

The Hong Kong University of Science & Technology
Department of Finance

FINA 536: Debt Securities
Spring 2004

L1: Saturday 14:30–**18:20**, Room 3008

Instructor: Dr. Chu ZHANG
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Office hours: Friday 13:30–15:30

Course Objective

This course covers basic analytical tools in fixed-income securities (present value, forward rates, yield-to-maturity, term structure theories, duration analysis and immunization techniques), sectors of fixed-income markets (government bonds, corporate bonds, and institution-issued debt securities), and certain advanced topics in risk management using interest rate contingent claims such as options, futures and swaps, with applications including callable bonds, mortgage-backed securities and convertible bonds. Both economic intuition and quantitative skills are emphasized. The course is suitable for students who are preparing for the Chartered Financial Analysts (CFA) exams.

Required Textbook

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

Topics

Part I	Basic Analytical Tools	Readings
	1. Overview of fixed-income securities	Ch.1
	2. Yield-to-maturity and spot rates	Ch.2, Ch.3
	3. Duration and convexity	Ch.4
	4. Forward rates and term-structure theories	Ch.5
	5. Floaters	Ch.2
Part II	Fixed-income Markets	
	6. Government bond and corporate bond markets	Ch.6-7
	7. Institutional bond markets and global perspectives	Ch.9-15
Part III	Fixed-income Derivatives	
	8. Overview of fixed-income derivatives	Ch.16
	9. Convertible bonds	Ch.18
	10. Interest-rate futures and options	Ch.23-24
	11. Interest-rate swaps and agreements	Ch.25
	12. Credit derivatives	Ch.26

Grading

Midterm exam (1 hours)	25 points
Final exam (3 hours)	75 points

You may bring to the exams an 11" by 8.5" (A4-size) data sheet, on which you can write anything you like on both sides, but everything has to be hand-written. The midterm covers Part I. The final exam covers the entire course. The course grade depends on the performance relative to the class average.

Absence from the exams will not be excused except for serious medical reasons with doctor's letter provided.

Important Dates

Feb. 21 Assignment 1 due
Feb. 28 Midterm exam.

March 13 Assignment 2 due
March 20 Final exam.

Miscellany

Knowledge in options pricing helps, but is not required.

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

Homework 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.

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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Assignments

Assignment 1:

Chapter 2: 1, 3, 4, 8, 9, 10, 11.

Chapter 3: 2, 7, 12, 14, 16.

Chapter 4: 2, 9, 10, 13, 15.

Chapter 5: 13, 14.

Assignment 2:

Chapter 16: 2, 7, 8, 10, 13.

Chapter 18: 1, 5, 6.

Chapter 23: 4, 10, 11, 16.

Chapter 24: 1, 4, 18, 19.

Chapter 25: 1, 2, 6, 14, 15, 16, 17, 18.