

**Санкт-Петербургский филиал федерального государственного
автономного образовательного учреждения высшего образования
"Национальный исследовательский университет
"Высшая школа экономики"**

Факультет «Санкт-Петербургская школа экономики и менеджмента»

Департамент финансов

**Рабочая программа дисциплины
«Финансовый риск-менеджмент»**

для магистерской программы «Финансы»
направления подготовки 38.04.08 «Финансы и кредит»
уровень магистратура

Разработчики программы

Вукович Д., PhD, доцент, департамент финансов, dvukovic@hse.ru

Согласована начальником ОСУП программ магистратуры

«_____» _____ 201 г.

Неклюдова М.А. _____ [подпись]

Утверждена Академическим советом МП «Финансы»

30 августа 2018 протокол № 1-2018/19

Академический руководитель образовательной программы

Рогова Е.М. _____ [подпись]

Санкт-Петербург, 2018

Настоящая программа не может быть использована другими подразделениями университета и другими вузами без разрешения кафедры-разработчика программы.

Course Syllabus

Title of the course	Financial Risk Management				
Title of the Academic Programme	Finance Master's programme				
Type of the course	Elective				
Prerequisites	Financial Markets and Institutions, Advanced Macroeconomics, Theory of Finance				
ECTS workload	5				
Total indicative study hours	Directed Study	Self-directed study	Total		
	56	134	190		
Course Overview	The course is aimed at the understanding of main functions of financial risk management and its role in the system of a corporate management. It also provides students with tools and methods of financial risks assessment and mitigation.				
Intended Learning Outcomes (ILO)	<p>Understand the principles of financial risk management</p> <p>Know basic functions of financial risk management</p> <p>Able to calculate cost of credit risk</p> <p>Able to calculate cost of currency risk</p> <p>Know tools of financial engineering and risk hedging</p> <p>Understand principles of non-profit organizations financial risk management</p>				
Teaching and Learning Methods	The course consists of lectures (28 hours) and tutorials (28 hours). The tutorials involve student presentations (in small groups), problems solving, case analysis and the individual assignment (project).				
Content and Structure of the Course					
№	Topic / Course Chapter	Total	Directed Study		Self-directed Study
			Lectures	Tutorials	
1	Fundamentals of financial risk management	28	4	4	20
2	Risk and returns on financial markets	28	4	4	20
3	Investment portfolio and market risk	28	4	4	20
4	Interest rate risk	28	4	4	20
5	Analysis and assessment of default risk	28	4	4	20
6	The foreign exchange market and currency risk	28	4	4	20
7	Global risks and the risk of country	22	4	4	14
Total study hours		190	28	28	134
Indicative Assessment Methods and Strategy	<p>The cumulative grade (G_C) is calculated as an average, based on the following equation:</p> $G_C = 0,45 \cdot G_{hw} + 0,1 \cdot G_{sa} + 0,45 G_t$ <p>where</p> <p>G_{hw} – grade for homework projects</p> <p>G_{sa} – grade for students' activities at class</p> <p>G_t - grade for written assignment</p> <p>The final grade (G_F) is calculated as follows:</p> $G_F = 0,5 \cdot G_C + 0,5 \cdot G_{EX}$ <p>where</p> <p>G_{EX} – grade for the final examination</p>				
Readings / Indicative Learning Resources	<p><u>Mandatory</u></p> <ol style="list-style-type: none"> 1. Michel Crouhy, Dan Galai, Robert Mark (2014). <i>The Essentials of Risk Management, 2nd Edition</i>. McGraw-Hill, NY, USA. 2. Zvi Bodie, Alex Kane, Alan J. Marcus (2012). <i>Essentials of Investments, 9th Edition</i>, The McGraw-Hill/Irwin, USA. <p><u>Optional</u></p> <ol style="list-style-type: none"> 1. Anthony Saunders & Marcia Millon Cornett (2012). <i>Financial markets and</i> 				

	institutions, 5 th edition, McGraw-Hill/Irwin. 2. Kidwell DS, Blackwell DW, Whidbee DA, Peterson RL (2008). Financial Institutions, Markets and Money, John Wiley & Sons, Inc.		
Indicative Self- Study Strategies	Type	+/-	Hours
	Reading for seminars / tutorials (lecture materials, mandatory and optional resources)	+/-	40
	Assignments for seminars / tutorials / labs	+	44
	E-learning / distance learning (MOOC / LMS)	+	0
	Fieldwork	+	0
	Project work	+	40
	Other (please specify)	-	
	Preparation for the exam	+	10
Academic Support for the Course	Academic support for the course is provided via LMS, where students can find: guidelines and recommendations for doing the course; guidelines and recommendations for self-study; samples of assessment materials		
Facilities, Equipment and Software	(If required)		
Course Instructor	Dr. Darko Vukovic, Associate Professor of the Department of Finance Assistant: Victor Krakovich		

Course Content

<p>Lecture 1. Fundamentals of financial risk management</p> <p>This is introductory part where students learn fundamentals of financial risk and how to manage them:</p> <ul style="list-style-type: none"> • Introduction to financial risk management • The Conflict of Risk and Reward • Typology of risk exposures <p>Reading: Michel Crouhy, Dan Galai, Robert Mark (2014). <i>The Essentials of Risk Management, 2nd Edition</i>. McGraw-Hill, NY, USA.</p>
<p>Lecture 2. Risk and returns on financial markets</p> <p>In this part, we derive predictions for expected return as a function of risk. We begin with an examination of various conventions for measuring and reporting rates of return. Students compute various measures of return on multi-year investments. We use data on the past performance of stocks and bonds or scenario analysis to characterize the risk and return features. The expected return and risk of portfolios are constructed by combining risky assets with risk-free investments in government bonds:</p> <ul style="list-style-type: none"> • Rates of return on individual financial instruments • Risk and Risk Premium • Rates of return • Payment of Dividends versus Reinvestment of Earnings

- Measuring Investment Returns over Multiple Periods
- Dollar-weighted return
- Scenario Analysis and Probability Distributions

Reading:

Zvi Bodie, Alex Kane, Alan J. Marcus (2012). Essentials of Investments, 9th Edition, The McGraw-Hill/Irwin, USA.

Lecture 3. Investment portfolio and market risk

In this chapter we evaluate the performance of a portfolio manager accounting for market risk. Adjusting average returns for risk presents a host of issues because the proper measure of risk may not be obvious and risk levels may change along with portfolio composition. We begin with conventional approaches to risk adjustment. These use the risk measures developed earlier to rank investment results:

- Diversification and portfolio risk
- Covariance and Correlation
- The Mean-Variance Criterion
- The optimal risky portfolio with a risk-free asset
- The complete portfolio
- The Efficient Frontier of Risky Assets
- A single-index stock market

Reading:

Zvi Bodie, Alex Kane, Alan J. Marcus (2012). Essentials of Investments, 9th Edition, The McGraw-Hill/Irwin, USA.

Lecture 4. Interest rate risk

In this part, we calculate how bond prices will change over time for a given interest rate projection. The call, convertibility and sinking fund provisions, are described and analyzed how these provisions affect a bond's price and yield to maturity:

- Interest rate – passive and active strategy
- Interest rate risk
- Interest Rate Sensitivity
- Duration
- Immunization
- Convexity
- The substitution swap

Reading:

Zvi Bodie, Alex Kane, Alan J. Marcus (2012). Essentials of Investments, 9th Edition, The McGraw-Hill/Irwin, USA.

Lecture 5. Analysis and assessment of default risk

In this part are identified and analyzed the determinants of bond safety and rating and how default risk is reflected in bond yields and the prices of credit default swaps:

- Credit risk instruments
- Junk Bonds
- Determinants of Bond Safety
- Sinking funds
- Collateral
- Yield to Maturity and Default Risk
- Credit Default Swaps

Reading:

Zvi Bodie, Alex Kane, Alan J. Marcus (2012). Essentials of Investments, 9th Edition, The McGraw-Hill/Irwin, USA.

Lecture 6. The foreign exchange market and currency risk

In this part we analyze foreign exchange market and learn how to hedge currency risk. We formulate hedge strategies to offset the currency risk involved in international investments:

- Market Capitalization and GDP
- Risk Factors in International Investing
- Exchange Rate Risk
- Hedging

Reading:

Zvi Bodie, Alex Kane, Alan J. Marcus (2012). Essentials of Investments, 9th Edition, The McGraw-Hill/Irwin, USA.

Lecture 7. Global risks and the risk of country

In this part are introduced global, political and country-specific risks that must be considered in the overall risk assessment. Also, students learn how performance attribution procedures can be adapted to an international setting:

- Country-Specific Risk
- International investing: risk, return, and benefits from diversification
- Benefits from International Diversification
- Performance Attribution

Reading:

Zvi Bodie, Alex Kane, Alan J. Marcus (2012). Essentials of Investments, 9th Edition, The McGraw-Hill/Irwin, USA.

Assessment Methods

Types of Assessment	Forms of Assessment	Modules			
		1	2	3	4
Formative Assessment	Test				*
	Essay				
	Report/Presentation				*
	Project				
	In-class Participation			*	*
	Other – problem sets				
Interim Assessment (if required)	Assignment (e.g. written assignment)				*
Summative Assessment	Exam				*

Assessment Criteria

In-class Participation

Grades	Assessment Criteria
«Excellent» (8-10)	A critical analysis which demonstrates original thinking and shows strong evidence of preparatory research and broad background knowledge.
«Good» (6-7)	Shows strong evidence of preparatory research and broad background knowledge. Excellent oral expression.
«Satisfactory» (4-5)	Satisfactory overall, showing a fair knowledge of the topic, a reasonable standard of expression. Some hesitation in answering follow-up questions and/or gives incomplete or partly irrelevant answers.
«Fail» (0-2)	Limited evidence of relevant knowledge and an attempt to address the topic. Unable to offer relevant information or opinion in answer to follow-up questions.

Project Work

Grades	Assessment Criteria
«Excellent» (8-10)	A well-structured, analytical presentation of project work. Shows strong evidence and broad background knowledge. In a group presentation all members contribute equally and each contribution builds on the previous one clearly; Answers to follow-up questions reveal a good range and depth of knowledge beyond that covered in the presentation and show confidence in discussion.
«Good» (6-7)	Clearly organized analysis, showing evidence of a good overall knowledge of the topic. The presenter of the project work highlights key points and responds to follow up questions appropriately. In group presentations there is evidence that the group has met to discuss the topic and is presenting the results of that discussion, in an order previously agreed.
«Satisfactory» (4-5)	Takes a very basic approach to the topic, using broadly appropriate material but lacking focus. The presentation of project work is largely unstructured, and some points are irrelevant to the topic. Knowledge of the topic is limited and there may be evidence of basic misunderstanding. In a group presentation, most of the work is done by one or two students and the individual contributions do not add up.
«Fail» (0-2)	Fails to demonstrate any appropriate knowledge.

Written Assignments (Essay, Test/Quiz, Written Exam, etc.)

Grades	Assessment Criteria
«Excellent» (8-10)	Has a clear argument, which addresses the topic and responds effectively to all aspects of the task. Fully satisfies all the requirements of the task; rare minor errors occur;
«Good» (6-7)	Responds to most aspects of the topic with a clear, explicit argument. Covers the requirements of the task; may produce occasional errors.
«Satisfactory» (4-5)	Generally addresses the task; the format may be inappropriate in places; display little evidence of (depending on the assignment): independent thought and critical judgement include a partial superficial coverage of the key issues, lack critical analysis, may make frequent errors.
«Fail» (0-2)	Fails to demonstrate any appropriate knowledge.

Recommendations for students about organization of self-study

Self-study is organized in order to:

- Systemize theoretical knowledge received at lectures;
- Extending theoretical knowledge;
- Learn how to use legal, regulatory, referential information and professional literature;
- Development of cognitive and soft skills: creativity and self-sufficiency;
- Enhancing critical thinking and personal development skills;
- Development of research skills;
- Obtaining skills of efficient independent professional activities.

Self-study, which is not included into a course syllabus, but aimed at extending knowledge about the subject, is up to the student's own initiative. A teacher recommends relevant resources for self-study, defines relevant methods for self-study and demonstrates students' past experiences. Tasks for self-study and its content can vary depending on individual characteristics of a student. Self-study can be arranged individually or in groups both offline and online depending on the objectives, topics and difficulty degree. Assessment of self-study is made in the framework of teaching load for seminars or tests.

In order to show the outcomes of self-study it is recommended:

- Make a plan for 3-5 presentation which will include topic, how the self-study was organized, main conclusions and suggestions and its rationale and importance.
- Supply the presentation with illustrations. It should be defined by an actual task of the teacher.

Recommendations for essay

An essay is a written self-study on a topic offered by the teacher or by the student him/herself approved by teacher. The topic for essay includes development of skills for critical thinking and written argumentation of ideas. An essay should include clear statement of a research problem; include an analysis of the problem by using concepts and analytical tools within the subject that generalize the point of view of the author.

Essay structure:

1. *Introduction and formulation of a research question.*
2. *Body of the essay* and theoretical foundation of selected problem and argumentation of a research question.
3. *Conclusion* and argumentative summary about the research question and possibilities for further use or development.

Special conditions for organization of learning process for students with special needs

The following types of comprehension of learning information (including e-learning and distance learning) can be offered to students with disabilities (by their written request) in accordance with their individual psychophysical characteristics:

- 1) *for persons with vision disorders:* a printed text in enlarged font; an electronic document; audios (transferring of learning materials into the audio); an individual advising with an assistance of a sign language interpreter; individual assignments and advising.
- 2) *for persons with hearing disorders:* a printed text; an electronic document; video materials with subtitles; an individual advising with an assistance of a sign language interpreter; individual assignments and advising.
- 3) *for persons with muscle-skeleton disorders:* a printed text; an electronic document; audios; individual assignments and advising.