Financial University under the Government of Russian Federation
(full name of education institution/branch)
**Department of corporate finance and corporate governance**
(name of department/teaching department)

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Behavioral Finance
(subject name)

# SYLLABUS

***Level of Study:*** *Bachelor's Degree*

***Field of Study:*** *Economics*

***Study Program:*** 38.03.01

# Syllabus

**1. Name of a subject __Behavioral Finance__**

**2. Mapping of learning outcomes (list of competences), with the relevant indicators described and subject learning outcomes indicated**

Table 1

| Competence code | Competence | Competence development indicators | Learning outcomes (skills, and knowledge) and indicators that show competence development |
|---|---|---|---|
| PKN - 3 | The ability to collect, process and statistical data analysis, apply mathematical methods to solve standard professional financial and economic problems, interpret the results | Conducts the collection, processing and statistical analysis of data to solve financial and economic problems. | To know the methods of collecting, processing and statistical analysis of data to solve financial and economic problems<br>To be able to collect, process and statistical data analysis to solve financial and economic problems. |

**3. Place of the subject in the curriculum**

6 semester

**4. Workload in credits and academic hours, with class work (lectures and seminars) and self-study indicated**.

Table 2

| **Type of work** | **Total (in credits and hours)** | **Semester (Module)1 (in hours)** | **Semester (Module)2 (in hours)** |
|---|---|---|---|
| **Overall workload** | ***3/108*** | ***3/108*** | ***3/108*** |
| ***Class work*** | ***34*** | ***34*** | ***34*** |
| *Lectures* | ***16*** | ***16*** | ***16*** |
| *Seminars, practicals* | ***18*** | ***18*** | ***18*** |
| ***Self study*** | ***74*** | ***74*** | ***74*** |
| Formative assessment | ***credit*** | credit | credit |
| Summative assessment | test | test | test |

**5. Subject content (with the thematic components indicated).**

Theme 1. The theory of market efficiency and rationality in decision making.

American economist R. Schiller and Soviet economist A. Kitov on the principles of behavioral finance. Contradictions of the logical preconditions of traditional finance: rationality of participants in financial relations, financial institutions, markets, unbiased decisions and maximization of people's own benefit. Contradictions of the practical application of theories of traditional finance in real markets. The hypothesis of market efficiency (GER), asset valuation models characterizing the risk-income relationship (CAPM), modern portfolio theory (MPT - Modern Portfolio Theory). Contradictions of the assumptions of traditional finance: decision-making rationality, general risk aversion, ideal markets without “friction force” in the form of transaction costs and taxes, easy access to information for all market participants. The three forms of Fama's effective markets are the latest response from classical theory to criticism of the followers of Behavioral Finance. Evidence of market inefficiencies: Violations of the hypothesis of market efficiency in a weak and semi-strong form. The inability of arbitrators to restore the efficiency of markets.

Theme 2. Basics of behavioral finance.

Philosophical Foundations of Science Behavioral Finance. Philosophical rationale for behavioral finance. Instrumental positivism Strict logical positivism. Critique of behavioral finance. Social features of the scientific community as a brake on the development of behavioral finance.

Neurobiological foundations of behavioral finance. Features of neuroeconomic research. Experimental methods of neurobiological studies of behavioral finance. Issues developed by neurobiological research: willingness to take financial risk; the work of the function of usefulness and value, the formation of expectations, the learning process, the assessment of probability, the social influence on choice, mutual concessions, manifestations of altruism and compliance with moral standards. The mechanism of accepting financial risks by an individual: the concept of utility, the primacy of emotions, the assessment of probabilities, the determination of reference points. How society influences financial choice: the role of mutual attitudes, cooperation, trust and revenge. The structure of the brain, brain zones and their activation in assessing risk and making unpleasant and pleasant decisions. Methods and technology of neuroeconomic research. The decision-making process, based on the correlation of observed biological markers with behavioral results. Financial risk and reward and punishment systems. Genetic markers. Emotions and testosterone on the exchange. Rejection of losses and its explanation at the neurobiological level.

Theme 3. Conducting research in behavioral finance.

Financial research is a matrix with three dimensions: institute, method and theory. Research based on psychology. The benefits of case studies of behavioral finance. Limitations Quality factors for case studies of behavioral finance. The advantages of a three-dimensional model of financial research.

The psychological foundations of behavioral finance. Psychoanalysis in emotional finance. Types of state of mind affecting financial decision making. Group thinking. Working group. Group of basic assumptions. The emotional consequences of uncertainty. Fantastic object and its impact on financial decision making. Emotional finance (EF) and risk. Emotional finance and the momentum indicator. Emotional finance and the anomaly of bad news. Emotional finance and pension contributions. Price "bubbles": dot-com - mania. The 2008 financial crisis in terms of EF.

Behavioral finance in corporate finance. Corporate Governance Behavioral finance: personal characteristics and typical human behavior when making financial decisions. Self-confidence and its impact on financial decision making. Gender aspects in behavioral finance.

The dividend policy of the company in terms of behavioral finance. Theories of dividend policy in terms of behavioral theories. The influence of management characteristics on the decision on borrowed capital. The evolution of behavioral theories of capital structure.

Behavioral finance and their role in the stock market: theoretical and empirical estimates.

Theme 4. Toolkit of behavioral finance.

Key groups of behavioral finance (BF) tools: heuristics, framing, emotions, market influence. Directions for the development of the use of BF tools: investors, corporations, markets, regulation, education. Applications: investors, corporations, markets, regulation, education. Psychological concepts underlying behavioral finance: perspective theory, cognitive dissonance, framing. Justification of the need for the state to regulate the volatile sphere of contact of finance with the human psyche from the point of view of behavioral finance. Heuristics: definition, justification of heuristics, reasons for the existence of heuristics, rules for using heuristics, categories

## 6. List of teaching and methodological materials needed for the students self-study

### 6.1. List of questions for student self-study and types of out-of-class activities

The section lists types of out-of-class activities that correspond to items in the subject content description.

There is a list of questions the students should answer while working independently.

Table 3

| Itemized subject content | Questions the students should answer within the self-study process | Types of out-of-class activities |
|---|---|---|
| Theme 1. The theory of market efficiency and rationality in decision making. | What brings the views of the American economist R. Schiller and the Soviet economist A. Kitov closer to the principles of behavioral finance?<br>What are the contradictions of the logical premises of traditional finance: rationality of participants in financial relations, financial institutions, markets, unbiased decisions and maximization of people's own benefit?<br>What are the contradictions in the practical application of theories of traditional finance in real markets: the hypothesis of market efficiency (GER), asset valuation models that characterize risk-income relationships (CAPM), and modern portfolio theory (MPT - Modern Portfolio Theory).<br>What do you see as the contradictions of the assumptions of traditional finance: rationality of decision-makers, universal risk aversion, ideal markets without “friction force” in the form of transaction costs and taxes, easy access to information for all market participants.<br>The three forms of Fama's effective markets are the latest response from classical theory to criticism of the followers of Behavioral Finance. Give evidence of market inefficiencies: violations of the hypothesis of market performance in a weak and semi-strong form.<br>Explain the inability of arbitrators to restore market efficiency. | listening to presentations, discussion of issues, consideration of practical examples, case studies on the topic of the lesson, summing up |
| Theme 2. Basics of behavioral finance. | Give a philosophical foundation for the science of behavioral finance.<br>What is instrumental positivism, strict logical positivism?<br>Give examples of criticisms of behavioral finance.<br>How the social characteristics of the scientific community hinder the development of behavioral finance.<br>What are the features of neuroeconomic research.<br>What are the experimental methods for neurobiological studies of behavioral finance.<br>What issues are being developed by neurobiological research.<br>How society affects financial choice: the role of mutual authority, cooperation, trust and revenge. | listening to presentations, discussion of issues, consideration of practical examples, case studies on the topic of the lesson, summing up |
| Theme 3. Conducting research in behavioral finance. | Why is financial research called a three-dimensional matrix?<br>Give examples of research based on psychology.<br>What are the benefits of case studies of behavioral finance?<br>Give limitations, quality factors of practical research of behavioral finance.<br>What types of state of mind exist that influence | listening to presentations, discussion of issues, consideration of practical examples, case studies on the topic of the lesson, summing up |

| | | |
|---|---|---|
| | financial decision making?<br>Give examples in the emotional finances of the momentum indicator. Describe the emotional finances and the anomaly of bad news, pension contributions, price "bubbles" (dot-mania, 2008 financial crisis). | |
| Theme 4. Toolkit of behavioral finance | What are the key groups of behavioral finance (BF) tools?<br>What are heuristics, framing, emotions?<br>Describe the development directions for using BF tools.<br>Give a justification for the need for the state to regulate the volatile sphere of contact of finance with the human psyche from the point of view of behavioral finance in connection with framing.<br>What is heuristic.<br>What are the rules for using heuristics.<br>Describe the guidelines for the proper use of heuristics.<br>What are the heuristic usage errors that are especially significant for finance? | listening to presentations, discussion of issues, consideration of practical examples, case studies on the topic of the lesson, summing up |
| Theme 5. The practical application of behavioral finance in various areas of finance. | Describe the experience of successfully building behavioral valuation models.<br>Give examples of valuation of public companies and financial institutions.<br>What are the features of the "sentimental investor" models of Barberis, Shleifer, and Cherry (Barberis, Shleifer, and Vishny), the model of self-informed informed traders Daniel, Hirschleifer and Subrahmanyam, and the model of fundamental confrontation news and traders using the momentum of Hong and Stein.<br>What is the difference between preference based models?<br>Why is the Generalized Behavioral Model of Asset Valuation (GBM) a universal approach that takes into account key categories of psychologically determined factors. Describe the algorithm for applying psychological factors in GBM to identify processes for valuing assets and generating profitability.<br>Where does the Statman model apply? Describe the features of the calculation and application in the Russian practice of evaluation.<br>Examples of behavioral reporting.<br>How do behavioral factors influence investment decision making.<br>Give examples of the emotional content of the news and their correlation with the dynamics of the market. | listening to presentations, discussion of issues, consideration of practical examples, case studies on the topic of the lesson, summing up |

**6.2. List of questions/assignments/topics for students' preparation to formative assessment**

Theme 1. The theory of market efficiency and rationality in decision making.

Contradictions of the practical application of the theories of traditional finance in real markets: the hypothesis of market efficiency (GER), asset valuation models characterizing risk-income relations (CAPM), and modern portfolio theory (MPT - Modern Portfolio Theory). Contradictions of the assumptions of traditional finances: rationality of decision-makers, widespread risk aversion, ideal markets without "friction force" in the form of transaction costs and taxes, easy access to information for all market participants. Three forms of Fama's effective markets.

Theme 2. Basics of behavioral finance.

Experimental methods of neurobiological studies of behavioral finance. Issues developed by neurobiological research: willingness to take financial risk; the work of the function of usefulness and value, the formation of expectations, the learning process, the assessment of probability, the social influence on choice, mutual concessions, manifestations of altruism and compliance with moral standards. The mechanism of accepting financial risks by an individual: the concept of utility, the primacy of emotions, the assessment of probabilities, the determination of reference points. How society influences financial choice: the role of mutual attitudes, cooperation, trust and revenge. The structure of the brain, brain zones and their activation in assessing risk and making unpleasant and pleasant decisions. Methods and technology of neuroeconomic research. The decision-making process, based on the correlation of observed biological markers with behavioral results. Financial risk and reward and punishment systems. Genetic markers. Emotions on the stock exchange. Rejection of losses and its explanation at the neurobiological level.

Theme 3. Conducting research in behavioral finance.

Financial research is a matrix with three dimensions: institute, method and theory. Research based on psychology. The benefits of case studies of behavioral finance.

Limitations Quality factors for case studies of behavioral finance. The advantages of a three-dimensional model of financial research.

The psychological foundations of behavioral finance. Psychoanalysis in emotional finance. Types of psychological state affecting the adoption of financial decisions. Group Thinking Working Group A group of basic assumptions. The emotional consequences of uncertainty. Fantastic object and its impact on financial decision making. Emotional finance (EF) and risk. Emotional finance and the momentum indicator. Emotional finance and the anomaly of bad news. Emotional finance and pension contributions. Price “bubbles”: dot-com mania. The 2008 financial crisis in terms of EF.

Theme 4. Toolkit of behavioral finance

Applications: investors, corporations, markets, regulation, education. Psychological concepts underlying behavioral finance: perspective theory, cognitive dissonance, framing. Justification of the need for the state to regulate the volatile sphere of contact of finance with the human psyche from the point of view of behavioral finance. Heuristic rejection "hindsight bias]." Heuristic expert judgment. Heuristics of memory (memory). The default selection heuristic. Heuristic "loss aversion" (risk averse). Heuristic "theory of regret." Affect heuristic. Heuristic limited attention. Heuristic categorization. Exploitation of heuristics: freekonomics is the science of exploitation of heuristics. Guidance on the proper use of heuristics.

Theme 5. The practical application of behavioral finance in various areas of finance.

The basics of successfully building behavioral valuation models. Valuation of public companies and financial institutions. Early attempts to create behavioral models based on the beliefs and preferences of market participants: limited use.

The model of the “sentimental investor” by Barberis, Shleifer and Vishny, the model of self-informed informed traders Daniel, Hirschleifer and Subrahmanyam, and the model of the confrontation between fundamental investors and investors using the momentum of Hong and Stein.

Models based on preferences. Risk shift models - Barberis, Huang, and Santos. The model of erroneous perception of probability - Dacey and Zielonka (Dacey and Zielonka).

Generalized Behavioral Asset Valuation Model (GBM). A universal approach, key categories of psychologically determined factors of GBM. The algorithm for the application of psychological factors in GBM to determine the processes of assessing the value of assets and generating profitability. Three behavioral variables of GBM: errors in processing information signals, errors in representativeness, and unstable preferences.

The place, role and complementarity of neoclassical and behavioral models. Valuation of closed companies and financial institutions.

Statman Model: Behavioral Discount Rate (BAPM). Features of the calculation and application in the Russian practice of evaluation.

Behavioral reporting. Behavioral planning.

A systematic manifestation of excessive confidence. Emotional state and attitude to risk. The impact of success and failure on management behavior.

Integration of various types of risk in company management. The role of the risk manager. Hedging with options and futures: reflection of behavioral factors in the value of derivative financial instruments.

The influence of behavioral factors on investment decisions.

The emotional content of news and their correlation with the dynamics of the market. Social sentiment and market behavior: empirical evidence of changes in social trends.

**7. Mandatory and optional reading list**

Mandatory reading list:

1. Богатырев С.Ю. Поведенческие финансы: учеб. пособие / С.Ю. Богатырев; Финуниверситет. — Москва: Прометей, 2018. — То же [Электронный ресурс]. — Режим доступа: http://biblioclub.ru/index.php?page=book_red&id=494852&sr=1.Богатырев С.Ю.

2. Инструменты и технологии поведенческих финансов / С.Ю. Богатырев. — Москва: Прометей, 2019.

Optional reading list:

3.Поведенческие финансы. Инвесторы, компании, рынки. Вып. 1: Фундаментальные понятия поведенческих финансов и основные взаимосвязи между ними. Оценка капитальных активов и поведенческие финансы: пер. с англ. / под ред. К. Бейкера, Дж. Нофсингера; науч. ред. перевода В.М. Рутгайзер, М.А. Федотова, А.С. Иванов. — Москва: Маросейка, 2011.

4. Богатырев С.Ю. Корпоративные финансы: стоимостная оценка : учеб. пособие / . - М. : РИОР : ИНФРА-М, 2018. — 164 с. — (Высшее

образование). - DOI: https://doi.org/10.12737/1749-4

5. Богатырев С.Ю. Информационные системы в корпоративных финансах [Электронный ресурс]: учебное пособие / С. Ю. Богатырев. - Электрон.дан. - М. : РИОР : Инфра-М, 2017

6. Богатырев С.Ю. Управление стоимостью компании на основе современных технологий [Электронный ресурс]: учебное пособие / С. Ю. Богатырев. - М. : Финансовый университет: Образовательный портал, 2019

7. Эрнст Д. Финансовое моделирование в фирме: Учебник / Диетмар Эрнст, Йоахим Хэкер, М.А. Федотова, С.Ю. Богатырев, Матросов С.В.; перевод А.А. Новоселовой и А.М. Ахметовой. – М.: Прометей, 2020. – 160 с.

**8. List of IT resources, incl. the list of software, information and reference systems (as appropriate).**

Personal web-site Behavioral Finance

http://presskit.narod.ru/index/zadanie_po_discipline_povedencheskie_finansy/0-20

**8. 1. Software:**

1. Windows, Microsoft Office software;

2. ESET Endpoint Security antivirus software; etc.

**8.2. Databases and information and reference systems**

1. Bloomberg;

2. Thomson Reuter.