The Hong Kong University of Science & Technology
Department of Finance

FINA 553: Fixed Income Securities

Fall 2005

Instructor:	Dr. Chu ZHANG
Office:	Room 2369, HKUST
Phone:	2358-7684
E-mail:	czhang@ust.hk
Website:	http://home.ust.hk/~czhang

Course Description

This course teaches analytical tools and financial instruments in the fixed-income market. It covers topics such as straight bond valuation, yield-to-maturity, forward rates, discount factors, par yields, term structure theories, durations, convexities, and hedging strategies. It then covers certain topics in managing interest-rate risk using interest-rate forwards, futures swaps and bonds with imbedded options. Both economic intuition and quantitative skills are emphasized. Lectures are supplemented with in-class computer exercises.

Required Textbook

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

Other Recommended Readings

(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, Pearson Education.

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

Grading

Midterm exam (100 min.)	**40 points**	October 22, 2005
Final exam (150 min.)	**60 points**	December 17, 2005

Tentative Schedule

Date	Topic	Readings (Chapter)
Sept.3	Overview of Fixed-income Securities	MPP 1
Sept.10	Bond Price and Yield-to-maturity	MPP 2
Sept.17	Classical Term Structure Theories	MPP 3
Sept.24	Yield Curve Fitting	MPP 4
Oct.1	Duration and Convexity	MPP 5
Oct.8	Nonparallel Yield Shift	MPP 6
Oct.15	Midterm Exam	
Oct.22	Portfolio Strategies	MPP 7,8,9, SS 12
Oct.29	Floating Rate Securities	
Nov.5	Interest-rate Forwards and Futures	MPP 11, SS 15, 16
Nov.12	Interest-rate Swaps	MPP 10 SS 16
Nov.19	Callable Bonds and Putable Bonds	MPP 14
Nov.26	Equity-linked Securities	MPP 14
Dec.3	Inflation, Commodity and Currency-linked Securities	SS 7
Dec.10	Repackaged Fixed-income Securities	MPP 17,18, SS 9
Dec.17	Final Exam	

Suggested Homework

MPP Ch.2: 7, 14, 24.
MPP Ch.3: 1, 2, 3, 7,10, 11.
MPP Ch.4: 1, 4, 9.
MPP Ch.5: 1, 2, 7, 9, 11, 16.
MPP Ch.6: 1, 2, 8, 9.
MPP Ch.8: 4, 7.
MPP Ch.10 4, 7.
MPP Ch.11 1, 4, 6, 10.
MPP Ch.14 4, 11.
MPP Ch.17 2, 9, 11.
MPP Ch.18 1, 6.

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 not be collected. Solutions will be available on my web-site before midterm or final.