

# International Financial (Risk) Management (intensive course)

**EM3E5M07A1**

## Program

**PGE**  
Visitants

## UE

International Financial (Risk) Management

## Semester

A

## Discipline

Finance

## Contact hours

27 H

## Number of spots

45

## Open to visitors

Yes

## Language



## Coordinator

## List of lecturers

Lecturer(s)	Email	Contact hours - lecture
Mihail BUSU	<a href="mailto:mihail.busu@fabiz.ase.ro">mihail.busu@fabiz.ase.ro</a>	27 h

### Pedagogical contribution of the course to the program

No educational contribution associated with this course for this program.

### Description

The lecture aims to offer students an overview about the growing importance of risk management as a major tool of sustainable and value-based management and to familiarize them with its most common mechanisms. Participants will get into the risk management value perspective, discuss its assumptions and discover major monitoring and incentive tools by putting a special focus on the sustainability aspect of existing financial instruments.

To bridge the gap between theory and practice, students will deal with examples and case studies that tackle risk management issues (hedging, options and future contracts).

The interactive organization of the lecture allows to quickly acquire the skills and techniques needed for analyzing the efficiency of financial instruments and judging about the effectiveness of risk management computational tools with respect to a sustainability-oriented and value-driven management approach.

### Teaching methods

#### Face-to-face

- Lectures
- E-learning

#### In group

- Exercises
- Oral presentations
- Case studies/texts

#### Interaction

- Discussions/debates

## Others

**No items in this list have been checked.**

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## Learning objectives

### Cognitive domain

Upon completion of this course, students should be able to

- - (level 1) **recognize** good practices of treasury management in industry
  - - (level 2) **summarize** the language and the practice of treasury management industry by reading professional treasury journals
  - - (level 3) **demonstrate** an understanding of Foreign exchange theory and its applications in risk management
  - - (level 4) **analyze** practical risk management problems using a case study approach (assignment)
  - - (level 4) **relate** academic theories to the practice of risk management
  - - (level 5) **interpret** and evaluate financial problems posed both in quantitative and non-quantitative terms.
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### Affective domain

Upon completion of this course, students should be able to

**None affective domain have been associated with this course yet**

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## Outline

### I. Introduction to Financial Risk Management (4h)

1. Motivation for risk management
2. Why risk management?
3. Creating value with risk management
4. Measuring risk for a single asset and for a portfolio of assets

### II. Financial Engineering & Hedging (4h)

1. Basics of derivatives
2. Forwards, pricing of forward contracts under assumptions of dividends, carrying costs, etc
3. Futures, settlement mechanism, clearing house concept
4. Hedging with futures and forwards
5. Basic, and exotic options
6. Basics of option valuations, valuation options using Black-Scholes Model
7. Duration hedging

### III. Measuring volatility and Correlations (4h)

1. Conditional and unconditional volatility
2. Weighted and unweighted conditional volatility
3. EWMA and CARCH (1,1) approaches to volatility
4. Estimating covariance

#### IV. Market Risk (4h)

1. Value at Risk (VaR) measurement
2. Historical and Monte Carlo Simulation approaches
3. Back-testing
4. Stress-testing
5. Capital charge for market risk under Basel rules

#### V. Credit Risk (4h)

1. Credit analysis models (expert system, credit scoring and rating models, artificial neural networks)
2. Capital charge for credit risk under Basel rules
3. Calculating default probabilities with actuarial and market prices based methods
4. Measuring loss given defaults with actuarial methods
5. Credit Derivatives

#### VI. Operational Risk (4h)

#### VII. Case study presentations (2h30)

#### VIII. General conclusion (0h30)

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## **No prerequisite has been provided**

### **Knowledge in / Key concepts to master**

Knowledge of :

- Basic knowledge of portfolio theory
- Credit analysis models

Key concepts to understand:

- risk management
  - future contracts
  - options contracts
  - portfolio risk
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## **Teaching material**

### **Mandatory tools for the course**

- Computer
- Calculator
- Reference manuals

### **Documents in all formats**

- Case studies/texts
- Syllabus

### **Moodle platform**

- Upload of class documents
- Interface to submit coursework

- Assessments

## **Software**

- Pack Office (Word, Excel, PowerPoint, Access)

## **Additional electronic platforms**

**No items in this list have been checked.**

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## **Recommended reading**

Main reading material

Borghesi, A., & Gaudenzi, B. (2013). Risk management : How to assess, transfer, and communicate critical risks. Springer.

Omenn, G. S. (2003). On the significance of "The Red Book" in the evolution of risk assessment and risk management.

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Additional literature

opkin, P. (2018). Fundamentals of risk management: understanding, evaluating and implementing effective risk management. Kogan Page Publishers.

Bouchaud, J. P., & Potters, M. (2003). Theory of financial risk and derivative pricing: from statistical physics to risk management. Cambridge university press.

Hull, J. (2012). Risk management and financial institutions,+ Web Site (Vol. 733). John Wiley & Sons.

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## **EM Research: Be sure to mobilize at least one resource**

Textbooks, case studies, translated material, etc. can be entered

CHEHBI-GAMOURA, F. S., DERROUCHE, S. R., MALHOTRA, T. M., & DAMAND, F. D. PREDICTIVE CROSS-MANAGEMENT OF DISASTER PLANS IN BIG DATA SUPPLY CHAINS: FUZZY COGNITIVE MAP APPROACH.

Gueye, D. (2021). Some Contributions to Quantitative Financial Risk Management (Doctoral dissertation, Université de Strasbourg).

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## **Assessment**

### **List of assessment methods**

**Intermediate assessment / continuous assessment 1**Other (date, pop quiz, etc.) : -

Written and oral / Individual / English / Weight : 20 %

**Details :** Class activity

**Final evaluation**Last class

Written (90 Min.) / Individual / English / Weight : 80 %

**Details : -**