

Announcement SoSe 2020

Lecture in Mathematical Finance

Asset Liability Management

Prof. Dr. Alexander Bohnert

Area: / Modulnr.: Insurance Mathematics / MA5723

Course Structure: Lecture: 2h Exercises: 1h

Content: The aim of this course is to give an introduction to asset liability management of financial services companies (such as banks and insurers with a focus on the latter) comprising modeling as well as enterprise risk management. This includes to learn and apply techniques from asset management, liability management, financial and insurance mathematics as well as from risk management, while concepts of European supervision (such as Solvency II) with their impact on modeling and risk management are introduced and discussed. Learned concepts, techniques, and models will be implemented based on examples (in Excel, VBA, and R).

Audience: MSc Mathematics, Mathematical Finance and Actuarial Science

Literature: **Glasserman, P. (2003)** Monte Carlo Methods in Financial Engineering, Springer.
Albrecht, P., Maurer, R. (2016) Investment- und Risikomanagement, Schäffer-Poeschel.
Wilson, T. C. (2015) Value and Capital Management, Wiley.
Bellis, C., Lyon, R., Klugman, S., Shepherd, J. (2010) Understanding Actuarial Management, Institute of Actuaries of Australia.
McNeil, A. J., Frey, R., Embrechts, P. (2015) Quantitative Risk Management, Princeton University Press.
Hull, J. C. (2018) Options, Futures, and Other Derivatives, Pearson.

Certificate: Exam, 5 ECTS

Location and Time: see TUMonline