

The Hong Kong University of Science & Technology
Department of Finance

**FINA 553: Fixed Income Securities
Spring 2004**

Saturday 9:00–12:20, room LTG

Instructor: Chu ZHANG
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Office hours: Fridays 13:30–15:30

Course Description

This is a course on fixed-income securities and related derivatives. It covers basic analytical tools in fixed-income markets. Topics include relative pricing of fixed-income securities, forward rates, yield-to-maturity, yield-curve trading strategies and immunization techniques. It also discusses term structure models, fixed-income securities with embedded options, and derivatives with fixed-income underlying securities. Instruments to be discussed are forward rate agreements, bond and interest rate futures, interest rate swaps, fixed-income options, mortgage-backed securities, and credit derivatives. The course emphasizes analytical techniques, rather than institutional details.

Required Textbook

(BT) Bruce Tuckman, 2003, *Fixed Income Securities: Tools for Today's Markets*, 2nd edition, Wiley.

Other Reference Books

(SS) Suresh Sundaresan, 2001, *Fixed Income Markets and Their Derivatives*, 2nd edition, Southwestern.

(FF) Frank J. Fabozzi, 2003, *Bond Markets, Analysis and Strategies*, 5th edition, Prentice Hall.

(KG) Kenneth Garbade, 1996, *Fixed Income Analytics*, MIT Press.

Grading

Midterm exam	40 points
Final exam	60 points

Unless I say otherwise, everything discussed in class may appear in the exams.

The midterm exam covers Chapter 1 to Chapter 8 of BT. The final exam covers Chapter 9 to Chapter 21. Only certain simple descriptive material on credit derivatives will be covered in the final exam.

You may bring to the exams an 11" by 8.5" (A4 size) data sheet. You can write anything you like on both sides of it, but everything has to be hand-written.

Homework (HW) assignments will be collected before the lecture on due dates. Late assignments will not be accepted. Solutions will be available on my web-site after due dates. Each overdue assignment results in minus 10 points in the total grade.

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.

Your Photo	HKUST, FINA553, Spring 2004 Name (English): Law Suet-Ming, Lisa Name (Chinese characters): <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> ID number: 03000001 E-mail Address: fn_smlaw@stu.ust.hk Company/Dept: ING Barings/credit control
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Schedule

Date	Material to be covered	Homework
Feb. 7	Ch.1, Ch.2	
Feb. 14	Ch.3, Ch.4	
Feb. 21	Ch.5, HW.1	HW.1 due
Feb. 28	Ch.6, Ch.7	
Mar. 6	Ch.8, Ch.9	
Mar. 13	Ch.10, HW.2	HW.2 due
Mar. 20	Midterm exam	
Mar. 27	Ch.11, Ch.12	
Apr. 3	Ch.13, Ch.14	
Apr. 17	Ch.15, HW.3	HW.3 due
Apr. 24	Ch.16, Ch.17	
May 1	Ch.18, Ch.19	
May 8	Ch.20, Ch.21	
May 15	Credit derivatives, HW.4	HW.4 due
May 22	Credit derivatives	
May 29	Final exam	

Homework Assignments

The questions marked with a * are optional.

Homework assignment 1:

1.3, 1.4, 1.5, 1.6,
2.1, 2.2, 2.3, 2.5, 2.6,
3.1, 3.2, 3.3, 3.5, 3.6, 3.7, 3.8
4.2, 4.5, 4.6, 4.7.

Homework assignment 2:

5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7,
6.1, 6.3, 6.5,
7.1, 7.2, 7.3, 7.4, 7.5, 7.6,
8.1*, 8.2, 8.3*.

Homework assignments 3 and 4 will be distributed later.