

# ECON573/FIN522 Fixed Income Securities 2<sup>ND</sup> Module, 2016-2017

#### **Course Information**

Instructor: Heungju Park

Office: PHBS Building, Room 754

Phone: 86-755-2603-3191 Email: <a href="mailto:hpark@phbs.pku.edu.cn">hpark@phbs.pku.edu.cn</a>

Office Hour: W 3:30 - 5:20pm or by appointment

**Teaching Assistant: Peng DU** 

Email:

Classes:

Lectures: M/Th 3:30am - 5:20pm Venue: PHBS Building, Room 229

Course Website: http://faculty.phbs.pku.edu.cn/hpark/FIS

#### 1. Course Description

#### 1.1 Context

#### Course overview:

The purpose of this course is to study the concepts and tools required to price and manage risk of fixed income securities and portfolios. We discuss basic fixed income securities and fixed income derivatives with a focus on popular interest rate models used to value them. The emphasis is 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.

#### 1.2 Textbooks and Reading Materials

Required: Bruce Tuckman, *Fixed Income Securities: Tools for Today's Market*, **2**<sup>nd</sup> **edition**, **John Wiley & Sons, Inc.** 

Pietro Veronesi, *Fixed Income Securities: Valuation, Risk, and Risk Management,* 1<sup>st</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.

#### 2. Learning Outcomes

#### 2.1 Intended Learning Outcomes

| Learning Goals  | Objectives  | Assessment |
|---|---|------------|
| Our graduates will be effective   | 1.1. Our students will produce quality business and research-oriented documents.  | √          |
| communicators.  | 1.2. Students are able to professionally present their ideas and also logically explain and defend their argument.  | √          |
| Our graduates will be skilled in team work and leadership.                | 2.1. Students will be able to lead and participate in group for projects, discussion, and presentation.   | √          |
|   | 2.2. Students will be able to apply leadership theories and related skills.   |            |
| 3. Our graduates will be trained in ethics.                               | 3.1. In a case setting, students will use appropriate techniques to analyze business problems and identify the ethical aspects, provide a solution and defend it. | √          |
|   | 3.2. Our students will practice ethics in the duration of the program.  |            |
| 4. Our graduates will have a global perspective.                          | 4.1. Students will have an international exposure.  | √          |
| 5. Our graduates will be skilled in problemsolving and critical thinking. | 5.1. Our students will have a good understanding of fundamental theories in their fields.   | √          |
|   | 5.2. Our students will be prepared to face problems in various business settings and find solutions.  | <i>√</i>   |
|   | 5.3. Our students will demonstrate competency in critical thinking.   | √          |

#### 2.2 Assessment/Grading Details

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

#### $G=Max[.40\times M+.40\times F, .25\times M+.55\times F]+.20\times HW$

- 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) Assignment There is a 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.
- 6) Attendance I take roll randomly. The first absence would be fine. However, if you are absent twice, you lose 5points in your final grade. You need to let me know your absence in advance.

#### 2.3 Academic Honesty and Plagiarism

It is important for a student's effort and credit to be recognized through class assessment. Credits earned for a student work due to efforts done by others are clearly unfair. Deliberate dishonesty is considered academic misconducts, which include plagiarism; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; or altering, forging, or misusing a University academic record; or fabricating or falsifying of data, research procedures, or data analysis.

All assessments are subject to academic misconduct check. Misconduct check may include reproducing the assessment, providing a copy to another member of faculty, and/or communicate a copy of this assignment to the PHBS Discipline Committee. A suspected plagiarized document/assignment submitted to a plagiarism checking service may be kept in its database for future reference purpose.

Where violation is suspected, penalties will be implemented. The penalties for academic misconduct may include: deduction of honour points, a mark of zero on the assessment, a fail grade for the whole course, and reference of the matter to the Peking University Registrar.

For more information of plagiarism, please refer to PHBS Student Handbook.

## 3. Topics, Teaching and Assessment Schedule

### **Tentative Schedule (subject to change)**

| Week | <u>Topic</u>                                       |
|------|--|
| 1    | Introduction to Bond Market                        |
|      | Basic Bond Pricing Concept                         |
| 2    | Spot, Forward, and Par Rates                       |
|      | Term structure of Interest Rate                    |
| 3    | Duration, Convexity, and Other Basic Risk Measures |
| 4    | Empirical Approaches to Risk Metrics and Hedges    |
| 5    | Midterm Exam                                       |
|      | Forward  |
| 6    | Futures  |
|      | Interest Rate Swaps                                |
| 7    | Interest Rate Models                               |
| 8    | Interest Rate Models                               |
| 9    | Presentation of Term Project                       |
|      | Review   |