Financial risk management

Academic Year: (2022 / 2023) **Review date: 09-09-2022**

Department assigned to the subject: Business Administration Department

Coordinating teacher: RODRIGUEZ LOPEZ, ROSA

Type: Compulsory ECTS Credits : 6.0

Year : 3 Semester : 2

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)

FIXED INCOME AND DERIVATIVES
ECONOMETRICS I

OBJECTIVES

The objective of this course is for the student to acquire an overview of the financial risks to which companies are exposed as well as the existing methods for their evaluation and hedging.

To achieve the goal, the student, at the end of the course must have achieved a series of knowledge, skills and attitudes that are detailed below:

Knowledge:
- To understand the fundamental concepts associated with financial risk management.
- To understand the concept of risk and the different types of risks that exist.
- To know the instruments used in companies to measure and evaluate financial risk.
- To understand the application of the instruments and mechanisms for measuring financial risk.
- To understand the application of the instruments and mechanisms for evaluating financial risk.

Of skills:
- Understand the problem of financial risk management in financial and non-financial companies
- To solve risk management problems.
- Apply the hedging techniques used in risk management.
- Calculate the VaR risk measure for market risks using different methodologies

Attitude:

- Enhancing the capacity for analysis and the capacity for synthesis.
- Capacity for the organization and planning of work and autonomous learning in teams
- Ability to solve complex problems associated with risk management in Excel
- Ability to communicate with experts in other areas.
- Enhance oral and written expression skills.
- Ethical commitment.

DESCRIPTION OF CONTENTS: PROGRAMME

1 Introduction to Risk management
2. Hedging Risks
3 The greeks and Portfolio Insurance
4 The management of Interest Rate Risk
5. Value at Risk (VaR).
6. Historical and Montecarlo Simulation of VaR
7. Back-Testing
8. VaR Limitations

LEARNING ACTIVITIES AND METHODOLOGY

- Class
- Group homeworks

ASSESSMENT SYSTEM

The final exam (it will represent 40% of the final grade), is a multiple-choice test and its objective will be to verify the degree to which the student has acquired the knowledge competencies. A minimum grade of 4 is required in this exam in order to calculate the average with continuous evaluation.

The remaining 60% of the final grade will correspond to the continuous evaluation:

- 30% completion of a test on the date that appears in the weekly planning. NOTE: If a student can not attend, for any reason, to the evaluation test, he will have a zero on that test.

- 30% Completion and delivery of 3 exercises - groups of 4 people. For these practices, students will have their own portfolios with actual data (data from stocks, currencies, ETFs, mutual funds, etc.). The three exercises should be done for your portfolio.
o Exc. 1: Volatility Estimation
o Exc. 2: VaR estimation (minimum content parametric VaR and historical simulation).
o Exc. 3: VaR backtesting and final report.

The delivery of the practicals is dated in the above schedule and will be done by Aula Global in the corresponding assignment. Late delivery of these assignments will result in a grade penalty of 0.5 points for each late practice.

% end-of-term-examination:	50
% of continuous assessment (assigments, laboratory, practicals…):	50

BASIC BIBLIOGRAPHY

- Hull, J Options Futures and Other Derivatives, Pearson , 2013
- J. Hull Risk Management and Financial Institutions, Willey, 2012
- Jorion Value at Risk: The New Benchmark for Managing financial Risk, McGRawhill, 2006

ADDITIONAL BIBLIOGRAPHY

- Rene M. Stulz Risk Management and Derivatives, Prentice Hall.