Midterm: Parts 1-3  February 26th; during scheduled class periods

Final: Parts 4-5

<table>
<thead>
<tr>
<th>Periods</th>
<th>Date and Time</th>
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<tbody>
<tr>
<td>5-6 (Section 5153)</td>
<td>April 26th, 7:30-9:30 A.M. (Monday)</td>
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<tr>
<td>7-8 (Section 5156)</td>
<td>April 28th, 10:00-12:00 noon (Wednesday)</td>
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Detailed Course Outline

Part 1: Introduction to Debt and Money Markets

Lecture 1
Overview of Financial Assets and Capital Markets
- Financial Assets
- Capital Markets
  - Debt versus Equity Markets
  - Debt versus Money Markets
  - Purpose of Capital Markets

Livingston: Introductory Chapter

Taxonomy of Debt and Money Market Instruments (brief overview of security types)
- Some Distinguishable Features

Livingston: Chapter 2, Chapter 5 (pgs. 72-81)

Lecture 2
Security Market Microstructure
- Primary Market versus Secondary Market
  - Primary Market Debt Issuing Procedures
  - Secondary Market Structure

Livingston: Chapter 3, Chapter 2 (pgs. 18-23)
Part 2: Interest Rates

**Lectures 3-5**
Interest Rate Concepts
- Time Value
  - Future Value
  - Present Value
- Yields
- Interest Rates versus Returns

*Livingston: Chapter 4, 5 (pgs. 81-87)*

Real versus Nominal Interest Rates
- Inflation
- The Fisher Equation

*Livingston: Chapter 1 (pgs. 13-16)*

**Lectures 6-7**
Interest Rate Determination
- Intertemporal Consumption/Savings and Investment Decisions
- Loanable Funds Model
- Other Models

*Livingston: Chapters 1 and Packet - Chapters 2-3 from Money and Capital Markets*

**Lectures 8-9**
Term Structure of Interest Rates
- Some Background
- Deriving the Term Structure of Interest Rates
- Theories and Empirical Evidence
  - Pure Expectations Theory
  - Liquidity Theory
  - Preferred Habitat Theory
  - Market Segmentation Theory
- Interpreting Yield Curves

*Livingston: Chapters 7, 9*
Part 3: Bond Valuation

**Lectures 10-11**
- Review
  - Bond Prices
  - Yields

- Bond Price Theorems
- Factors Influencing Bond Prices

*Livingston: Review Chapters 4, 5, 7*

**Midterm Exam: Parts 1-3**

Part 4: Managing Bond Risk

**Lectures 12-18**
- Determinants of Bond Risk
  - Reinvestment Rate Risk
  - Price Risk
  - Default Risk
  - Call Risk
  - Inflation and Yields
  - Taxes and Yields

- Reinvestment Rate Risk and Price Risk
  - Interest Rate Risk
  - Duration
  - Convexity
  - Immunization
  - Interest Rate Futures, Options and Swaps
  - Other Specialized Financial Instruments (financial engineering)

*Livingston: Chapters 6, 13, 14, [11 & 15 (options will be covered thoroughly in Part 5)]*
Lecture 19

Default Risk
- Financial Distress
- Bond Ratings
- Risk Structure of Interest Rates
  - Yield Spreads and Default Premia

Livingston: Review Chapter 10

Call Risk
- Introduction to Bonds with Embedded Options (covered in Part 5)
  - Characteristics and Purpose of Callable Bonds

Livingston: Packet – parts of Chapter 14 from Money and Capital Markets
(Callable Bonds will be covered thoroughly in Part 5)

Inflation
- Inflation and Yields

Livingston: Review Chapter 1 (pgs. 13-16)

Taxes
- Tax Treatment of Bonds
- Taxes and Yields

Livingston: Chapter 2 (pgs. 25-27)
Part 5: Bonds with Embedded Options

Lecture 20
Options
- Introduction and Definitions
- Valuation
- Factors
- Black-Scholes Option Pricing Model

Livingston: Chapter 11

Convertible Bonds

Livingston: Chapter 15 (pgs. 236-238)

Callable Bonds and Sinking Funds

Livingston: Chapter 11 (pgs. 173-175)

Lecture 21
Mortgage Backed Securities

Livingston: Chapter 12

Final Exam: Parts 4-5