Universität Regensburg

M.Sc. Course
Kreditrisikomanagement (Credit Risk Management)
Course number 22 334 (Tutorial 22 335)

Examiner   Prof. Dr. Daniel Rösch

Instructor   Prof. Dr. Daniel Rösch

Tutorial   Igor Honig, M.Sc.

Course Objectives   The course teaches theoretical basics of modern statistical methods to measure and manage credit risk. Case studies demonstrate the wide range of applications and strengthen the understanding. The acquired knowledge and skills allow the implementation and development of statistical methods in the context of credit risk management.

Specifically, the course covers the modelling of the probability of default using regression models for categorical data, i.e., Logit and Probit models. In this context, statistical methods for the validation of rating systems are presented. Similar emphasis is on providing an understanding of portfolio risk by a detailed scientific introduction into the topic and a demonstration of some popular portfolio models. In addition, the structure and importance of securitizations are discussed. Last but not least the calculation of capital adequacy in the context of regulatory requirements is presented.

In short, the topics covered in the course include:
- Specific banking risks and (credit) risk management
- Default risk measurement on counterparty level
- Borrower dependencies, portfolio risk and portfolio models
- Modelling and measuring recovery/LGD
- Regulatory treatment of credit risk (Basel II / III)
- Credit derivatives and securitizations / structured credit products
- Case studies

Primary Learning Outcomes   The students acquire the skills to understand advanced methods and techniques for the modelling and measurement of credit risk in research and practice. They are familiar with common prudential rules and are able to model default risk and analyze portfolio risk.

The tutorial continues the contents of the lecture on the basis of examples and case studies. Students are able to do their own analyzes. A main emphasis is on a tight connection of the theoretical concepts to practical aspects by accompanying lecture contents with real world case studies, IT based applications and guest lectures from practitioners.

Language   German

Prerequisites	Statistics 1 (recommended) Statistics 2 (recommended) Applied Data Science (recommended) Data Science & Machine Learning (recommended)
Applicability of the MSc Module	WiWi - MSc - Finanzierung - Corporate Finance WiWi - MSc - Finanzmärkte - Financial Economics WiWi - MSc - Quantitative Finanzwirtschaft - Quantitative Finance
Frequency	Summer term
Recommended Semester	Second MSc semester
Examination	Written exam, 90 minutes
Workload	Overall: 180h (6 ECTS * 30h) Hours of presence: 60h Selfstudy: 120h
Credit Points	6 ECTS
Last updated	March 5, 2024