

The Hong Kong University of Science & Technology
Department of Finance
FINA 361: Fixed Income Securities
Spring 2009

L1: Monday 1630-1750 Friday 1200-1320, LTH
L2: Monday 1330-1450 Friday 900-1020, Room 2503

Reuters Lab Times

a) March 2, 2009, 1200-1320 and 1630-1750. (This comprises a basic introduction to Fixed Income in the Reuters pricing system and is held in lieu of the week 5 lecture)
b) The Lab will be open on every Friday (1000-1200, 1400-1600) exclusively for students in FINA 361)..

Course Outline

This course covers basic analytical tools in fixed-income securities, major fixed-income markets, interest rate derivatives, bond portfolio management and credit derivatives such as credit default swaps. Theories, quantitative skills and their applications in the bond markets will be emphasized. Examples from Bloomberg and Reuters screens and EXCEL examples will be used to assist the illustration of how market practitioners apply the theories and concepts for their bond investments and trading. The course aims to prepare students with the basic and necessary knowledge to advance their study in fixed-income securities and/or start working in the bond-investment industry.

The specific objectives of this course are to

- analyse the core issues involved in trading and pricing fixed income securities and explain the underlying institutional arrangements;
- develop the analytical tools necessary for valuing fixed income securities and managing interest rate risk;
- effectively communicate the structure and nature of the institutional arrangements in place in domestic and regional bond markets in both a written and oral form to inform and convince others;
- contribute to the successful and timely completion of a group project; demonstrate the ability to lead or contribute to a successful team;
- locate, gather and organise fixed income information services, software and hardware (such as Reuters and Excel for trading and research purposes);
- identify areas for further learning to improve performance in fixed income trading and pricing

The first part of the course covers the basic analytical tools used in analysing fixed income securities. These include: present value, prices and yields of default free, Government bonds, forward interest rates, the relation between bond prices and spot and forward interest rates, term structure theories and bond portfolio management tools like duration analysis, convexity measures and immunization techniques.

The second part of the course introduces the different segments of the international bond market, including government bonds, corporate bonds and non-U.S. bonds.

The last part of the course deals with valuation and practical use of financial instruments closely related to fixed income securities. These include forward and futures contracts on fixed income securities, interest rate options, bonds with embedded options like callable bonds and convertible bonds, interest rate swaps, and mortgage-backed securities.

Recommended Textbook

(FF) Frank J. Fabozzi, 2007, *Bond Markets, Analysis and Strategies*, 6th edition, Pearson Education/Prentice Hall. ISBN : 100131986430

Other Useful References- Also see other academic Papers available on the Social Science Research Network (see www.ssrn.com):

Bank for International Settlements, "BIS Quarterly Review: International Banking and Financial Market Developments" See latest available on: www.bis.org

Batten, Jonathan A. and Szilagyi, Peter G., "Developing Foreign Bond Markets: The Arirang Bond Experience in Korea" (May 2006). IIS Discussion Paper No. 138 Available at SSRN: <http://ssrn.com/abstract=923783> (also available in the *World Bank Research Observer*, 22: 165-195, 2007).

Brown, Kym, Batten, Jonathan A. and Skully, Michael T., "Financial Development in the Asia-Pacific Region" (March 16, 2006). Available at SSRN: <http://ssrn.com/abstract=891607>

Faria, Andre, Mauro, Paolo , Minnoni, Martín and Zaklan, Aleksandar, "The External Financing of Emerging Market Countries: Evidence from Two Waves of Financial Globalization" (September 2006). IMF Working Paper No. 06/205 Available at SSRN: <http://ssrn.com/abstract=934464>

Pynnonen, Seppo, Hogan, Warren P. and Batten, Jonathan A., "Dynamic Equilibrium Correction Modelling of Yen Eurobond Credit Spreads" (March 2006). IIS Discussion Paper No.127 Available at SSRN: <http://ssrn.com/abstract=923768>

Renneboog, Luc and Szilagyi, Peter G., "How Do Mergers and Acquisitions Affect Bondholders in Europe? Evidence on the Impact and Spillover of Governance and Legal Standards" (August 2006). ECGI Finance Working Paper No. 125/2006 Available at SSRN: <http://ssrn.com/abstract=907141>

Renneboog, Luc and Szilagyi, Peter G., "Corporate Restructuring and Bondholder Wealth" (March 2006). TILEC Discussion Paper No. 2006-007 Available at SSRN: <http://ssrn.com/abstract=899072>

Sharma, Krishnan, "The Underlying Constraints on Corporate Bond Market Development in Southeast Asia" (September 2000). United Nations DESA Working Paper No. 14. Available at SSRN: <http://ssrn.com/abstract=245968>

Warnock, Francis E. and Burger, John D., "Diversification, Original Sin, and International Bond Portfolios" (April 2003). FRB International Finance Discussion Paper No. 755. Available at SSRN: <http://ssrn.com/abstract=381861>

Assessment

1. Midterm exam: Tuesday March 23rd 2009: worth 20 % (1 hour)
2. Final exam: Date TBA: worth 40 % (2 hour)
3. Group report: Due Monday 27th April 2009: worth 15%. Note a brief overview of the report findings will need to be presented in class on the 27th April – maximum of 5 minutes for the presentation.
4. Group assignment using Reuters Fixed Income Database 15% (Details to be provided in Week 5).
5. Class participation 10% (Note a class roll will be taken at random times during the semester and will contribute to this score).

The group report will be a maximum of 1200 words and should follow the style of an academic article (introduction, brief overview of literature-theory, literature-empirical evidence, analysis/discussion, conclusion, references), be 12 points font Times Roman. The report will be handed in at class after Easter on the Monday April 27th, 2009. Late submissions will be automatically penalised 5-marks for 1-day late, 8-marks for 2-days late, 10-marks for 3-days late, 11-marks for 4-days late and 12-marks for 5-days late. Submissions later than 5-days will receive no marks at all.

Report Topic: “Recent articles investigating corporate and foreign bond market development highlight the interlocking relationships between corporations, banks and governments that have dissuaded bond issuance by non-financial corporations and therefore contributed to the underdevelopment of domestic bond markets internationally and especially those in the Asia-Pacific region. Discuss what is critical for the next stage of development of Asia-Pacific bond markets. Explain your answer using specific examples of policy that could be adopted by governments in the region.

The midterm test (1 hour) will cover topics 1-7 and will a multiple choice test. The final exam covers the entire course and will last 2 hours and will be a mixture of short answer and multiple choice (more details will be provided later) You may bring into the exams an A4-size data sheet, on which you can write anything you like (typing ok) on both sides. Cheating will not be tolerated. Any student caught cheating in the exams will receive zero credit and may face further disciplinary actions.

Other group assignment using the Reuters Fixed Income System

You will be required to attend a Workshop in the Financial Laboratory to learn and then utilize the Reuters Fixed Income system. After this Workshop (Monday 2nd March 2009) a group homework assignment will need to be completed. The assignment will need to be handed in on the Friday 3rd April 2009. Late assignments will not be accepted.

To help with the tests/exams, key class problems will be discussed in class at the end of each topic. These problems provide a good preparation for the exams and you are strongly encouraged to attempt to solve them individually. Solutions will be available after due dates. A number of trading games will also be conducted, usually in the Friday class.

The course will comprise 13 topics that will be delivered over the 13 week period 2/2/2009 to 1/5/2009. Note that it may be necessary to deliver one or more lectures in the week 4/5/2009 to 8/5/2009 should a class need to be cancelled for any reason. Note the exam period is 20 May to 30 May and usually FINA 361 exams are held at the END of the Exam Period. If students need to travel prior to the end of the exam period they will need to make arrangements to sit a supplementary exam. The decision as to the time of the final and supplementary exam is made by the Administration and will require a physical presence in Hong Kong.

Topics

Part I	Basic Analytical Tools Readings	Readings
	1. Overview of fixed-income securities 2. Yield-to-maturity and spot rates 3. Duration and convexity 4. Forward rates and term-structure theories 5. Floaters and repos	Ch.1 Ch.2, Ch.3 Ch.4 Ch.5 Ch.2, Ch.19
Part II	Fixed-income Markets	
	6. Government bond markets 7. Corporate bond markets 8. Global perspectives	Ch.6 Ch.7 Ch.9
Part III	Fixed-income Derivatives	
	9. Interest-rate futures 10. Interest-rate options 11. Callable and Convertible bonds 12. Interest-rate swaps 13. Collateralized Mortgage Obligations	Ch.23 Ch.24 Ch.16,18 Ch.25 Ch.10-13

Miscellany

Each student is required to hand in a name card with a recent photo in the following format by the end of the third week.

<div style="border: 1px solid black; width: 150px; height: 100px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> Your Photo </div>	HKUST, FINA361, Spring 2005, L1 Name (English): Law Suet-Ming, Lisa Name (Chinese): ID number: 98000001 E-mail Address: fn smlaw@stu.ust.hk Major: Finance
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