

# 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

## ECTS

5

## Open to visitors

Yes

## Language



## Coordinator

Mihail Busu

## 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

#### **Développer un management à impact grâce aux connaissances et aux outils les plus récents dans les domaines du management**

Design solutions adapted to organizational problems by applying relevant methodologies

#### **Développer des compétences managériales de niveau avancé se traduisant par un leadership responsable**

Co-build a managerial and organizational culture through collaborations and team projects

Effectively argue his ideas orally and in writing with a professional posture

#### **Pratiquer un management à impact dans un environnement multiculturel et international, porté par un "European mindset"**

Communicate in a professional context in (foreign) languages, in writing and/or orally

### 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 3) **apply** the risk management concepts in practical problems
  - - (level 3) **solve** basic option valuation problems
  - - (level 4) **analyze** how specific board aspects may strengthen the CSR dimension of a firm's governance setting
  - - (level 5) **assess** hedging with futures and forward contracts
  - - (level 6) **construct** an efficient portfolio
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### Affective domain

Upon completion of this course, students should be able to

- - (level 3) **explain** the basic of derivatives
  - - (level 4) **compare** Back-testing and stress testing market risk
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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 + attendance

**Final evaluation**Last class

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

**Details :** -