

**Instructor:** Heungju Park

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**Class Website:** <http://faculty.phbs.pku.edu.cn/hpark/FIS>

**Office:** 754

**Office #:** 2603-3191

**Office hours:** M/Th 1 – 3 p.m. or by appointment

I strongly encourage you to contact me on a regular basis and discuss the topics of our class. Regardless of my office hours, you can always contact me via email and I will respond as soon as possible.

**Objectives:**

The purpose of this course is to study the concepts and tools required to price and risk management of fixed income securities. We will discuss basic fixed income securities and fixed income derivatives with a focus on popular interest rate models used to value them. Throughout, the emphasis in the course will be on practical applications of the analytical concepts to real data and securities.

**Prerequisites:**

Students are required to have completed the prerequisite courses, as specified by HSBC Business School. It is a good idea to study the courses of Investments and Derivatives first. Those of you without this course may require additional time reviewing the material and working on the assignments. Also, fixed income analysis is generally mathematical in nature, so students are advised that the class will have a lot of quantitative material.

**Course material:**

Required: Tuckman and Serrat, *Fixed Income Securities: Tools for Today's Market*, 3<sup>rd</sup> edition, John Wiley & Sons, Inc.

Additional supporting material may be distributed (hard copy or electronic) as reading assignments throughout the semester.

Financial Calculator. Any financial calculator will suffice, but you are responsible for understanding how to operate it. You should know how to operate your calculators prior to exams. Calculator manuals are NOT authorized references for examinations. Sharing calculators during exams is prohibited.

Microsoft Excel. There will be a focus on using Excel, since that is the tool of choice in most entry-level finance jobs. Even though we will not be using Excel in the exams, knowledge of Excel will help you understand the material better, and it will greatly strengthen your application as you look for a job and begin your career in finance.

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### Exams and grading:

- 1) The final evaluation for your performance in this course will be based on a midterm exam (M), a final exam (F), and two assignments (HW). The grading will be based on:

$$G = \text{Max}[\mathbf{.40 \times M + .40 \times F}, \mathbf{.25 \times M + .55 \times F}] + \mathbf{.20 \times HW}$$

- 2) Exams - There will be two exams: a midterm and a final. The midterm exam will cover the material up to that day. The final exam will be comprehensive but its focus will be the material after the midterm.
- 3) Makeup exams will only be permitted 1) if requested in advance, and/or 2) for very serious reasons. Such serious circumstances must be validated in writing by an appropriately accredited professional (e.g. medical doctor etc.). If the absence is not excused according to the university guidelines, the exam grade will be recorded as zero. The make-up exam should be taken within one week after the regularly-scheduled exam time.
- 4) Exams are closed book, but you may bring one A4 sized “crib sheet” of your own making for each exam. The notes on your crib sheet must be **HANDWRITTEN**. I will take up the sheets after the exam and give them back with the graded exam.
- 5) Assignments – There will be a data analysis (individual) and a term project (group) during the semester. **I cannot accept late submissions of the assignments.** If you are out of town, you must make arrangements to submit the assignment through another student, or before the due date to me.
- 6) Term project – There is one group project which should be done in groups of four or five students only. You may choose your partners, and submit the names for your groups by the midterm. Any topic can be chosen by each group as long as it is related to Chinese bond markets. It is not a rigorous research topic, so that 10 pages of text along with exhibits will be enough. You should choose your topic by the midterm.

### Keys to Success:

- 1) Class participation – I do not take roll every class, but I do expect you to come to class and take an active part in discussions. In order to do so, you are expected to read the assigned material prior to the date it is covered in class. This will both facilitate your learning and help your preparation for exams.
- 2) Working problems outside of class – I will work a few problems in class and recommend some others for you to work on your own. These problems and practices are not required, but working them will greatly improve your chances of performing well on exams.

### Classroom Etiquette:

1. Be on time.
2. Be prepared.
3. Be respectful of your fellow classmates.
4. No private conversations – direct questions and/or comments to the entire class.
5. Turn off all electronic devices prior to class (i.e. cell phones, pagers, etc).
6. Sleeping – if you can't keep your eyes open, please stand at the back of the class for a few minutes until you wake up.

**Tentative Schedule (subject to change)**

<u>Week</u>	<u>Topic</u>	<u>Chapter</u>
1	Introduction to Bond Market Basic Bond Pricing Concept	1
2	Spot, Forward, and Par Rates Term structure of Interest Rate	2, 3
3	Duration, Convexity, and Other Basic Risk Measures	4, 5
4	Empirical Approaches to Risk Metrics and Hedges	6
5	<b>Midterm Exam (Dec 11<sup>th</sup>)</b> Forward	13
6	Futures Interest Rate Swaps	14, 16
7	Interest Rate Models	8, 9, 10
8	Interest Rate Models	8, 9, 10
9	Presentation of Term Project Review <b>Final Exam: Jan 15<sup>th</sup> or Jan 16<sup>th</sup></b> <b>Due Date of Term Project: Jan 18<sup>th</sup></b>	