Syllabus MA-seminar “Applied Risk-Management” – summer term 2024

The seminar is open for master students that require a seminar in finance/econ, such as students in economics, mathematical finance, SEDS, or political economy. The maximum number of participants is 12.

Content

The goal of the seminar is to deepen modern risk management tools taught in introductory courses and to investigate how these methods are applied in practice. A solid understanding in the field “Risk Management” (e.g., documented by having attended courses, seminars, or even written a master thesis in that field) has helped many students having taken our courses in the past to secure competitive jobs.

Language

The entire seminar (seminar paper, presentations, etc.) is held in English language.

Schedule

The seminar is scheduled to be held on Friday, June 14, 2024 and Saturday, June 15, 2024. A kickoff meeting is scheduled to be held on Friday, April 19, 2024, at 10:00. Attendance at both the kickoff meeting and all presentations is a prerequisite to pass the seminar.
Following the seminar, all participants are invited for individual meetings to receive feedback on their work and to discuss further steps for those of you that plan on building their theses on their seminar papers.

Indicative topics

Indicative topics (with suggestions for departing points for reading) for our seminar are:

1. Systemic risk
   Adrian and Brunnermeier (2015): CoVaR, *The American Economic Review* 106, 1705-1741

2. EU banking regulation

   - Ferran, Moloney, Hill, and Coffee (2012): The Regulatory Aftermath of the Global Financial Crisis
   - Mügge (2014): Europe’s regulatory role in post-crisis global finance, *Journal of European Public Policy* 21, 316-326
   - Hennessy (2014): Redesigning financial supervision in the European union, *Journal of European Public Policy* 21, 151-168

3. Copulas
   Salvatierra and Patton (2015): Dynamic copula models and high frequency data, *Journal of Empirical Finance* 30, 120-135

4. The new market risk framework - Fundamental Review of the trading book
   Minimum capital requirements for market risk, Basel Committee on Banking Supervision, January 2016, https://www.bis.org/bcbs/publ/d352.pdf

5. Pension fund management in (very) low interest environments
   Berdin and Gründl (2015): The effects of a low interest rate environment on insurers, *Geneva Papers on Risk and Insurance* 40, 385-415

6. Liquidity risk
   - Hong, Huang, and Wu (2014): The information content of Basel III liquidity risk measures, *Journal of Financial Stability* Volume 15, 91-111
   - Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools, Basel Committee on Banking Supervision, January 2013, https://www.bis.org/publ/bcbs238.pdf

7. Credit risk management
   - Altman and Saunders (1997): Credit risk measurement: Developments over the last 20 years, *Journal of Banking and Finance* 21, 1721-1742
   - Duan and Miao (2016): Default Correlations and Large-Portfolio Credit Analysis, *Journal of Business and Economic Statistics* 34, 536-546

8. Extreme value theory:
   - Rocco, Marco (2014): Extreme value theory in finance: a survey, *Journal of Economic Surveys* 28, 82-108
   - Alexander and Frey (2000): Estimation of tail-related risk measures for heteroscedastic financial time series: an extreme value approach, *Journal of Empirical Finance* 7, 271-300

9. Monte Carlo Methods in applied risk management
   - Glasserman, Paul (2013): Monte Carlo Methods in Financial Engineering, Springer Science & Business Media
   - Kroese, Brereton, Taimre, and Botev (2014): Why the Monte Carlo method is so important today

10. Portfolio optimization with risk constraints
    - Krokhmal, Pavlo, Palmquist, and Uryasev (2002): Portfolio optimization with conditional value-at-risk objective and constraints. *Journal of Risk* 4, 43-68
    - Gandy, Ralf (2005): Portfolio optimization with risk constraints. Diss. Universität Ulm

11. Asset management in busting markets
    Barroso and Santa-Clara (2015): Momentum has its moments, *Journal of Financial Economics* 116, 111-120

12. Risk mitigation techniques in OTC markets: clearing and bilateral margining
    (a) Central clearing - motivation, benefits and dangers for financial market
    (b) Cleared risk models / margins (Variation margin, initial margin)
    (c) Clearing obligation
    (d) Bilateral collateralization / margins (variation margin, bilateral initial margin: standard approach, ISDA SIMM)

    References:

- European Market Infrastructure Regulation (EMIR) and upcoming Regulators Standards (ESMA)
- Publications of the Central Counterpartys (CCPs), such as the Eurex Clearing
- International Swaps and Derivatives Association: Standard Initial Margin Model

In case your application for our seminar is successful, we will ask you to provide us with a ranking of your preferred topics. During that process, we appreciate own suggestions for topics (fitting to the theme of the seminar broadly defined).

Structure

Students are expected to write a seminar paper 12 to 15 pages excluding cover page and references (12 point font size, Times font, double spaced, margins of 1 inch each at top, bottom, left, and right). Your seminar paper has to be submitted by email to chair-of-finance@uni.kn plus one hard-copy to our secretary in F332 no later than June 3, 2024, 9:30 a.m. stating "Submission seminar paper *your name*" in the subject line. Shortly thereafter, you will receive a seminar paper of another participant. You are expected to prepare and present a discussion providing helpful comments on how your classmate's work could be further improved. Grading will be based on your seminar paper including its presentation (70%), your discussion (20%), and your participation during the seminar (10%). A passing grade in all parts is required to pass the seminar.

Questions

If you have any questions, please do not hesitate to contact us at: chair-of-finance@uni.kn.

We look forward to working with you!

This file is current as of November 14, 2023.