School of Administrative Studies
Faculty of Liberal Arts and Professional Studies

Fixed Income Securities and Risk Management

Course Number: **AP/ADMS 4504 Sections M and N**
Term: **Winter 2022**

Course Outline

Instructor: Professor Xiaofei Li

Email: XiaofeiL@yorku.ca

Office Phone Number: (416) 736-2100 extension 30119

Class Hours: Section M, Wednesdays, 7 – 10 pm, room TBA
Section N, Wednesdays, 4 – 7 pm, room TBA

Office Hours: Wednesdays, 1 pm – 3 pm, in my office AK235A

Course Description

This course introduces you to fixed income securities and markets. Topics covered include debt securities, risks of investing in bonds, the pricing of fixed income securities, the measurement of interest rate risk, the term structure and volatility of interest rates, mortgage-backed and asset-backed securities, the valuation of mortgage-backed and asset-backed securities, credit analysis, and interest rate derivatives etc. A notable feature of this course is that it is based on the Chartered Financial Analyst (CFA) curriculum, thus preparing you for writing the fixed income parts of both the Level I and Level II of the CFA exams. However, please note that this course is *not* a CFA prep course. This course is both rich in content and fast in pace. So, significant out of class work is required for each of you.

Prerequisite

AP/ADMS 3531 (Personal Investment Management) is the prerequisite. **You are also highly recommended to take AP/ADMS 4503 (Derivative Securities) and AP/ADMS 4509 (Financial Risk Management) at your convenient time. But AP/ADMS 4503 is *no* longer a co-requisite for this course.**

Student Evaluation

Midterm Exam I	30%
Midterm Exam II	30%
Final Exam	40%

Textbook

***Fixed Income Analysis*, fourth edition**, James F. Adams and Donald J. Smith (edited), John Wiley & Sons, Inc., 2019.

Supplementary Readings

1. ***Bond Markets, Analysis, and Strategies***, seventh, eighth, or ninth edition, Frank J. Fabozzi, Pearson Education Inc., 2010 for the seventh edition, 2013 for the eighth edition, or 2016 for the ninth edition.

2. ***Fixed Income Securities: Tools for Today's Markets***, second edition, Bruce Tuckman, John Wiley & Sons, Inc., 2002.

Please note: A number of references will also be posted on the course website throughout the semester. You are required to read these references.

Method of Instruction

Your active participation is encouraged. You are required to think, to analyze, to evaluate, and to apply problem-solving techniques. You are also expected to complete the assigned reading before each class.

Midterm and Final Exams

Midterm exams I and II and final exam are **open book**. There is *no* make-up midterm exam. Midterm exam I is on **Friday**, **February 18th**, **7 pm – 9 pm**, which will cover the topics in the **first five weeks**. Midterm exam II is on **Friday**, **March 25th**, **7 pm – 9 pm**, covering the materials in **Weeks 6 – 9**. The final exam is **cumulative** and might test every topic in the course. The midterm and final exams have **both quantitative and qualitative** questions. You will need to use **Excel** to solve some exam questions.

If you miss the midterm exam for a legitimate reason, your final exam performance relative to other students in the class will be used to estimate your midterm exam mark. The estimation and any further adjustment will be entirely at the discretion of the Course Director/Area Coordinator and are *not* subject to any appeal. All students who need a passing grade for the course must write the final exam.

Note: It is the policy of the School of Administrative Studies Finance Area that **instructors will *not* sign a DSA form if a student misses both the midterm and final exams**. Students in this situation will need to petition for a remedy appropriate to their circumstances.

Formula Sheets

Because the midterm and final exams are open book, formula sheets will *not* be provided at the exams. You may use the formula sheets in the previous terms as a reference. These sample formula sheets are posted on eClass.

Financial Calculator

A financial calculator is required. If you will pursue the CFA designation in the future, note that only two types of calculator are currently allowed for the CFA exams: the Texas Instruments BAII Plus (BAII Plus) and the Hewlett-Packard 12C (HP-12C).

Academic Honesty and Integrity

In this course, we strive to maintain academic integrity to the highest extent possible. All instances of academic dishonesty in this course will be reported to the appropriate university authorities, and can be punishable according to the Senate Policy on Academic Honesty:

https://secretariat-policies.info.yorku.ca/policies/academic-honesty-senate-policy-on/

Relevant University /LA&PS/ School Regulations

The regulations on many aspects of coursework that apply to you are on this site: http://sas.laps.yorku.ca/students/

You are responsible for understanding and following these regulations.

Deferred Standing – Missed Final Exam

Deferred standing may be granted to students who are unable to write their final examination at the scheduled time. In order to apply for deferred standing in an AP/ADMS class, students must register at:

http://sas-app.laps.yorku.ca

The DSA and supporting documentation must be submitted *no* later than five (5) business days from the date of the exam. These requests will be considered on their merit and decisions will be made available by logging into the same link as above. *No* individualized communication will be sent from the School to the students (*no* letter or e-mails).

Tentative Course Schedule

The topic order will be as stated below. Depending on time constraint some topics may be subject to minor changes.

Week	Date	Topic and Textbook Material

1	January 12th		Features of Debt Securities, and Risks in Bond Investments Chapter 1
2	January 19th		Overview of Bond Sectors, and Understanding Yield Spreads Chapter 2 and Section 7.4
3	January 26th		Introduction to the Fixed Income Valuation, and Duration and Convexity Chapters 3 and 5
4	February 2nd		Yield Measures, Spot Rates, and Forward Rates Section 7.2
5	February 9th		Term Structure and Volatility of Interest Rates PowerPoint slides
	Midterm Exam I is on Friday, February 18th, 7 pm – 9 pm, room TBA		**Midterm Exam I covers Weeks 1 - 5**
6	February 16th		Binomial Model and Convertible Bonds Sections 8.1 – 8.3 and Sections 9.3.5 – 9.6
7	March 2nd		Mortgage-Backed Securities Sections 4.4 – 4.6
8	March 9th		Asset-Backed Securities Sections 4.2 – 4.3, Sections 4.7 – 4.8, and Chapter 11
9	March 16th		Monte Carlo Simulation Model

			Section 8.4
	Midterm Exam II is on Friday, March 25th, 7 pm – 9 pm, room TBA		**Midterm Exam II covers Weeks 6 - 9**
10	March 23rd		General Principles (or Fundamentals) of Credit Analysis Chapter 6
11	March 30th		Credit Analysis Models Chapter 10
12	April 6th		Modelling the Term Structure of Interest Rates, and Interest Rate Derivatives Sections 7.5 – 7.6