

The Hong Kong University of Science & Technology  
Department of Finance

**FINA 536: Fixed Income Analysis**  
**Spring 2006**

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### Course Description

This course teaches basic valuation techniques of the traditional fixed-income securities and certain derivatives related to fixed-income securities. The course begins with reviewing basic concepts such as price-yield relationship, discount factors, par-bond yields, forward rates, and price sensitivity measures. These concepts are followed by yield curve fitting techniques and portfolio strategies. It then moves on to topics in managing interest-rate risk using repos, floating rate securities, interest-rate forwards, interest-rate and bond futures, and interest-rate swaps. Both economic intuition and quantitative skills are emphasized.

### Required Textbook

- (MPP) Martellini, L., Priaulet, P. and Priaulet, S., 2003, *Fixed-Income Securities: Valuation, Risk Management and Portfolio Strategies*, The Wiley Finance Series.
- (FF) Frank Fabozzi, 2005, *Fixed Income Analysis for the Chartered Financial Analyst Program*, F.J. Fabozzi Associates.

### Other Recommended Readings

- (SS) Suresh Sundaresan, 2001, *Fixed Income Markets and Their Derivatives*, 2nd edition, Southwestern.
- (BT) Bruce Tuckman, 2003, *Fixed Income Securities: Tools for Today's Markets*, 2nd edition, Wiley.

### Grading

Midterm exam (100 min.)	40 points	4th week
Final exam (150 min.)	60 points	8th week

## Topics

1. Review of Basic Concepts
2. Yield Curve Fitting
3. Portfolio Strategies
4. Repo markets
5. Floating Rate Securities
6. Interest-rate Forwards and Futures
7. Interest-rate Swaps

## Miscellany

Knowledge in options pricing helps, but is not required.

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

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 final exam covers the entire course, but emphasize the material after the midterm. The course grade depends on the exam performance relative to the class average.

Homework assignments will not be collected. Solutions will be available before exams.

## Suggested Homework

MPP end-of-chapter questions

**Ch.1:** 1, 3, 4, 8, 15.

**Ch.2:** 1, 2, 3, 7, 14, 20, 24.

**Ch.3:** 1, 3, 13.

**Ch.4:** 1, 4, 7, 15.

**Ch.5:** 1, 7, 11, 19.

**Ch.6:** 1, 6, 8.

**Ch.10** 4, 7.

**Ch.11** 1, 4, 6, 10.

FF end-of-chapter questions

**Ch. 5:** 1, 3, 5, 7, 9.

**Ch. 6:** 3, 6, 16, 18, 19, 25, 26, 28.

**Ch. 7:** 8, 11, 12, 13, 15.

**Ch. 13:** 8, 10, 17.