

The Hong Kong University of Science & Technology
Department of Finance

FINA 690T: Fixed Income Derivatives
Fall 2007

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Course Description

This course teaches fixed-income derivatives and related topics. It begins with the interbank forward rate agreements and exchange traded interest rate and bond futures. It then covers the standard interest rate swaps followed by a variety of nonstandard swaps (amortizing swaps, currency swaps, quanto swaps, yield curve swaps, etc.) and swap derivatives (swap forwards, swap futures and swaptions). The next topic to be covered is fixed-income options (caps, floors, collars, etc.) and nonstandard floating rate notes that aim for managing interest rate risk. The last part of the course deals with fixed-income structured notes that have exposure in equity, commodity/inflation, currency, and so on. Both economic intuition and quantitative skills are emphasized.

Recommended Readings

(MPP) Martellini, L., Priaulet, P. and Priaulet, S., 2003, *Fixed-Income Securities: Valuation, Risk Management and Portfolio Strategies*, The Wiley Finance Series.

Chapter 10, 11, 14, 15, and 16 should be consulted frequently.

Grading

Midterm exam (100 min.)	40 points	5th week
Final exam (150 min.)	60 points	8th week

Topics

1. Fixed-income Forwards and Futures
2. Standard Interest-rate Swaps
3. Nonstandard Interest-rate Swaps
4. Swap Derivatives
5. Fixed-income Options
6. Structured Notes

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 mid-term exam covers the first three lectures. The final exam covers the entire course, but it emphasizes 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 on the website before exams.

Suggested Homework

MPP end-of-chapter questions

Ch.10: 4, 6, 7.

Ch.11: 4, 5, 6, 8, 10, 11.

Additional homework assignments will be given on the website.