Course Materials

Text, Class Notes, and Additional Readings: These can be downloaded from the Finance 515 Compass webpage at [https://compass2g.illinois.edu](https://compass2g.illinois.edu). The text is the yet-to-be-published book *Interest Rate and Credit Risk Derivatives* by Peter Ritchken of Case Western Reserve University. I will post class notes and background readings during or prior to the weekend before class.


Useful references (Not required):

Course Objective

Successful completion of this course provides a basic understanding of the growing field of fixed-income securities, including interest rate and credit derivatives. The course material is most valuable to those considering a career in fixed-income securities trading and analysis, financial institution lending and credit analysis, bond and loan portfolio management, and the management of interest rate and credit risks. We will analyze the major government, corporate, and consumer debt instruments and their interest rate risk and credit risk characteristics. We will also discuss the features, usage, and valuation of the most common types of interest rate derivatives and single name and portfolio credit derivatives. In addition, we will introduce techniques used to value default-free and defaultable debt and various interest rate and credit derivative contracts.

Course Topics and Textbook Readings

0. Overview of Fixed-Income Security Markets

I. Basics of Bond Prices and Yields
   Ritchken Chapter 1

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1 Additional readings will be posted on course web page.
II. Treasury Securities
Ritchken Chapter 2
Case: The Harvard Management Company and Inflation-Protected Bonds HBS 9-201-053

III. The Federal Reserve, Money Markets, and Government Security Markets
Ritchken Chapter 4
Ritchken Chapter 10
Case: Salomon and the Treasury Securities Auction HBS 9-292-114

IV. The Term Structure of Spot, Forward, and Par Rates
Ritchken Chapter 3 p.49-54
Ritchken Chapter 13 p.273-280
Ritchken Chapter 5

V. Repurchase Agreements and Forward Contracts
Ritchken Chapter 9
Case: Arbitrage in the Government Bond Market? HBS 9-293-093

VI. Eurodollars, Floating Rate Bonds, and Forward Rate Agreements
Ritchken Chapter 11

VII. Eurodollar Futures
Ritchken Chapter 11

VIII. Interest Rate Swaps
Ritchken Chapter 12
Case: Banc One Corporation: Asset and Liability Management. HBS 9-294-079

IX. Constructing Zero-Coupon Yield Curves
Ritchken Chapter 6
Case: Deutsche Bank: Finding Relative-Value Trades. HBS 9-205-059

X. Measures of Price Sensitivity: Duration and Convexity
Ritchken Chapter 7
Case: Ticonderoga: Inverse Floating Rate Bond. HBS 9-205-113

XI. Key Rate Durations (if time permits)
Ritchken Chaper 8

XII. Interest Rate Options
Ritchken Chapter 14
Case: G&P Greetings, INC. Darden Business Publishing UVA-F-1122

XIII. Household Credit
Case: Understanding the Grameen Miracle: Information and Organisational Innovation. This case will be posted on Compass.
Case: Rosetree Mortgage Opportunity Fund. HBS 9-209-088

XIV. Business Credit
Bomfim Chapter 15
XV. Single-Name Credit Risk and Credit Derivatives
Bomfim Chapters 3, 25, 7, 6, 24, 12, 9, 10, 13, and 14
Bomfim Chapters 17 and 22
Case: First American Bank: Credit Default Swaps. HBS 9-203-033

XVI. Portfolio Credit Risk and Derivatives
Bomfim Chapters 19, 20, and 21
Case: Nexgen: Structuring Collateralized Debt Obligations (CDOs). HBS 9-205-121

Course Procedures

As shown in the course topics, we will cover 11 case studies over the course of our 29 classes. Class time will be devoted to case discussion and to covering concepts that are needed to prepare for subsequent cases. Because of the nature of the course and its grading policy, it is very important that you attend every class and be prepared to participate. Please bring your name cards to each class.

Prior to those classes where a case will be discussed, I will post questions to guide your preparation for the case. At the beginning of the class during which the case is discussed, you will submit a two-page memorandum covering the main points of the case. Memoranda should be written as if you are a manager or consultant asked to provide a recommendation on the major decisions regarding the case. Besides the two typed pages describing your recommendations, you may provide additional pages of supporting calculations if needed.

It may be helpful to you to meet with a group of other students to prepare a case memorandum. If you choose to do this, you also may hand in a single group memorandum. However, there can be no more than four people in the same group. You can organize yourselves into groups using Compass. Case memoranda must be submitted via Compass by 12:00 noon on the day that the case will be discussed in class. Case memoranda are graded on a point scale of 0 to 3, and 1 point will be deducted for each ½ hour that the case is submitted late.

Since there are usually no absolutely correct answers to a case, only well-reasoned and not-so-well-reasoned arguments, I give no written “solutions” to a case after it is discussed in class. A purpose of this course is to help you to distinguish logical from illogical analysis of problems related to fixed-income securities.

Grading Policy

Case memoranda and occasional assignments will count for 25% of your grade. Class participation, based on your quality and quantity of comments during class, will count for 20%. The mid-term exam, given in class on Wednesday March 12th, will be worth 25 % of the course grade. A final exam, worth 30% of the course grade, will be given during the scheduled final exam period. Plus and minus grades may be assigned.

Academic Integrity

You are expected to uphold the highest standards of academic honesty and abide by the University’s policies on academic integrity. You are responsible for knowing and following the University’s rules given at http://admin.illinois.edu/policy/code/article1_part4_1-401.html.