

LSE Fixed Income Securities, Debt Markets and the Macro Economy

Department of Finance

This course helps to develop the relevant knowledge and understanding of fixed income instruments and interest rate models for students aiming for a career in the fixed income field.

The course will provide an overview of the major institutions, organisations and investors, and the recent developments in fixed income, covering both theoretical background and practical implementation.

In the course we will discuss traditional debt instruments (namely government and corporate bonds) and fixed income derivatives (including mortgage-backed securities), develop the theory for valuing them and study the determinants of risk and return of fixed-income securities. We will also cover the most important state-of-the-art interest rate models, develop their theoretical underpinnings and provide examples for practical implementation. We will also discuss the role of fixed-income securities in risk management and introduce the concepts of duration and convexity.

The course will closely look at the interdependencies and the roles of the different players in the debt markets. In particular, we will examine the role of, and the instruments available to the central bank in setting interest rates. The major focus of the course will be on economic intuition and on understanding the products and interrelationships in the fixed income markets.

Session: Two

Dates: 11 July - 29 July 2022

Lecturers: Dr Christian Julliard and Dr Cameron Peng

Programme details

Assessment*: Two written examinations

Prerequisites

Basic mathematics and statistics. Introductory Finance (to the level of FM250) or Introductory Microeconomics (to the level of EC101).

Programme structure

An overview of debt markets with a focus on the US and the UK: players, institutions and various instruments

Organisation and structure of debt markets. Terminology and market conventions. Specific markets: US Treasuries, corporate bonds, agency securities, repos, MBS, etc.

Basics of fixed income securities: interest rates and discount factors, the yield curve, coupon and zero coupon bonds

Basics of interest rate risk management: variation in interest rates, duration, convexity, risk measurement and management. Interest rate risk, liquidity risk, inflation risk, credit risk

Term structure models: binomial trees, risk neutral pricing, no-arbitrage and pricing of interest rate securities

Monetary policy and the role of the central bank in setting interest rates. Interest rates and inflation. Relationship between interest rates and future economic activity

Fixed-income derivatives: Treasury futures, Eurodollar futures, options, swaps, mortgage backed securities

Credit derivatives

The 2007-2009 credit crisis

Course outcomes

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Reading materials

Pietro Veronesi, Fixed Income Securities: Valuation, Risk, and Risk Management, Wiley and Sons, 2010.

Related Programmes:

Financial Markets and Portfolio Management

Alternative Investments