



HANQING
RENMIN UNIVERSITY of CHINA



Smith | Queens
SCHOOL OF BUSINESS University

Renmin-Queen's Master in Finance Program

MFIN829 Fixed Income Analysis

Spring, 2021

Syllabus

INSTRUCTOR

Dr. Calvin Dun JIA
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TEACHING ASSISTANT

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LECTURES

8:30-12:00 (AM Sessions) & 13:30-17:00 (PM Sessions)

DAYS OF MEETINGS

April 10th, April 17th, April 18th, April 24th

COURSE DESCRIPTION

This course is a master-level course on fixed-income analysis. The fixed-income securities refer to an important class of financial instruments, a.k.a. bonds, that pay the pre-defined amounts of interests along with the principal at pre-specified dates. This course provides a comprehensive coverage of advanced topics including the pricing models of various fixed-income securities, bond market equilibrium analysis, bond portfolio management, risk analysis, investment in international bond markets, central banking and interest rate determinations, and financial innovations in terms of securitization. In addition, applied themes including financial data extraction related to bond markets and products, and Python programming will be introduced. Ultimately, students are expected to be equipped with tools

and analytical frameworks for investments in fixed-income markets and for understanding the dynamics in the bond markets.

PREREQUISITE

Advanced calculus and undergraduate courses including principles on financial markets, intermediate micro and macroeconomics, accounting, and corporate finance are highly recommended.

TEXTBOOKS AND REFERENCE BOOKS

This course will heavily draw on materials from the following textbook. Note that any newer edition of this book should suffice:

- Barbara S. Petitt, Jerald E. Pinto and Wendy L. Pirie. *Fixed Income Analysis*, CFA Institute Investment Series, 3rd Edition, Wiley, 2015. [PPP]

Two extra handbooks can be very useful to draw intuitions and real-world examples to enrich your understandings of the fixed-income markets and securities:

- Frank J. Fabozzi, *The Handbook of Fixed Income Securities*, 8th edition, McGraw-Hill Education, 2020 [Fabozzi]
- Marlene Amstad, Guofeng Sun and Wei Xiong, *The Handbook of China's Financial System*, 1st edition, Princeton University Press, 2020 [China]

GRADING

- 10 % Class participation
- 40% Mid-term Problem Set
- 50% Final Exam.

Your overall course grade will be a *weighted average* of scores of categories above. If at any point during the semester, you face circumstances which prevent you from attending the lecture, handing in the assignment on time, and/or participating in exams, please contact me as *early* as possible to manage the situation. There is little that can be done after an unsatisfactory grade has been assigned.

STUDY PREPARATION AND PARTICIPATION

1. You are responsible for ALL the materials delivered in the class to better prepare yourself for the successful completion of this course.
2. Do *read* and *study* the relevant PPT slides, related book chapters, and extra readings in each section of a given topic.
3. Carefully take *notes* from the class.

MIDTERM PROBLEM SETS

- There will be **ONE** mandatory problem set due for the mid-term. The problem set will help you work through some parts of the materials covered in this class and will be useful for the preparations of the final exam.
- This assignment should be submitted as a **TEAM** work
- This assignment may be submitted either in an electronic version via emails or in hard copies or combinations of both
- The problem set will be assigned by the end of April 17th (right after our second lecture)
- This assignment has a due date on April 24th by 11:59PM
- emails should be sent to the TA and copies my email address. The header of the email should be “Group (number) - (names of individuals in the group)”

EXAMS

There will be **ONE** final exam. The exam covers **ALL** we have covered in class. You are expected to do simple calculations, derivations and to provide intuitions and explanations in short answers. If you fail to take the exam, you will get a zero grade for his part, unless your absence is due to one of the legitimate causes and you provide documentation timely.

ACADEMIC INTEGRITY

As a student, you are responsible for upholding the academic integrity with full commitment to all the ethics, codes, and standards of the Renmin University of China and those of the Queen’s University. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. If there is any breach and violation of the academic integrity detected, as instructor, I will be filing a complaint for further actions against the violation, and this carries very serious consequences.

COURSE EVALUATION

At any time of our semester, please let me know what you think about this class and what can be improved. I appreciate all your feedbacks. Incorporating your suggestions will greatly help me in updating the course for future generations of students.

COURSE PLAN

- Disclaimer: the course plan is subject to due changes throughout the semester

Lecture Day 1 (April 10th, 2021)

- introduction to fixed income markets and products
- overview of the important bond markets around the globe
- bond math basics
- introduction to bond pricing

* *Readings: [PPP] Textbook Chapters 1, 2, 3, 4*

Lecture Day 2 (April 17th, 2021)

- bond price sensitivity analysis
- credit and risk analysis
- term structure analysis
- monetary policy and central banking
- interest rate determination and monetary policy transmission

* *Readings: [PPP] Textbook Chapters 5, 6, 10*

Lecture Day 3 (April 18th, 2021)

- introduction to investment in international bond markets
- portfolio management and analysis
- introduction to asset securization
- asset-backed securities

* *Readings: [PPP] Textbook Chapters 7, 11, 12*

Lecture Day 4 (April 24th, 2021)

- mortgage-backed securities
- overview on Chinese bond markets and instruments
- introduction to Python: application to portfolio analysis
- introduction to Bloomberg: application to fixed-income analysis

* *Readings: [China] Reference Book Chapters 5 and Supplementary Lecture Notes*