

RISK MANAGEMENT

MODULE: OAP - FINANCIAL MARKETS

Numbers of hours and language: 15 (English)

Lecturer : Purnur AGIACAI SCHNEIDER, FRM

Learning objectives:

This course provides a quick introduction to the core body of knowledge and tools used by professional risk managers. Risk Management has evolved quickly over the last two decades, starting with statistical and probabilistic tools, derivatives and portfolio techniques, and continuing with VAR methods, scenario analysis, stress-testing, and extreme value theory. The course covers quantitative methods, and then proceeds to measuring and managing market, credit, operational and liquidity risk management. To understand this part, students need to have basic knowledge of financial markets and instruments. The course further discusses regulatory issues and ends by reviewing some known cases of risk management failures.

Course Contents:

I. Foundations of Risk Management

- Types of Risks
- Quantitative Tools
- VAR and Extreme Tail Loss
- VAR Methods
- Back-testing VAR
- Portfolio VAR
- Stress-testing

II. Market Risk Management

- Categories of market risk
- Hedging Risks

III. Liquidity Risk Management

- Asset Liquidity Risk
- Funding Liquidity Risk

IV. Credit Risk Management

- Expected and Unexpected Credit Loss
- Credit VAR
- Credit Ratings
- Asset Liquidity Risk
- Measuring Default Risk

- Credit Derivatives
- Securitization

V. Operational Risk Management

- Types of Operational Risk
- Operational Risk Managing Tools

VI. Risk Regulation of Financial Institutions

- The Basel Accord

VII. Risk Management Failures: Class Discussion

Course Materials:

- Lecture Notes
- Main Textbook: Financial Risk Manager Handbook, Philippe Jorion
- RM Failure cases
- Recommended Readings: optional

Assessment:

Optional Track Exam covering credit 4 of Optional Tracks: 30 minutes – 10% of final grade. The tested material will cover the lecture notes. The recommended readings will not be tested in the exam, but are provided as a useful resource for extending the knowledge gained in the course, in view of applying it in your future professional lives. The exam is closed book with calculator. Students will be allowed to use a previously prepared (maximum 2-pages) formula sheet.

Recommended Readings:

- Risk Management Failures: What are they and when do they happen?, René Stulz, 2008
- Why Banks Failed The Stress Test, Andrew G Haldane, 2009
- Has Financial Development Made the World Riskier?, Raghuram G. Rajan, 2005
- What We Know, Don't Know And Can't Know About Bank Risk: A View From The Trenches, Andrew Kuritzkes and Til Schuermann, 2008
- A Primer in the Role of Securitization in the Credit Market Crisis of 2007, John D. Martin, 2009
- Information, Liquidity, and the (Ongoing) Panic of 2007, Gary Gorton, 2009
- Shareholder Report on UBS's Write-Downs, UBS, 2008
- Hedge Funds, Systemic Risk, and the Financial Crisis of 2007–2008, Andrew W. Lo, 2008
- The European Economy in the Global Financial Crisis, Martin Wolf, 2010
- Extreme Value VAR and ETL, Kevin Dowd, 2005
- Black Monday and Black Swans, John C. Bogle, 2008
- International Convergence of Capital Measurement and Capital Standards, Basel Committee on Banking Supervision
- Observations on Risk Management Practices during the Recent Market Turbulence, Senior Supervisors Group, 2008
- BIS Quarterly Review