

Subject card

Subject name and code	Behavioral Finance, PG_00202430						
Field of study	Economics, International Economic Relations, International Business, Logistics and Mobility						
Date of commencement of studies	October 2025		Academic year of realisation of subject		2026/2027		
Education level	Master's studies		Subject group		Obligatory subject group in the field of study Optional subject group		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		English		
Semester of study	3		ECTS credits		5.0		
Learning profile	academic		Assessment form		credit		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		mgr Paweł Smoliński				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	0.0	0.0	0.0	0.0	30
	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	30		0.0		95.0	125
Subject objectives	The aim of the course is to introduce students to behavioral finance, a discipline that combines finance with cognitive psychology and experimental economics. Students will learn classical asset pricing models and their limitations, the most important market anomalies, the psychological and emotional foundations of investment decisions, and contemporary research streams including cognitive finance, social finance, and narrative economics. Upon completion of the course, students will be able to critically analyze investor behavior and interpret market phenomena that fall outside the framework of the efficient market hypothesis.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[MSGGL3_W09] has knowledge about a human being as an individual making economic decisions, acting within social structures and organisational units (in particular enterprises) or conducting individual economic activity	Student has knowledge of the individual as an investor making economic decisions under uncertainty, knows the limits of rationality in investment decisions (overconfidence, loss aversion, extrapolation), and understands the influence of social structures and peer interactions on behavior in financial markets.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report
	[EKONL3_W04] knows the types of economic and social ties and the regularities governing them	Student knows the principles of financial market functioning and classical asset pricing models (CAPM, Fama-French three-factor model, five-factor model, momentum factor) describing the relationships between risk and return in capital markets.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report
	[MSGMU2_W03] knows and understands types of economic ties and the regularities governing them; understands the conditions and principles of the functioning of the market and the market mechanism in the national, international and global aspect	Student has in-depth knowledge of classical and multi-factor asset pricing models and their behavioral limitations, with particular emphasis on applications in global financial markets and implications for international investors' decisions.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report
	[EKONMU2_W04] has an in-depth knowledge of different types of economic and social ties and regularities governing them; has an in-depth knowledge of economic and financial ties between enterprises	Student has in-depth knowledge of classical asset pricing models (CAPM, Fama-French, momentum) and their behavioral limitations, including market anomalies and mechanisms of social information transmission linking market participants.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report
	[MSGMU2_U04] can use the acquired knowledge to formulate and solve complex problems related to the operation of economic entities on the international market, with particular emphasis on the European Union market	Student can apply advanced behavioral finance models (prospect theory, diagnostic expectations, salience theory) to formulate and solve complex problems related to the functioning of economic entities in international and EU markets.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written
	[EKONMU2_W05] has an extended knowledge of the human being as a manufacturer and consumer and extended knowledge of the human being as a creator of culture and social structures	Student has extended knowledge of the behavior of individual (retail) investors as consumers of financial services and the role of emotions and mood in human economic decisions.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report
	[EKONMU2_U07] can independently propose solutions to complex economic or social problems, select methods of analysis and conduct conclusive procedures in this respect	Student can independently apply behavioral finance models to analyze complex problems in financial markets (e.g., mechanisms of speculative bubble formation, cross-sectional anomalies, underreaction to news) and select appropriate analytical methods and procedures.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written
	[MSGGL3_U03] can identify and analyse relations between economic entities and public institutions in the national and international environment; using the acquired theoretical knowledge can critically evaluate these relations and indicate directions for their further development or changes	Student can identify and analyze the mechanisms of social transmission of investment information between entities in financial markets (peer effects, viral narratives, social networks) and critically evaluate their impact on market efficiency and investment decisions.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written
	[LMMU2_U02] can use acquired knowledge to describe and analyse the causes and course of logistics and mobility processes and systems, and can formulate his/her own opinions and critically select data and analysis methods based on the achievements of economic and social sciences	Student can use behavioral finance knowledge to describe and analyze the causes of market anomalies, and formulate independent opinions on market efficiency, critically selecting data and analytical methods based on the literature of behavioral economics and cognitive psychology.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written

	Course outcome	Subject outcome	Method of verification
	[LMMU2_U04] can forecast and model complex economic and social processes, as well as logistics and mobility processes and systems using quantitative and qualitative methods and tools developed by economic sciences (including statistics and econometrics)	Student can apply quantitative and qualitative behavioral finance models (extrapolation models, prospect theory, cognitive noise models) to forecast and model investor behavior and asset price dynamics, including the use of statistical methods.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written
	[MSG3_U01] can correctly interpret and explain economic and social phenomena, analyse their causes, course and connections between these phenomena using the acquired knowledge of economics, finance and international economic relations	Student can correctly interpret phenomena in financial markets, including cross-sectional anomalies (momentum, value premium, post-earnings announcement drift), calendar effects, and news reactions, using knowledge from economics, classical finance, and behavioral finance.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written
	[EKONMU2_U02] can use acquired knowledge to describe and analyse the causes and course of economic and social processes and phenomena, and can formulate his/her own opinions and critically select data and analysis methods based on the achievements of economic and social sciences	Student can search for, critically evaluate, and use academic sources in behavioral finance (including top empirical articles) to describe and analyze market processes, and critically select data and methods based on the latest behavioral economics literature.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written
	[EKONL3_U02] is able to use the knowledge of theory and data to analyse concrete economic and social processes and phenomena and to analyse these phenomena using methods developed in economics, finance and management sciences	Student can use theoretical knowledge from finance (classical and behavioral) and obtain market data (e.g., from K. French Data Library, Shiller's data) to analyze specific processes in financial markets, including calculating and interpreting investment performance measures.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written
	[LMMU2_W05] has a fundamental knowledge of the human being as a manufacturer and consumer and extended knowledge of the human being as a creator of culture and social structures	Student has fundamental knowledge of the individual as an investor and consumer of financial services, knows the psychological and emotional mechanisms influencing investment decisions and the role of social and cultural context in shaping economic behavior.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report
	[IBL3_U01] can interpret and explain economic phenomena, analyse their causes, course and connections within these phenomena using the acquired knowledge of international business, economics and finance and complementary disciplines	Student can calculate and interpret basic investment performance measures (Sharpe ratio) and explain phenomena in financial markets using knowledge from classical and behavioral finance.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written
	[IBL3_U03] is able to perform tasks in uncertain conditions, solve complex issues of international business by appropriate selection information sources, conducting critical analysis and synthesis on the collected information and data	Student can analyze decision-making problems under uncertainty and risk, critically identify anomalies and inefficiencies in international financial markets, selecting academic sources and conducting analysis and synthesis of empirical data.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written
	[IBMU2_W06] has in-depth knowledge of the world economy, economic ties and the regularities governing them, principles of global market functioning and international economic and financial relations as well as the process of their evolution; understands the causes, regularities and consequences of occurring changes;	Student has in-depth knowledge of the functioning of global financial markets from a behavioral perspective, including classical pricing models, cross-sectional anomalies, the efficient market hypothesis and its limitations, and the evolution of financial markets in the presence of imperfectly rational investors.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report

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[IBL3_W08] knows and understands principles of economic decision making by individuals acting within social and business structures	Student knows and understands prospect theory and the most important cognitive biases (overconfidence, anchoring, mental accounting, framing) that affect the economic decisions of individuals operating in business structures and capital markets.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report
[MSGMU2_U02] can observe, evaluate and critically analyse the causes and course of processes and phenomena taking place in the open economy; can formulate his/her own opinions on the subject, interpret statistical data and economic indicators necessary in this respect, and also forecast economic processes and phenomena using advanced methods and tools applied in economic sciences	Student can perform critical analysis of processes in financial markets using basic investment metrics (Sharpe, Treynor, Jensen's alpha) and market sentiment indicators, and formulate independent opinions on phenomena such as market anomalies, speculative bubbles, and market inefficiencies.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written
[LMMU2_W03] has a knowledge of relations between economic entities and organisations functioning in the national, international and intercultural spheres; understands importance logistics and mobility for their operation	Student has knowledge of social interaction mechanisms among investors and the role of narratives and communication in international and intercultural information flows in financial markets, with particular emphasis on social finance and narrative economics.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report
[IBMU2_U01] can creatively interpret, explain and analyse complex economic phenomena and the relations occurring between them, using the acquired knowledge in international business and international economic and financial relations	Student can creatively apply behavioral finance models (prospect theory, cognitive noise models, narrative economics) to interpret complex phenomena in international financial markets, including speculative bubbles and financial crises.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written
[IBL3_W06] knows and understands the relations and regularities between international business stakeholders i.a. business entities, public institutions, organisations; functioning in the national, international and intercultural realms	Student knows contemporary trends in behavioral finance describing mechanisms of social transmission of investment beliefs, the impact of market narratives, and social connections among stakeholders in international financial markets.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report
[MSGL3_W07] knows and understands types of economic ties and regularities governing them, including the principles of functioning of the market and the market mechanism, both in the national and international aspect	Student knows and understands basic return and risk measures (Sharpe ratio, beta, alpha) and classical and multi-factor asset pricing models (CAPM, Fama-French, momentum) used to analyze market mechanisms in domestic and international markets.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report
[EKONL3_W05] has a knowledge of man as a subject who creates social structures and the principles of their functioning and of his action in these structures, knows well the motives of human economic decision-making	Student knows the psychological and emotional determinants of investment decisions made by individuals in financial markets, including the influence of cognitive heuristics, behavioral biases, and emotions (mood, sentiment) on human economic behavior.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report
[EKONL3_U07] is able to participate in analyses and evaluations of alternative solutions to economic and social problems and to choose the methods and instruments to resolve them rationally	Student can critically analyze investor behavior and identify market anomalies (disposition effect, weather effect, momentum, earnings announcement reactions) and select appropriate analytical tools from behavioral finance to evaluate alternative explanations of observed phenomena.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written

	Course outcome	Subject outcome	Method of verification
	[IBMU2_U03] can accurately select and use sources of information on international business, evaluate, critically analyse and creatively interpret them, and can present them in an innovative way	Student can search for, critically evaluate, and present academic sources in behavioral finance (including empirical articles from top journals in English), as well as interpret data from international financial markets from a behavioral perspective and present findings in an innovative way.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written
	[IBMU2_W08] knows in depth selected areas of the functioning of a modern enterprise in the international environment; understands the conditions, principles and consequences of decisions taken in modern enterprise's structures dealing on the international market	Student has in-depth knowledge of the psychological and cognitive determinants of investment decisions made by managers and institutional investors (including overconfidence, mental accounting, loss aversion) and their consequences for the valuation of enterprises in international markets.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report
	[MSGMU2_W14] has an in-depth knowledge of the human being as an individual making economic decisions, acting in social structures and organisational units, in particular in enterprises operating on the international market	Student has in-depth knowledge of prospect theory and cognitive heuristics (representativeness, availability, anchoring) that shape individual investment decisions in international markets, including mechanisms leading to market inefficiencies.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report

Subject contents	1. Introduction to behavioral finance and foundations of investment analysis. • Goals of behavioral finance and its place in financial economics; evolution from the traditional paradigm (1950s to 1990s) to the behavioral approach; three dimensions of psychological realism (beliefs, preferences, cognitive limits) • Efficient Market Hypothesis (EMH) in weak, semi-strong, and strong forms • Basic investment metrics: returns, risk measures (variance, beta), Sharpe ratio, Treynor ratio, Jensen's alpha 2. Classical asset pricing models and risk factors. • Sharpe-Lintner CAPM; concept of market risk premium and empirical critique (Fama, French 1992) • Fama-French three-factor model (market, SMB, HML); five-factor model (adding profitability and investment); Carhart four-factor model with the momentum factor • Beta anomaly (Frazzini, Pedersen 2014); momentum as a cross-sectional anomaly (Jegadeesh, Titman 1993); value premium • Case study: decomposition of Warren Buffett's and Berkshire Hathaway's returns (Frazzini, Kabiller, Pedersen "Buffett's Alpha", 2018) 3. Empirical facts from a behavioral perspective. • Three puzzles of the aggregate market: the volatility puzzle (Shiller 1981), the predictability puzzle (Campbell, Shiller 1988), the equity premium puzzle (Mehra, Prescott 1985) • The cross-section of returns: characteristics that predict returns (past return, P/E, issuance, idiosyncratic volatility, profitability); momentum, long-term reversal, post-earnings announcement drift • Speculative bubbles: empirical definition and six features of bubble episodes (price, skeptical opinions, volume, extrapolation, riding the bubble, fundamental news); historical and contemporary examples (tulip mania, South Sea Bubble, 1999-2000 tech bubble, 2007 housing crisis, 2017-2021 cryptocurrencies, GameStop 2021) • Individual investor behavior: non-participation, buying high/selling low, under-diversification, home bias, preference for active management, disposition effect 4. Limits to arbitrage. • The classical arbitrage critique and the 1990s research response; concepts of fundamental value, mispricing, noise traders, arbitrageurs • Fundamental risk and noise trader risk (De Long, Shleifer, Summers, Waldmann 1990; Shleifer, Vishny 1997); the role of leverage in deepening mispricing; the collapse of LTCM in 1998 as a case study • Costs of arbitrage: transaction costs, short-selling constraints, detection and implementation costs; empirical examples of mispricing (twin shares, equity carve-outs, index inclusions, Palm/3Com) 5. Extrapolative beliefs. • Return extrapolation: the idea that investors form expectations as a weighted average of past returns with more weight on recent ones; first wave of research (1990s) and second wave (post-2010) • Evidence from investor expectation surveys (Greenwood, Shleifer 2014); extrapolation as an explanation of aggregate market volatility, predictability, and bubbles • Cash-flow growth extrapolation; experience effects (Malmendier, Nagel 2011); sources of extrapolation: representativeness, law of small numbers, bounded rationality 6. Overconfidence and other belief biases. • Two forms of overconfidence: overprecision (overly narrow confidence intervals) and overplacement (overly rosy views of own abilities); relation to high trading volume • Disagreement models: three sources (different priors, different information, departures from rationality); overconfidence and dismissiveness as mechanisms generating volume (Odean 1998; Eyster, Rabin, Vayanos 2019) • Empirical evidence: Grinblatt, Keloharju (2009) using Finnish data; Barber, Odean (2001) on gender differences in trading; disagreement models with short-sale constraints (Miller 1977; Harrison, Kreps 1978; Scheinkman, Xiong 2003) as an explanation of overpricing and bubbles 7. Preference models I: prospect theory. • Four elements of prospect theory (Kahneman, Tversky 1979, 1992): reference dependence, loss aversion, diminishing sensitivity, probability weighting • Narrow framing and mental accounting (Thaler 1999) • Finance applications: equity premium puzzle through myopic loss aversion (Benartzi, Thaler 1995; Barberis, Huang, Santos 2001); skewness preference and pricing of lottery-like assets (Barberis, Huang 2008); the disposition effect (Shefrin, Statman 1985; Barberis, Xiong 2009) 8. Preference models II: ambiguity aversion and salience theory. • The Ellsberg paradox (1961); ambiguity aversion as distinct from risk aversion • Three main frameworks for modeling ambiguity: multiple priors (Gilboa, Schmeidler 1989), smooth ambiguity (Klibanoff et al. 2005), robust control (Hansen, Sargent 2007) • Applications: non-participation, under-diversification, equity premium, crisis amplification; salience theory (Bordalo, Gennaioli, Shleifer 2012, 2022) as an alternative framework; mere exposure effect and preference for the familiar 9. Bounded rationality. • Limited attention and underreaction to news: post-earnings announcement drift, customer links (Cohen, Frazzini 2008), demographic news (DellaVigna, Pollet 2007), Friday earnings (DellaVigna, Pollet 2009); attention-induced buying (Barber, Odean 2008) • The 1/n heuristic in portfolio decisions (Benartzi, Thaler 2001); nominal illusion (Modigliani, Cohn 1979) • Category-based thinking and return comovement (Barberis, Shleifer 2003); style investing, index inclusions as evidence 10. Cognitive finance: cognitive noise and uncertainty. • Cognitive uncertainty (Enke, Graeber 2023) as a contemporary framework: measurement and consequences for decisions under risk • Cognitive noise as a microfoundation of asset pricing (Charles, Frydman, Kilic 2024): weak transmission of beliefs into investment actions, experimental evidence • Economics of attention as an overarching framework (Loewenstein, Wojtowicz 2025); connections to inattention models and diagnostic expectations (Bordalo, Gennaioli, Shleifer 2018)
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	11. Social finance and narrative economics. - Social transmission of investment beliefs: Hirshleifer (2020); Han, Hirshleifer, Walden model of the spread of investment strategies; peer-effect evidence in mortgage and stock market decisions (Hong, Kubik, Stein 2004, 2005); Social Connectedness Index (Kuchler, Stroebel 2021) - Narrative economics (Shiller 2017, 2019): viral narratives as drivers of bubbles and crises; historical and contemporary episodes (1990s tech bubble, 2008 financial crisis, cryptocurrencies, GameStop, AMC, meme stocks) - The role of social media, online forums (r/wallstreetbets), and retail brokerage platforms (Robinhood) in shaping contemporary investment behavior		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	[SW2][SU2] presentation/project (final project in the form of a debate)	51.0%	40.0%
	[SW4][SU4] test/exam (written final examination covering lecture material and required readings)	51.0%	60.0%
Recommended reading	Basic literature	Barberis, N. (2018). Psychology-based models of asset prices and trading volume. In: D. Bernheim, S. DellaVigna, D. Laibson (Eds.), <i>Handbook of Behavioral Economics</i> , vol. 1, Ch. 2, pp. 79175. North-Holland. Hirshleifer, D. (2015). Behavioral finance. <i>Annual Review of Financial Economics</i> , 7, 133159.	
	Supplementary literature	Frazzini, A., Kabiller, D., Pedersen, L. H. (2018). Buffett's alpha. <i>Financial Analysts Journal</i> , 74(4), 3555. Shleifer, A., Vishny, R. W. (1997). The limits of arbitrage. <i>Journal of Finance</i> , 52(1), 3555. Kahneman, D., Tversky, A. (1979). Prospect theory: An analysis of decision under risk. <i>Econometrica</i> , 47(2), 263292. Barber, B. M., Odean, T. (2013). The behavior of individual investors. <i>Handbook of the Economics of Finance</i> , vol. 2B, Ch. 22, pp. 15331570. Elsevier. Enke, B., Graeber, T. (2023). Cognitive uncertainty. <i>Quarterly Journal of Economics</i> , 138(4), 20212067. Shiller, R. J. (2017). Narrative economics. <i>American Economic Review</i> , 107(4), 9671004	
	eResources addresses		
Example issues/ example questions/ tasks being completed	Sample debate topics: 1. Cryptocurrencies as a speculative bubble or a new asset class. Is the price behavior of Bitcoin, Ethereum, and other major cryptocurrencies in 20172024 best explained as a speculative bubble driven by extrapolation and viral narratives, or do these assets have rational valuation foundations. 2. The GameStop episode of January 2021. Was the surge in prices of GameStop, AMC, and other meme stocks a manifestation of limits to arbitrage and noise trader risk, or was it a legitimate form of retail investor coordination that should prompt a rethinking of market mechanisms. 3. Nvidia and the AI bubble. Are the current valuations of Nvidia, Microsoft, and other AI-related stocks a rational reflection of expected earnings growth, or a bubble driven by extrapolation and viral narratives (tested against Greenwood's six bubble characteristics). 4. Tesla's valuation. Does Tesla's stock price reflect rational expectations about EV market dominance, or is it driven by overconfidence in Elon Musk's vision, retail enthusiasm, and meme-stock-like dynamics. 5. Firms exploiting mispricing. Do firms and managers exploit overvaluation of their own stock to time the market through equity issuance (SEOs) and buybacks, and does the level of capital investment predict future stock returns (classic question from Hirshleifer's FBE 505). 6. Private valuations of unicorns and pre-IPO firms. Are private market valuations (SpaceX, OpenAI, Stripe) rational reflections of growth potential, or do they suffer from overconfidence, narrative-driven extrapolation, and amplified limits to arbitrage in private markets. 7. Passive investing vs active management. Should retail investors abandon active management entirely in favor of index funds, given the evidence on poor retail investor performance (Barber, Odean 2013), management fees, and the analysis of Buffett's alpha (Frazzini, Kabiller, Pedersen 2018). The good, the bad, and the ugly of the passive approach.		
Work placement	Not applicable		

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