



8,156: Financial Risk Management

Subject information

ECTS-Credits: 2

Attached courses

Timetable	Language	Lecturer
8,156,1.00 Financial Risk Management	English	Frauendorfer Karl

Course information

Course prerequisites

Course content

Objective

The course introduces modern concepts for identifying, modelling and measuring risk inherent in various financial assets.

Main Subjects:

- Black-Scholes and Risk-Neutral Valuation
- Measures of Risks and Coherence
- Hedging Strategies
- Copulas and Dependence

Course structure

I) Basic Concepts in Risk Management

- Risk Factors and Loss Distribution
- Risk Measurement
- Standard Methods for Market Risks
- Coherence
- Capital Allocation

II) Valuation Concepts

- Lognormality of Asset Prices
- Black-Scholes Approach
- Risk-Neutral Valuation
- Greeks
- Hedging Strategies

III) Copulas and Dependence

- Properties and Simulation
- Dependence Measures
- Fitting Copulas to Data

Course literature

Hull, J. C. (2006). *Options, Futures, and other Derivatives* (6th ed.). New Jersey: Prentice Hall.

McNeil, A. J., Frey, R., & Embrechts, P. (2005). *Quantitative Risk Management: Concepts, Techniques, and Tools*. New Jersey: Princeton University Press.

Course additional information

Information about the Examination

Examination type

decentral - Oral examination (individual examination) (100%, 20 mins.)

Examination aids

no regulation necessary

No rules for examination aids are required for this examination.

- For written examinations at home (term paper), courses without credits, etc., no specific rules for examination aids are required.
- The regulations of the University of St. Gallen and the rules of academic work (sources and aids must always be identified) are applicable in a subsidiary fashion.
- All written work must be accompanied by a declaration of authorship.

Question language: **English**

Answer language: **English**

Examination content

All Chapters of the Script:

Part I: Valuation and Hedging Concepts ([1], Chapters 13,17)

- Lognormality of asset prices
- Black-Scholes Approach
- Risk neutral valuation
- Greeks
- Hedging Strategies

Part II: Basics Concepts in Risk Management ([2], Chapters 2,6)

- Risk factors and loss distribution
- Risk measurement
- Standard methods for market risks
- Coherence
- Capital Allocation

Part III: Copulas and Dependence ([2], Chapter 5)

- Properties and Simulation
- Dependence measures
- Fitting Copulas to data

Exam-relevant literature

The whole **lectures** "Financial Risk Management"

1.

2. Basic Literature:

[1] Chapter 13 and 17 in Hull, J.C. (2008). *Options, Futures, and other Derivatives* (7th ed.). New Jersey: Prentice Hall.

[2] Chapter 2, 5 and 6 in McNeil, A. J., Frey, R., & Embrechts P. (2005). *Quantitative Risk Management*. Princeton University Press.

Attention please:

We would like to point out to you that this fact sheet has absolute priority over other information such as StudyNet, faculty members' personal databases, information provided in lectures, etc.

When will the fact sheets become binding?

Information about courses and examination type: from the start of the bidding process on 26 January 2012

Information about decentral examinations (examination aids, examination content, exam-relevant literature): after the 4th semester week on 19 March 2012

Information about central examinations (examination aids, examination content, exam-relevant literature): from the start of the enrolment period for the examinations on 9 April 2012

Please look at the fact sheet once more after these deadlines have expired.