

The Hong Kong University of Science & Technology
Department of Finance

FINA 557: Fixed Income Derivatives

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Course Description

This course teaches fixed-income derivatives and related topics. It begins with forwards and futures related to interest rates of fixed-income securities (interbank forward rate agreements and exchange-traded interest-rate and bond futures), continues with the standard interest rate swaps and a variety of nonstandard swaps (amortizing swaps, currency swaps, quanto swaps, yield curve swaps, etc.) and swap derivatives (swap forwards and swap futures), and then moves on to the fixed-income options (caps, floors, collars, and swaptions), the traditional bonds with embedded options (callable bonds, puttable bonds and convertible bonds), and more recent structured notes which have exposure in equity, commodity/inflation, currency, and so on. Popular credit derivatives will also be discussed if time allows. Both economic intuition and quantitative skills are emphasized.

The course emphasizes the economic functions of the fixed-income derivatives, with minimal exposures to the fixed-income modeling techniques.

Recommended References

- (MPP) Martellini, L., Priaulet, P. and Priaulet, S., 2003, *Fixed-Income Securities: Valuation, Risk Management and Portfolio Strategies*, The Wiley Finance Series.
- (SS) Suresh Sundaresan, 2009, *Fixed Income Markets and Their Derivatives*, 3rd edition, Academic Press.
- (BT) Bruce Tuckman, 2003, *Fixed Income Securities: Tools for Today's Markets*, 2nd edition, Wiley.