Advanced Academic Programs
Behavioral Economics and Finance
W 6:00 - 8:45 PM

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1 Preliminaries

1.1 Course Objective

This course is designed to introduce students to key topics in behavioral economics and finance. Class time will be divided between lecture and discussion of assigned readings. We will begin with behavioral economics exploring theory, experimental tests, and empirical results that call into question the rational paradigm. From here, we will focus on applications in financial economics, touching on investor behavior, asset pricing, and corporate finance.

1.2 Assessment

Students will be assessed on the basis of class participation (15%, paper presentation), a series of short in-class quizzes, (15%), three problem sets (30%) and a final exam (40%).

1.2.1 Quizzes

There will be a short quiz administered at the beginning of each class that will consist of between one and three questions and should take no more than 15 minutes to complete. Questions will be related to material from the prior lecture and typically involve closing models, completing short proofs, or writing short responses. Students who complete required readings and attend lecture should have no problem with quizzes. I ask that you attempt all questions, but only your five highest scores will count to your final grade.

1.2.2 Problem Sets

There will be three problem sets during the course. Questions will be similar to quiz questions, but slightly more difficult. You will have two weeks to complete problem sets. The planned schedule for problem sets will be:

- Problem Set 1, distributed 2/8, due 2/22;
- Problem Set 2, distributed 3/1, due 3/15;
- Problem Set 3, distributed 3/29, due 4/12.

1.2.3 Final Exam (4/19)

Our final meeting will include a final exam. The final exam will consist of short essays, multiple-choice questions, numerical problems and short proofs. It will be cumulative. Materials from the required readings and from lecture will be fair game.

1.2.4 Paper Presentation

Each student is expected to present a paper from the syllabus (15% of your grade). The presentation would consist of discussing the content of paper and implications of theories from the lectures (I will provide more information about paper presentation in class).

2 University Policies

2.1 General

This course adheres to all University policies described in the academic catalog.

2.1.1 Students with Disabilities

Johns Hopkins University is committed to providing reasonable and appropriate accommodations to students with disabilities. Students with documented disabilities should contact the coordinator listed on the Disability Accommodations page. Further information and a link to the Student Request for Accomodation form can also be found on the Disability Accommodations page [http://advanced.jhu.edu/current-students/current-students-resources/disability-accommodations/].

2.2 Ethics and Plagiarism

JHU Ethics Statement: The strength of the university depends on academic and personal integrity. In this course, you must be honest and truthful. Ethical violations include cheating on exams, plagiarism, reuse of assignments, improper use of the Internet and electronic devices, unauthorized collaboration, alteration of graded assignments, forgery and falsification, lying, facilitating academic dishonesty, and unfair competition. Report any violations you witness to the instructor. Read and adhere to JHU's Notice on Plagiarism [http://advanced.jhu.edu/current-students/policies/notice-on-plagiarism-2/].

2.3 Dropping the Course

You are responsible for understanding the university's policies and procedures regarding withdrawing from courses found in the current catalog. You should be aware of the current deadlines according to the Academic Calendar [http://advanced.jhu.edu/current-students/academic-calendar/].

2.4 Getting Help

You have a variety of methods to get help on Blackboard. Please consult the help listed in the "Blackboard Help" link for important information. If you encounter technical difficulty in completing or submitting any online assessment, please immediately contact the designated help desk listed on the AAP online support page. Also, contact your instructor at the email address listed atop this syllabus.

3 Calendar

While problem set dates and the final exam are generally fixed, our schedule is subject to change. Based on class interest we may reallocate time to some topics and away from others. I will update the syllabus accordingly. There is no textbook for the course. Lecture will draw heavily from published papers and working papers. While you need not read every paper listed below, I have selected certain required readings. These are marked with an asterisk. Please attempt to read these before coming to class. Papers with (*p) indicate papers that you are going to present in class.

3.0 Preliminary reading

- (*) Rabin, Matthew and Richard Thaler, "Anomalies - Risk Aversion," The Journal of Economic Perspectives, Vol. 15, No. 1, 2001.
- (*) Shiller, Robert J. "From Efficient Markets Theory to Behavioral Finance," Journal of Economic Perspective, Vol. 17, No.1, Winter 2003.
- (*) Hirshleifer D, 2015. "Behavioral Finance," Annual Review of Financial Economics. 7.

3.1 Basics of Behavioral Economics

- The Rational Paradigm and Rational Decision making
  - Rubinstein, A, 2006. "Dilemmas of an economist theorist," Econometrica, Vol. 74, No. 4, July 2006.
  - Rational Preferences
  - Utility
  - von Neumann Morgenstern Expected Utility Theory
- Shortcomings of the Rational Paradigm
  - (*) Tversky, Amos and Daniel Kahneman, "Rational Choice and the Framing of Decisions," The Journal of Business, Vol. 59, No. 4, Oct. 1986.
  - Thaler, Richard, "Some Empirical Evidence on Dynamic Inconsistency," Economics Letters, Vol. 8, 1981.
  - Markowitz, Harry, "The Utility of Wealth," The Journal of Political Economy, Vol. 60, No. 2, 1952.
  - Ellsberg, Daniel, "Risk, Ambiguity, and the Savage Axioms," The Quarterly Journal of Economics, Vol. 75, No. 4, 1961.
- Heuristics and Bias
  - Rabin, Matthew, "Inference by Believers in the Law of Small Numbers," The Quarterly Journal of Economics, Vol. 117 ,No. 3, 2002.
  - (*) Tversky, Amos and Daniel Kahneman, "Judgement under Uncertainty: Heuristics and Biases," Science, Vol. 185, No. 4157, 1974.
  - (*) Gilovich, Thomas, Robert Vallone and Amos Tversky, "The Hot Hand in Basketball, on the Misperception of Random Sequences," Cognitive Psychology, Vol. 17, 1985.
  - (*) Camerer, Colin, "Does the Basketball Market Believe in the 'Hot Hand?'," The American Economic Review, Vol. 79, No. 5, 1989. [It would help to read Gilovich, et. al. (1985) before reading this.]
  - Tversky, Amos and Daniel Kahneman, "The Framing of Decisions and the Psychology of Choice," Science, Vol. 211, No. 30, 1981.
  - Rabin, Matthew and Joel Schrag, "First Impressions Matter: A Model of Confirmatory Bias," The Quarterly Journal of Economics, Vol. 114, No. 1, 1999.

- Decisions Under Uncertainty
  - (*) Kahneman, Daniel and Amos Tversky, "Prospect Theory: An Analysis of Decision under Risk," Econometrica, Vol. 47, No. 2, 1979.
  - (*) Tversky, Amos and Daniel Kahneman, "Rational Choice and the Framing of Decisions," The Journal of Business, Vol. 59, No. 4, 1986.
  - Tversky, Amos, and Daniel Kahneman, "Advances in prospect theory: Cumulative representation of uncertainty," Journal of Risk and Uncertainty, Vol. 5, No. 4 1992.
  - Novemsky, Nathan and Daniel Kahneman, "The Boundaries of Loss Aversion," Journal of Marketing Research, Vol. 42, No. 2, 2005.
  - Harless, David W. and Colin Camerer, "The Predictive Utility of Generalized Expected Utility Theories," Econometrica, Vol. 62, No. 6, 1994.
  - Bordalo, Pedro, Nicola Gennaioli and Andrei Shleifer, "Salience Theory of Choice Under Risk," The Quarterly Journal of Economics, Vol. 127, No. 3, 2012.
- Time-Inconsistent Preferences
  - (*) Lowenstein, George and Drazen Prelec, "Anomalies in Intertemporal Choice: Evidence and an Interpretation," The Quarterly Journal of Economics, Vol. 107, No. 2, 1992.
  - O'Donoghue, Ted and Matthew Rabin, "Doing It Now or Later," The American Economic Review, Vol. 89, No. 1, 1999.
  - Lowenstein, George and Drazen Prelec, "Preferences for Sequences of Outcomes," Psychological Review, Vol. 100, No. 1, 1993.
  - Gruber, Jonathan and Botond Kőszegi, "Tax incidence when individuals are time-inconsistent: the case of cigarette excise taxes," Journal of Public Economics, Vol. 88, No. 3, 2004.
  - (*) DellaVigna, Stefano and Ulrike Malmendier, "Contract design and self-control: Theory and evidence," The Quarterly Journal of Economics, Vol. 119, No. 2, 2004.
- Consumers
  - (*) Iyengar, Sheena and Mark Lepper, "When Choice is Demotivating: Can One Desire Too Much of a Good Thing?" Journal of Personality and Social Psychology, Vol. 79, No. 6, 2000.
  - (*) Kuksov, Dimitri and Miguel Villas-Boas, "When More Alternatives Lead to Less Choice," Marketing Science, Vol. 29, No. 3, 2010.
  - Kamenica, Emir, "Contextual Inference in Markets: On the Information Content of Product Lines," American Economic Review, Vol. 98, No. 5, 2008.
  - Gabaix, Xavier and David Laibson, "Competition and Consumer Confusion," Working Paper, 2004.

3.2 Behavioral Finance

3.2.1 Individual Financial Decisions

- Choice
  - (*p) Iyengar, Sheena S., and Emir Kamenica, "Choice proliferation, simplicity seeking, and asset allocation," Journal of Public Economics, Vol. 94, No. 7, 2010.
  - (*p) Benartzi, Shlomo and Richard Thaler, "Naïve Diversification Strategies in Defined Contribution Saving Plans," American Economic Review, Vol. 91, No. 1, 2001.

- (*p) Huberman, Gul, and Wei Jiang, "Offering versus choice in 401(k) plans: equity exposure and the number of funds," Journal of Finance, Vol. 61, No. 2, 2006. [I recommend you read Benartzi and Thaler, 2001, first.]
- Carlin, Bruce Ian, Simon Gervais, and Gustavo Manso, "When Does Libertarian Paternalism Work?" Working Paper No. w15139, National Bureau of Economic Research, 2009.

- Home Bias
  - (*) French, Kenneth R., and James M. Poterba, "Investor diversification and international equity markets," No. w3609. National Bureau of Economic Research, 1991.
  - Grinblatt, Mark, and Matti Keloharju, "Distance, language, and culture bias: The role of investor sophistication." Journal of Finance, Vol. 56, No. 3, 2001.
  - (*p) Coval, Joshua D., and Tobias J. Moskowitz. "Home bias at home: Local equity preference in domestic portfolios," The Journal of Finance. Vol. 54, No. 6, 1999.
- Disposition Effect
  - (*p) Shefrin, Hersh, and Meir Statman, "The disposition to sell winners too early and ride losers too long: Theory and evidence," Journal of Finance, Vol. 40, No. 3, 1985.
  - Odean, Terrance,"Are investors reluctant to realize their losses?" Journal of Finance, Vol 53, No. 5, 1998.
- Social Interaction
  - (*p) Hong, Harrison, Jeffrey D. Kubik, and Jeremy C. Stein, "Social interaction and stock–market participation," The Journal of Finance, Vol. 59, No. 1, 2004.
  - Hong, Harrison, Jeffrey D. Kubik, and Jeremy C. Stein, "Thy Neighbor's Portfolio: Word–of–Mouth Effects in the Holdings and Trades of Money Managers," Journal of Finance, Vol. 60, No. 6, 2005.
- Savings
  - Benartzi, Shlomo and Richard Thaler, "Heuristics and Biases in Retirement Savings Behavior" The Journal of Economic Perspectives, Vol. 21, No. 3, 2007.
  - (*p) Benartzi, Shlomo and Richard Thaler, "Save More Tomorrow: Using Behavioral Economics to Increase Employee Saving" Journal of Political Economy, Vol. 112, No. S1, 2004.
  - Laibson, David. "Golden eggs and hyperbolic discounting," The Quarterly Journal of Economics, Vol. 112, No. 2, 1997.
  - Laibson, David I., Andrea Repetto, Jeremy Tobacman, Robert E. Hall, William G. Gale, and George A. Akerlof, "Self-control and saving for retirement," Brookings Papers on Economic Activity No. 1 1998.
  - (*) Levin, Laurence, "Are assets fungible?: Testing the behavioral theory of life-cycle savings," Journal of Economic Behavior & Organization, Vol. 36, No. 1, 1998).

3.2.2 Asset Pricing

- Market Efficiency
  - (*) Fama, Eugene, Lawrence Fisher, Michael C. Jensen, and Richard R. Roll, "The adjustment of stock price to new information," International Economic Review, Vol. 10, No. 1, 1969.
  - Fama, Eugene, "Efficient Capital Markets: A Review of Theory and Empirical Work," Journal of Finance, Vol. 25, No. 2, 1970.

- Fama, Eugene, “Market Efficiency, long-term returns, and behavioral finance,” Journal of Financial Economics, Vol. 49, No. 3, 1998.
- Shiller, Robert J., “From efficient markets theory to behavioral finance.” Journal of Economic Perspectives, Vol. 17, No. 1, 2003.

- Puzzles
  - (*p) Shiller, Robert J., “Do stock prices move too much to be justified by subsequent changes in dividends?” American Economic Review, Vol. 71, No. 3, 1981.
  - Benartzi, Shlomo, and Richard H. Thaler,“Myopic loss aversion and the equity premium puzzle.” The Quarterly Journal of Economics Vol. 110, No. 1 1995.
  - Rabin, Matthew, “Risk Aversion and Expected Utility Theory: A Calibration Theorem,” Econometrica, Vol. 68, No. 5, 2000.
- Predictability
  - De Bondt, Werner F.M., and Thaler, Richard, “Does the Stock Market Overreact?” Journal of Finance, Vol. 40, No. 3, 1985.
  - (*) Bernard, Victor, and Jacob Thomas,“Post-Earnings-Announcement Drift: Delayed Price Response or Risk Premium?” Journal of Accounting Research, Vol. 27, 1989.
  - Cohen, Lauren, and Andrea Frazzini, “Economic links and predictable returns,” The Journal of Finance, Vol. 63, No. 4, 2008.
  - Baker, Malcolm, and Jeffrey Wurgler,“Investor Sentiment and the Cross–Section of Stock Returns,” The Journal of Finance, Vol. 61, No. 4, 2006.
  - Barberis, Nicholas, Andrei Shleifer, and Robert Vishny, “A model of investor sentiment,” Journal of Financial Economics, Vol. 49, No. 3, 1998.
  - (*p) Barberis, Nicholas, Abhiroop Mukherjee, and Baolian Wang, “Prospect theory and stock returns: an empirical test,” Review of Financial Studies, Vol. 29, No. 11, 2016.
- Limits to Arbitrage
  - (*) Shleifer, Andrei, and Lawrence H. Summers, “The noise trader approach to finance,” The Journal of Economic Perspectives, Vol. 4, No. 2, 1990.
  - DeLong, J. Bradford, Andrei Shleifer, Lawrence H. Summers, and Robert J. Waldmann, “Positive feedback investment strategies and destabilizing rational speculation,” The Journal of Finance, Vol. 45, No. 2, 1990.

3.2.3 Trade

- (*) Easley, David and Maureen O’Hara, “Ambiguity and Nonparticipation: The Role of Regulation,” Review of Financial Studies, Vol. 22, No. 5, 2009.
- Easley, David and Maureen O’Hara, “Microstructure and Ambiguity,” The Journal of Finance, Vol. 65, No. 5, 2010.
- (*p) Guiso, Luigi, Paola Sapienza and Luigi Zingales, “Trusting the Stock Market,” The Journal of Finance, Vol. 63, No. 6, 2008.
- Gervais, Simon, and Terrance Odean, “Learning to be overconfident.” Review of Financial Studies, Vol. 14, No. 1, 2001.

3.2.4 Managerial Decisionmaking

- Irrational Investors
  - (*p) Shefrin, Hersh M., and Meir Statman, "Explaining investor preference for cash dividends," Journal of Financial Economics, Vol. 13, No. 2, 1984.
  - Baker, Malcolm, and Jeffrey Wurgler, "A catering theory of dividends," The Journal of Finance, Vol. 59, No. 3, 2004.
  - (*) Stein, Jeremy C. "Rational Capital Budgeting in an Irrational Wor—d," The Journal of Business, Vol. 69, No. 4 1996.
  - Sloan, Richard G. "Do stock prices fully reflect information in accruals and cash flows about future earnings?" Accounting Review, Vol. 71, No. 3, 1996.
  - Bolton, Patrick, Jose Scheinkman, and Wei Xiong,"Executive compensation and short-termist behaviour in speculative markets." The Review of Economic Studies, Vol. 73, No. 3, 2006.
- Irrational Managers
  - (*) Kahneman, Daniel and Dan Lovallo, "Timid Choices and Bold Forecasts: A Cognitive Perspective on Risk Taking," Management Science, Vol. 39, No. 1, .
  - (*p) Malmendier, Ulrike, and Geoffrey Tate, "CEO overconfidence and corporate investment," Journal of Finance, Vol. , No. , 2005.
  - Malmendier, Ulrike, and Geoffrey Tate, "Who makes acquisitions? CEO overconfidence and the market's reaction." Journal of Financial Economics, Vol. 89, No. 1, 2008.
  - Goel, Anand Mohan, and Anjan Thakor, "Rationality, overconfidence and leadership." University of Michigan Business School Faculty Working Paper No. 00-022, 2000. [Available as an SSRN download]
  - Hackbarth, Dirk, "Managerial traits and capital structure decisions." Journal of Financial and Quantitative Analysis, Vol. 43, No. 4 2008.