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BERN

Institut für Finanzmanagement

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Risk Management

FS24

Lecture: Mondays, 10:15 – 13:00, Engenhaldenstrasse 8, room 001
Assistance: Lukas Jaeger lukas.jaeger@unibe.ch and for administrative questions:
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ECTS: 6

General Information

More information about the course are provided on ILIAS.

Course Description

Financial risk management is the process by which financial risks are identified, assessed, measured, and managed in order to create economic value. The financial turmoil during the 2008 crisis showed how crucial risk management is. Some risks can be measured reasonably well. For those, risk can be quantified using statistical tools to generate a probability distribution of profit and losses. Other risks are not amendable to formal measurement but are nonetheless important. As a consequence, the function of the risk manager is to evaluate financial risk using both quantitative tools and judgment.

Course Objectives

After completing the course, students will be able to thoroughly assess and pragmatically handle various types of financial risk typical for financial markets, such as market risk and credit risk. Students will acquire a deeper understanding of financial instruments available to risk managers and learn to contemplate them as effective means to hedge and diversify financial risk. Specifically, students will gain knowledge in the following areas:

- Incentives and risks in financial institutions
- Risk management and firm value
- Credit risk and counterparty risk (estimating default probabilities, structure of credit ratings, credit ratings transition matrices, Credit Value at Risk (CVaR))
- Trading in financial markets (types of markets, clearing, long and short positions in assets, derivatives markets, the risk profile of options, futures, forwards, swaps and other derivatives)
- Hedging Foreign Exchange (FX) exposure
- Market risk (delta, gamma, vega, theta, and rho exposures, Value at Risk (VaR) models, model risk)
- Origins of the Financial crisis of 2007–2008 (role of credit rating agencies and analysis of their incentives)
- Operational risk
- Regulation: scenario analysis and stress testing in the context of current regulatory frameworks
- ESG from the risk management perspective
- Case studies in risk management (Bankers Trust, Barings, Fannie Mae and Freddie Mac, Long

- Term Capital Management (LTCM), Metallgesellschaft, Northern Rock, Orange County, Washington Mutual, etc.)

Learning Outcomes

1. Understand the relation between risk and return
2. Identify and define the most important risks faced by financial institutions
3. Summarize research evidence regarding the relationship between risk management and firm value
4. Define credit risk, be able to estimate default probabilities, understand the calculation methodology of credit ratings, define credit value at risk
5. Understand trading in financial markets and the risks stemming from it with a special focus on risks posed by derivatives
6. Explain how to hedge Foreign Exchange (FX) exposure
7. Define market risk, calculate and explain how to hedge risk exposures, calculate Value at Risk using a multitude of approaches
8. Explain the financial crisis of 2007–2008 and the role played by credit rating agencies
9. Define operational risk and identify its source areas
10. Name and describe the current regulatory frameworks, explain scenario analysis and stress testing
11. Analyze risks through the lens of ESG ratings, assess the impact of e.g., climate risk, reputation risk on various players in the financial market
12. Analyze case studies in risk management focused on some of the largest risk management failures

Organization

The lecture will take place **in-person only (no podcast or live-stream)**. The in-class participation is highly encouraged.

Course Material

- Slides
- Additional material that will be posted online or distributed in class

Course Literature (not mandatory):

- Risk management and financial institutions by John C. Hull, Fifth Edition, ISBN: 978-1-119-44811-2.

Evaluation

- In-class presentation of a risk management case study: 30%
- Final exam: 70%

The exam will be closed book.

Additional details to be communicated in class during the semester.

Academic Integrity

You are expected to adhere to the Academic Code of Honour which states:

“The unauthorized or unacknowledged use of others’ ideas, text, pictures or other work as if they were your own is forbidden. Sources – including information obtained from internet/online sources or previously submitted work – should always be fully and correctly acknowledged in academic papers. Submitting another person’s assignment or work as your own is also a form of plagiarism and will not be tolerated.”

Read more about plagiarism at <https://plagiarism.org/article/what-is-plagiarism/> or at <https://www.turnitin.com/static/plagiarism-spectrum/>.

“Written examinations and other forms of assessment should be completed honestly, truthfully and correctly, using only those methods and/or tools authorized by the faculty member in charge. Using unauthorized books, lecture notes or other materials (electronic or print) during an examination, or bringing such unauthorized items into an examination, will not be tolerated unless prior approval is obtained from the faculty member in charge of the examination. Copying from the examination or course work of a fellow student, allowing a fellow student to copy from your own examination or course work, using unapproved materials during examinations or assessments of any kind, or preparing assignments or other work for a fellow student to submit as their own are also considered forms of cheating and will result in disciplinary action.”

Preliminary Schedule

| Lecture | Date | Start | End |
|---------|------------|-------|-------|
| 1 | 19.02.2024 | 10:15 | 13:00 |
| 2 | 26.02.2024 | 10:15 | 13:00 |
| 3 | 04.03.2024 | 10:15 | 13:00 |
| 4 | 11.03.2024 | 10:15 | 13:00 |
| 5 | 18.03.2024 | 10:15 | 13:00 |
| 6 | 25.03.2024 | 10:15 | 13:00 |
| 7 | 08.04.2024 | 10:15 | 13:00 |
| 8 | 15.04.2024 | 10:15 | 13:00 |
| 9 | 22.04.2024 | 10:15 | 13:00 |
| 10 | 29.04.2024 | 10:15 | 13:00 |
| 11 | 06.05.2024 | 10:15 | 13:00 |
| 12 | 13.05.2024 | 10:15 | 13:00 |
| 13 | 27.05.2024 | 10:15 | 13:00 |

Preliminary Exam Dates

05.06.2024 12:15 – 14:15 HG 201

10.09.2023 14:45 – 16:45 HG 114