

LSE

ANALYSIS & MANAGEMENT OF FINANCIAL RISK

This course helps to develop the relevant knowledge and understanding of risk management practices for students aiming to advance their careers in financial risk management.

The course is roughly divided in to four parts:

We start with an introduction to the classification of risk and the basic principles of diversification and hedging, optimal portfolio choice. This will include an overview of the Capital Asset Pricing Model, which is widely applied for the equilibrium pricing of risks.

Then, we will discuss the methods to manage market risk for fixed income and equity portfolios. You will learn about Value at Risk (VaR) and its applications to risk management practices.

Next, we introduce the concept of endogenous risks to demonstrate how financial risks originate within the financial system. We will also highlight behavioural aspects of risk and discuss important limitations of current risk management practices.

Finally, we turn to credit risk, with a focus on ratings based and structural models. We also cover credit risk on portfolios and credit derivatives. In the final lecture we will discuss the recent credit crisis and the ensuing regulatory responses and tie together the various parts of the course.

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- Foundations of risk measurement and risk finance theory
 - Basic risk management instruments: Forwards, futures, swaps and options
 - Market risk management: Methods for hedging risk in equity and fixed income portfolios; Delta and Gamma, Duration and Convexity
 - Value-at-Risk: Definition, implementation and evaluation of risk forecasts. Alternative risk measures

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- Credit risk: Merton model, the KMV approach, and ratings based models
 - Introduction to credit derivatives and mortgage-backed securities
 - Limitations and failures of risk models
 - Endogenous risk
 - Some ideas from behavioural finance: noise trader risk, limits to arbitrage, bubbles
 - The impact of the credit crisis and its implications for risk management and regulation
 - Learn the main tools and practices needed to assess and evaluate financial risks
 - Understand risk management practices in an industry setting
 - Gain the ability to critically assess risk management reports and research