Forschungsgruppe Finanz- und Versicherungsmathematik
TUM School of Computation, Information and Technology
Technische Universität München

Announcement SoSe 2025
Lecture in Mathematical Finance

Equity and Option Trading Seminar

Dr. Mike Smith

Area: / Modulnr.: Mathematical Finance / MA 8020

Course Structure: Seminar

Content: Equity trading, options trading, hedging of derivatives, calculating greeks, payoff diagrams, option valuation, risk management
At the end of module, students are able to get practical insight in work as a trader, apply knowledge on options, derivatives and calculate relevant quantities for risk management.

Prerequisite: Financial Mathematics 1 (MA3407)

Partner companies support the seminar by presenting practical applications within their company environment.

Certificate: 2 ECTS

Location/ Time: Riskfactory 2.02.03 / June 26 – June 28, 2025

Registration: See TUMonline

Trading Days 2025			
Time	June 26	June 27	June 28
09:00 - 10:00	***Trading Seminar***	**Ernst & Young**	***Trading Seminar***
10:00 - 11:00		***Trading Seminar***	
11:00 - 12:00			
12:00 - 13:00	**break**	**break**	
13:00 - 14:00	**Finbridge**	**KPMG**	**break**
14:00 - 15:00	***Trading Seminar***	***Trading Seminar***	***Trading Seminar***
15:00 - 16:00			
16:00 - 17:00			
17:00 - 18:00	**XAIA**		

Finbridge Dr. Carsten Keller	**Streamlining the HRL Process through Automation and Machine Learning:** Hidden reserves / losses describe unrecognized positive and negative valuation effects of financial instruments recognized at cost. Specifically, the amount of the charge or reserve is driven by numerous factors: for example, changes in book or market value components, e.g., yield curves or credit spreads, can be a driver of the HRL change. The analysis process aims to provide a supporting statement on the development at trade and portfolio level and to discover overarching trends. Furthermore, it is about localizing implausible values, in other words irregularities in the data, and identifying the underlying causes.	**Ernst & Young** Dr. Lorenzo Sindoni	**Market Risk Management in Banking: Capital Requirements and Risk Sensitivities:** We discuss the fundamental methodologies employed in market risk management, with a focus on two principal approaches to risk quantification: risk sensitivities and VaR for capital requirements, including internal capital adequacy. We will also discuss Profit and Loss (P&L) analysis in the context of risk management, emphasizing the pros and cons of full revaluation methods and risk sensitivity based expansion techniques. Risk sensitivities serve as critical indicators of risk exposure on a day to day and granular level market risk management. A different, less granular approach is based on the quantification of capital requirements on the basis of Value at Risk (VaR) calculations, which are instrumental in ensuring that banks maintain adequate capital reserves to absorb potential losses over a defined time horizon with sufficient statistical confidence. In practice, both approaches must harmonise to allow effective management within risk appetite limits.
XAIA Dr. Jan-Frederik Mai	**Hedging credit exposures with equity puts:** We discuss mathematical background and practical challenges, when setting up relative value trades that go long credit risk and hedge it with equity puts.	**KPMG** Daniel Zeiner	**Trading and its role in overall bank management:** Hustle and bustle in the trading room with the aim of selling financial instruments at a higher price than buying them: Is that trading? Yes, but in practice, trading activities in banks serve completely different purposes. Liquidity procurement, risk transfer, and more—trading is utilized in various ways in overall bank management and is therefore an essential component of different business models. Depending on the purpose, traders must strive for different goals and adjust their mindset accordingly.