

# FINANCIAL MARKETS AND INSTRUMENTS

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## Course description

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This course provides a comprehensive view on the functioning of modern financial markets: specifics of different types of securities, organization of trading, and financial intermediaries. The classes involve much interaction with students, and everyone is expected to contribute to the discussions.

We start with discussion of the specifics of financial sector and its links with the real economy. Then, we study basic financial instruments (debt and equity) and derivatives (forwards, futures, and options). We continue with the structure of primary and secondary markets. Then we discuss the organization, risks, and strategies of the largest financial intermediaries (commercial and investment banks, mutual and hedge funds, etc.), stressing the impact of asymmetric information and conflicts of interest. Finally, we study the role of regulators and the latest financial crisis. Throughout the course, we pay attention both to the specifics of the Russian marketplace and to global trends and perspectives.

The course pursues two main objectives. Firstly, students should get a holistic picture of the financial system, its structure and evolution. Secondly, students should get an impression about the main concepts and models covered by the subsequent courses at the program.

## Course requirements, grading, and attendance policies

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The course grade is based on quizzes (20%), group presentations (20%) and final exam (60%). Active class participation may contribute to the grade when it is on the margin (note that quality rather than quantity of your interventions will count).

The closed-book quizzes are conducted in the beginning of each class. They consist of 5 short questions and take 7 minutes to complete. In the first class I conduct a quiz for the training purpose, without grading. From the second class to the seventh, you will have a chance to write six quizzes that will be graded. The top four scores out of six will count to the grade. Thus, you can miss one or two classes without direct effect on the grade.

The group presentations take place at the final class. All students will be divided into groups of up to 5 people. Each group will be assigned the topic devoted to one of the preceding classes. The groups should prepare 10-minute presentations (up to 7 slides) based on the pre-assigned questions. The presentation must be uploaded to my.NES before the class. If you want to receive my preliminary feedback, you should send your files (including the most important sources of information) to me at least one day in advance. Each member of the group should participate in the presentation to receive the grade, which is the same for all students in the group.

## Course contents

Class	Topic	Reading
1	<p><b>Introduction:</b> role and structure of the financial system, links between financial sector and real economy  <u>Mini-case:</u> Micro-finance (bank Grameen)</p> <p><b>Interest rates:</b> time value of money, real and nominal rates, risk-free rate and risk premium  <u>Mini-case:</u> LIBOR-gate</p>	<p>[1] ch.1-2  [2] ch.1</p> <p>[1] ch.3, 5</p>
2	<p><b>Debt and equity:</b> corporation vs. single ownership, rights and risks of debtholders and stockholders  <b>Fixed income instruments:</b> money market instruments, specifics of government bonds and corporate bonds, yields and pricing  <u>Mini-case:</u> Junk bonds</p> <p><b>Stocks:</b> specifics of preferred stocks, depositary receipts, indices, valuation and risks  <u>Mini-case:</u> Stock market bubble</p>	<p>[1] ch.11-13  [2] ch.2, 14, 18</p>
3	<p><b>Derivatives:</b> motivation, main types (forwards, futures, and options), applications, no-arbitrage approach to pricing, risks  <u>Mini-case:</u> Financial weapon of mass destruction</p>	<p>[1] ch.24  [2] ch.20, 22  [3] ch.1, 2, 3, 5, 10-12</p>
4	<p><b>Organization of primary markets:</b> costs and benefits of IPO, reasons for underpricing, role of the underwriters  <u>Mini-case:</u> People's IPOs</p> <p><b>Organization of secondary markets:</b> motivation for trading, trading infrastructure, exchanges vs. over-the-counter markets  <u>Mini-case:</u> Algo-trading</p>	<p>[2] ch.3</p>
5	<p><b>Commercial and investment banks:</b> motivation for financial intermediation, general principles of banking, bank runs and deposit insurance, separation of the commercial and investment banking, evolution of IB sources of earnings and risks  <u>Mini-case:</u> bank run</p>	<p>[1] ch.7, 17-19, 22</p>
6	<p><b>Mutual and hedge funds:</b> organization and fees, different types of mutual funds, specifics of ETF, typical strategies of hedge funds, pension plans  <u>Mini-case:</u> robo-advisors</p>	<p>[1] ch.20  [2] ch.4, 26</p>
7	<p><b>Regulation:</b> conflicts of interests, approaches to regulation, separate vs. unified regulation  <u>Mini-case:</u> global financial crisis of 2008</p>	<p>[1] ch.8, 18</p>

## Description of course methodology

The course requires intensive preparation to the classes including reading of the textbook and other materials. Before each class, I will send you the list of the assigned materials: required readings (including the mini-case), optional readings (articles and web links), questions for self-preparation (that you should learn before the class), and topics for in-class discussions (that you should think about beforehand).

During the class I will present the key concepts providing practical examples. However, the focus of the classes will be on the interactive discussions of the mini-cases and recent hot topics. Let me stress again that classes will not include lecturing on the fundamentals; you are expected to study the basics yourself. Of course, if anything remains unclear, you can ask about it during the class. If you want to learn more about a particular problem, you are encouraged to notify me in advance, several days before the respective class.

## **Sample tasks for course evaluation**

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Sample questions from Quiz 1:

1. Name at least two features of Grameen micro-loans, which could NOT be successfully applied in Russia.
2. How does the openness of capital account contribute to the country's financial development?
3. Why are financial markets more developed in common law countries like US and UK than in countries with continental law like Germany?
4. Can nominal rate be lower than real rate? Motivate your answer.
5. Is Treasury rate higher than LIBOR (assuming same term and currency)? Why?

Sample question from Home assignment 1:

Specify main risks for the company's minority shareholders. Choose one of the main risks, which can be hedged by derivatives available at the market (OTC or exchange-traded). Choose the derivative, which fits the most. Motivate your choice and discuss the hedging strategy.

Sample question from the exam:

Specify at least three different sources of external financing for a large corporation. What is the preferred order of these sources for a company (which one comes first, second, and so on)? Which factors influence the company's choice of these instruments? Which (financial and non-financial) institutions help the company to attract financing (specify them for each source)? What is the role of financial regulator(s) in this process (describe it for each source)?

## **Course materials**

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### **Required textbooks and materials**

1. Mishkin and Eakins, Financial Markets and Institutions, global 8<sup>th</sup> edition.
2. Bodie, Kane, and Markus, Investments, 10<sup>th</sup> edition.
3. Hull, Options, Futures, and Other Derivatives, 10<sup>th</sup> edition.

### **Additional materials**

4. Горяев и Чумаченко, 2009, [Финансовая грамота](#).

[1] is a required reading containing an overview of modern financial markets and institutions. The [accompanying website](#) contains plenty of student resources, including web links, mini-cases, web exercises, and quizzes. [2] is an alternative textbook that may replace or complement [1] for most topics (except for banks). [3] is an advanced supplementary reading on derivatives.

[4] describes basic notions of personal finance including investment into bonds and stocks. Note that these books do not cover the whole material; thus, students are expected to study the additional materials made available at the course page at my.NES.

### **Academic integrity policy**

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Cheating, plagiarism, and any other violations of academic ethics at NES are not tolerated.