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Reforming Master Programmes in Finance in Armenia and Moldova / REFINE

An Erasmus+ Capacity Building Project (2017-2020)

THE COURSE
APPLIED SKILLS IN RISK MANAGEMENT
OVERVIEW

ARMENIAN STATE UNIVERSITY OF ECONOMICS

Teacher Gayane Harutyunyan

BASIC INFORMATION

TITLE OF THE COURSE	Programme Budgeting
TEACHERS	Gayane Harutyunyan
YEAR OF THE COURSE	2nd
SEMESTER OF THE COURSE	1st
LANGUAGE	Armenian
NUMBER OF ECTS CREDITS	4

The background of the course

- The following course **aims** to give an imagination about the main risks which may take place in financial markets and their management.

- In this course **financial market consists** of bank sector, insurance and securities markets. It is well known that such sectors of market can be partly controlled by the help of right planning and chosen strategy.

- Because of **management is a tool** for right planning, companies working in this filed should always apply appropriate risk management technics. The last one can take place only if the forecasting methods are used.

- **Forecasting methods** are based on mathematical methods knowledge and also some tools. In this case such risks of financial markets like credit, market, operational and percentage risks' management are closely connected with the prediction abilities of sectors, especially the people who are working there.
- That's why this **course should develop knowledge** for students to work and manage the risks in different parts of financial markets.

LEARNING OUTCOMES

Explanation: learning outcomes of the course

At the end of the course the student will know:

Knowledge

- Define, memorize and classify the main risks in financial institutions,
- Interpret company management and risk management steps. Implement methods and tools for appropriate risk management,
- Test risk management methods and tools by the example of financial institution,
- Value and predict financial risks as a consequence of appropriate risk management.

LEARNING OUTCOMES

Explanation: learning outcomes of the course

At the end of the course the student will be able to:

Competence

- Use Risk management methods and Instruments,
- Use main types of probability distributions, regression analysis elements, Risk management function,
- Make a Risk monitoring.

At the end of the course the student will possess:

Skill

- Define, memorize and classify the main risks in financial institutions,
- Interpret company management and risk management steps. Implement methods and tools for appropriate risk management,
- Test risk management methods and tools by the example of financial institution,
- Value and predict financial risks as a consequence of appropriate risk management.

SYLLABUS OF THE COURSE

WEEK	TOPIC
1	Subject and content of the course
2	Tasks and Process of risks management
3	Basic mathematical methods of risk assessment
4	Company management and risk management
5	Main risks

WEEK 1

Topic 1. Subject and content of the course

- Subject of risks' management,
- The concept of risk and risk management.
- A place of risk in the system of management sciences,The nature of the risk.

WEEK 2

Topic 1. Subject and content of the course

- Development of views on risks. The contribution of Blaise Pascal, Daniel and Jacob Bernoulli, Joseph von Neumann, Harry Markowitz. Aspects of risks.
- Risks basic views (Strategic, operating, financial risks and hazards).

WEEK 3-5

Topic 2. Tasks and Process of risks management

- Risk management methods: Insurance,reservation,hedging,distribution, diversification, minimization, avoidance

WEEK 4

Topic 2. Tasks and Process of risks management

- Risk management Instruments
- Transfer of risk to a third party, risk self-sustaining

WEEK 5

Topic 2. Tasks and Process of risks management

- Costs and revenues of risk management
- Exposure to riskBanking risks

WEEK 6-7

Topic 3. Basic mathematical methods of risk assessment

- Basic concepts of probability theory and mathematical statistics in the field of risks,
- Financial mathematics, including the cost of money in time

WEEK 8

Topic 3. Basic mathematical methods of risk assessment

- Financial mathematics, including profitability and volatility, pricing methods, interest rate volitions

WEEK 9

Topic 3. Basic mathematical methods of risk assessment

- The main types of probability distributions, regression analysis elements and the Monte Carlo method.

WEEK 10

Topic 4. Company management and risk management

- Strategy: external and internal risks of the company. Strategic risks of the company.

WEEK 11

Topic 4. Company management and risk management

- Risks of the environment. Stages of life and the dynamics of the company's risks. New, pseudonymous and specific risks.

WEEK 12

Topic 4. Company management and risk management

- Risk monitoring. Multidimensional control of company. The multidimensionality of a risky space. Company development and risk management.

- Risk management function.

WEEK 13

Topic 5. Main risks

- Risks of strengthening competition in a downturn: products and services, communication, sales, pricing, personnel.
- Operational. Classification of operational risks of financial and industrial companies.
- Portfolio approach in risk management. Financial risks and their classification.

WEEK 14

Topic 5. Main risks

- Derivative financial instruments for managing financial risks.
- Risks of danger and their classification.
- Risk management of danger.

TEACHING METHODOLOGY

Please explain the teaching methodology and pedagogical approaches of the course

1. **Lectures**

- Theory+practice=solution to a certain situation,
- Case study,
- The use of student knowledge level orientation,
- Practise in the organizations related to specialization.

2. **Seminars**
3. **Self-study**

LABOUR MARKET RELEVANCE

- Please explain the labour market relevance of the course – how the students can use knowledge in practise
- financial markets and their development,
- Segments of financial markets,
- Risks and their management.

After this course students can work in following sectors and organizations:

- Central Banks,
- Risk management department in banks,
- Risk management department in insurance companies,
- Risk management department in all most all financial organizations.

ASSESSMENT AND GRADING

Please explain the form of assessment of the course

- Class participation – 25 %

- Students' presence in the class (Absences reduces the total participation grade)
- Grading of students, which includes:
- Individual work -10%,
- Seminars including case studies, group works, etc.-10%,
- Asking and answering questions-5%.

- Midterm exam – 25 %
- Final exam – 50%

Assignment 1

- **Group work**

An example:

Make a group of 6 students. Divide the group in 3 parts-2 students in each group. Analyse the whole financial market by sectors, e.g. insurance, banking and securities markets. Choose one company in each sector. Collect data for an appropriate period for analyses (5-10 years). Do the analyses either by years, or by quarthers. Each 2 students have to calculate the credit risk, make VaR analyses using different mathematical methods. Then they should compare the data for the whole financial market and give some suggestions for the credit risk reduction.

Assignment 2

Homework

Calculate:

- The credit risk,
- Percentage risk,
- Market risk,
- Operative risk

By using

- Basic concepts of probability theory and mathematical statistics in the field of risks,
- Financial mathematics, including the cost of money in time, profitability and volatility, pricing methods, interest rate volitions,
- The main types of probability distributions, regression analysis elements and the Monte Carlo method.

REFERENCES

- Nigel Da Costa Lewis,(2012), Market Risk Modelling, Second Edition: Applied Statistical Methods for Practitioners,
- John Hampton, (2014), Fundamentals of Enterprise Risk Management: How Top Companies Assess Risk, Manage Exposure, and Seize Opportunity, 2nd Edition,
- Michel Crouhy, Dan Galai, Robert Mark, (2014), The Essentials of Risk Management, 2nd Edition,
- Rupak Chatterjee, (2014), Practical Methods of Financial Engineering and Risk Management: Tools for Modern Financial Professionals 1st ed. Edition

Thank you!


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