Behavioral Finance

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21.9.2017

EVROPSKÁ UNIE
Evropské strukturální a investiční fondy
Operační program Výzkum, vývoj a vzdělávání

MINISTERSTVO ŠKOLSTVÍ, MLÁDEŽE A TĚLOVÝCHOVY

Behavioral Finance – aim of the course

- To reunite the fields of psychology and finance
- To shed light on major concepts of behavioral approach such as cognitive biases, individual emotions and other psychological effects
- To give a new perspective to market inefficiencies, apply psychologically realistic assumptions and analyze effects of these assumptions

Learning outcomes and competences

- ✓ Ability to explain **why market participants make irrational systematic errors** contrary to assumption of rational market participants
- ✓ Knowledge of **how other participants take advantage** of such errors and market inefficiencies
- ✓ Mastering how **to test market behaviour** in an **experimental laboratory**

Course outline

Date	Course contents:
21.9.	1. Introduction to Behavioral Finance
28.9.	2. Public holiday
5.10.	3. Limits to arbitrage and psychology of decision making
12.10.	4. Aggregate stock market and market anomalies I - Equity premium puzzle and volatility puzzle
19.10.	5. Market anomalies II and Investor behavior
26.10.	**6. Trading and trading strategies in practice (guest speaker)**
2.11.	7. Market bubbles + Laboratory experiment I
9.11.	8. Laboratory experiment II
16.11.	9. Agent-Based Computational Finance
23.11.	10. Behavioral corporate finance
30.11.	**11. Valuation theory, economic policy (guest speaker)**
7.12.	12. Presentations
14.12.	13. Final exam

Course requirements

- **Laboratory experiment attendance** - 20 points

(+ up to 5 bonus points based on the results)

- **Paper presentation** – 25 points
- **Final exam** - 55 points

(at least 50 % of final exam to pass the course)

Total – 100 points

Course literature

Major:

- ARBERIS, Nicholas C., and Richard H. THALER, 2003. A survey of behavioral finance. In: George M. CONSTANTINIDES, Milton HARRIS, and René M. STULZ, eds. Handbook of the Economics of Finance: Volume 1B, Financial Markets and Asset Pricing. Elsevier North Holland, Chapter 18, pp. 1053–1128.

Other:

- De BONDT, Werner F. M., and Richard THALER, 1985. Does the stock market overreact? The Journal of Finance, 40(3), 793–805.
- FAMA, Eugene F., 1998. Market efficiency, long-term returns, and behavioral finance. Journal of Financial Economics, 49(3), 283–306.
- FESTINGER, Leon, Henry W. RIECKEN, and Stanley SCHACHTER, 1956. When Prophecy Fails. Minneapolis: University of Minnesota Press.
- KAHNEMAN, Daniel, Paul SLOVIC, and Amos TVERSKY, eds., 1982. Judgment Under Uncertainty: Heuristics and Biases. Cambridge University Press.
- KAHNEMAN, Daniel, and Amos TVERSKY, 1979. Prospect theory: An analysis of decision under risk. Econometrica, 47(2), 263–292.
- KAHNEMAN, Daniel, and Amos TVERSKY, 2000. Choices, Values, and Frames. Cambridge University Press.
- TVERSKY, Amos, and Daniel KAHNEMAN, 1974. Judgment under uncertainty: Heuristics and biases. Science, 185(4157), 1124–1131.
- TVERSKY, Amos, and Daniel KAHNEMAN, 1981. The framing of decisions and the psychology of choice. Science, 211(4481), 453–458.
- TVERSKY, Amos, and Daniel KAHNEMAN, 1992. Advances in prospect theory: Cumulative representation of uncertainty. Journal of Risk and Uncertainty, 5(4), 297–323.

The need to understand inefficiencies and biases

WHY THE TRADITIONAL APPROACH IS NOT EXPLAINING IT ALL

TRADITIONAL FRAMEWORK

- **Efficient Market Hypothesis**
  Assets‘ prices fully reflect all available information, trading at their fundamental value – no “free lunch”

- **Rational Expectations Hypothesis**:
  When receiving new information, agents update their beliefs correctly (Bayes’ law) and make choices that are normatively acceptable, consistent with Savage’s notion of Subjective Expected Utility (SEU).

= agents’ expectation can be wrong, but they are correct on average over time, there are no biases

In reality there are evidences of irrationality, inconsistency and errors in judgement that traditional framework can‘t explain

CRITICISM TO TRADITIONAL FRAMEWORK

- The assumption that economic agents have **unlimited processing capabilities** turned out as **unrealistic**

    => idea of **bounded rationality** (Herbert Simon)

    - cognitive resources of individuals such as time, memory or attention, plus the information available, are in reality limited and create source of judgement and decision biases

    - describes more realistic approach to cover human problem solving competences

- To adopt strategies **to correct mispricing** can be in reality **costly**

= > Two key building stones of Behavioral Finance:

I. **Psychology**
II. **Limits to arbitrage**

Behavioral Finance

- More „realistic“ approach to financial markets and its participants
- Considers influence of psychology on the behavior of financial practitioners and the subsequent effect on markets.
- Helps explain revealed **irrationalities and biases**
- **Gained importance especially after financial crisis** (dot-com bubble to mortgage crisis)

EXAMPLES OF IRRATIONAL DECISION MAKING

- Ultimatum game

(Imagine I give you 100 CZK. One in pairs offers his/her colleague any amount, willing to give away. If your colleague accepts, he/she can keep the offered amount and you can keep the rest. If your colleague refuses the offer, none of you gets anything)

How did you do?

- Ultimatum game when carried out between members of a shared social group:
  - people offer fair splits (50:50) and
  - offers of less than 30% are often rejected.

IS IT RATIONAL?

OTHER EXAMPLES

- **Amazon gift certificate**

  Would you prefer $100 certificate for free or 150$ certificate for 30$?

- **Economist subscribtion – the importance of irrelevant alternatives**

	3 options (A,B,C)	2 options(A,C)
A. Web subscription ($59.00)	16 %	68 %
B. Print subscription ($125.00)	0 %	-
C. Web and print subscription ($125.00)	84 %	32 %

- **Linda**

  Linda is 31 years old, single, outspoken, and very bright. She majored in philosophy. As a student, she was deeply concerned with issues of discrimination and social justice, and also participated in anti-nuclear demonstrations.

- A) Linda is a bank teller
- B) Linda is a bank teller and is active in the feminist movement

Coming next:

- Psychology of Decision making

(specific types of cognitive biases)

- Limits to Arbitrage discussion

Thank you for your attention!