Behavioral Finance Syllabus

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Term: Spring 2022

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Over the past several decades, the field of finance has developed a successful paradigm based on the notions that investors and managers were generally rational and the prices of securities were generally "efficient." However, recent theoretical and empirical research has shown this paradigm to be insufficient to describe various features of actual financial markets and firm behavior. In this course, we will use insights from behavioral economics and psychology as well as other social sciences and more realistic economic settings to guide and develop alternative theories of financial market behavior and firm decision-making, while relying on the analytical and quantitative methods common to finance. We will examine how the insights of behavioral finance complement the traditional paradigm and shed light on investors' trading patterns, the often-anomalous behavior of asset prices, and distortions in firm outcomes. The course will culminate in a Term project, in which students will work on a solution of a behavioral bias or pursue a profitable investment opportunity.

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Office Hours:
Professor Niessner: TBD
Zhongtian Chen: TBD

Reading Materials

There is, unfortunately, no single textbook that comprehensively covers all or the majority of topics discussed in this course. As a result, there is no required textbook for this class.

The textbooks and articles listed below provide in-depth coverage of certain topics and may be a useful source for the Term projects. Again, these are optional readings; all material needed to be successful in the course will be covered in class.

Useful textbooks:
- *Behavioral Finance: Insights into Irrational Minds and Markets*, by Montier
- *Behavioral Corporate Finance*, by Shefrin

Academic overview articles (sufficiently easy to read!):
Psychology-based Models of Asset Prices and Trading Volume, by N. Barberis, in Bernheim, D., DellaVigna, S., Laibson, D. (Eds.), Handbook of Behavioral Economics, North Holland, Amsterdam, October 2018. (link)
Behavioral Corporate Finance: The Life Cycle of a CEO Career, by M. Guenzel and U. Malmendier, in Oxford Research Encyclopedia of Economics and Finance, September 2020. (link)
Behavioral Corporate Finance, by U. Malmendier, in Bernheim, D., DellaVigna, S., Laibson,D. (Eds.), Handbook of Behavioral Economics, North Holland, Amsterdam, October 2018. (link)

Alternative textbooks that can be useful:
Behavioral Finance: Understanding the Social, Cognitive, and Economic Debates, by Burton and Shah
Beyond Greed and Fear: Understanding Behavioral Finance and the Psychology of Investing, by Shefrin

Big picture overviews by the leaders of the field, each with their own focus:
Adaptive Markets: Financial Evolution at the Speed of Thought by Andrew Lo
Animal Spirits by Akerlof and Shiller
Thinking, Fast and Slow by Daniel Kahneman.
Irrational exuberance by Robert Shiller

Engaging historical account of how some of these ideas came about, and their influence to date:
The Undoing Project by Michael Lewis

Detailed coverage of market anomalies and/or trading strategies based on them:
Expected Returns: An Investor's Guide to Harvesting Market Rewards, by Antti Ilmanen
Quantitative Value: a Practitioner's Guide to Automating Intelligent Investing and Eliminating Behavioral Errors, by Wesley Gray
The Missing Risk Premium: Why Low Volatility Investing Works, by Erik Falkenstein

Narratives and specific episodes

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When Genius Failed by Roger Lowenstein. Account of LTCM failure.
Big Bets Gone Bad by Phillipe Jorion. Description of Orange County fiasco. *Capital Ideas* by Peter Bernstein. Short history of academic finance (now dated).
The Big Short: Inside the Doomsday Machine, by Michael Lewis. The subprime blowup.

Announcements, problem sets, solutions, and other material will be posted on the course **Canvas** website: https://canvas.upenn.edu/courses/XXXXXXXX

Requirements

1. There are two exams given in class.
2. A Term project will be due during the Final Exam period with group presentations during the last several weeks of class.
3. Problem sets and cases will be assigned on a regular basis.

All requirements are discussed in more detail below.

Attendance and class participation

1. Because the textbooks only provide cursory coverage of most topics (and none at all for others) they are not self-sufficient and is meant as a complement to, and not a substitute, for the lectures. Class attendance is therefore vital.
2. Students are expected to have read all assigned materials in preparation for class.
3. Class participation is essential for the success of the course. Your questions not only help me better judge how the class is absorbing the material, they also help generate discussion. To this same end, I will also cold-call.
4. I may not be able to answer all questions to your satisfaction in class, especially if the answer involves material beyond that lecture's content. I am always happy to discuss such questions during my office hours.
5. To make it easier for me to get to know you, please sit in the same seat at each class session. Please bring a name tent to class (if you've forgotten it, please fold a piece of paper horizontally and write your first name in large block letters). If you prefer to take notes and consult course materials during lecture using a tablet, iPad, etc., you are free to do so, as long as long as the device remains in a flat position. Needless to say, I expect everyone to refrain from unrelated web-surfing during lecture as it is distracting to other students.

Homework Assignments

Problem sets and cases. All submissions will be online and will be due at noon ET, unless specified otherwise. Late answers will not be accepted. For problem sets and cases, you may work with other students in the class. As in the case of the Term

project, group size is 4 students or less, and groups must be comprised of students from the same section. Each group only needs to submit one solution for a given problem set or case. Each group member will receive the same grade. All submissions will be through Canvas. Solutions to problem sets will be made available after the submission deadline. The main purpose of the problem sets is to increase your understanding of the material. Cases will be discussed in class and your preparation is essential for these discussions. Unless specified otherwise on Canvas, assignments will be graded by giving a "check-plus" (3 points), "check" (2 points), "check-minus" (1 point), or "no credit" (0 points).

Examinations

There will be two in-class examinations during the semester. The (tentative) dates are listed on the course schedule. They will be closed-book. For the first exam, you may bring an 8 ½ x 11 piece of paper of notes. You may write on both sides. For the second exam, you may bring two such pieces of paper. The second exam concentrates on material taught since the first exam, but material presented earlier may also appear on this exam. You may bring a calculator to the exam, but not a computer (please do not plan on using your phone as a calculator).

Following university rules, exams may be postponed because of "illness, a death in the family, or some other unusual event." If such a circumstance arises, students must petition the MBA Program Office.

Regrade Requests

Any request for regrading must be submitted to me by email within two weeks from the date the exam or assignment was returned. In that case, we will regrade the entire exam or assignment, which may result in an increase or decrease in your grade.

Term Project

The term project is meant as a venue for the students to apply the concepts and methods developed in class in a practical context of their interest. The goal of the project is to develop an implementable idea that has potential to generate value in that context. Specifically, student groups will take one of the following perspectives (of their own choosing):

- a portfolio management team looking for a new trading strategy;
- a consulting firm advising corporations on issues of financial management;
- an entrepreneurial start-up developing a retail financial product (further alternatives can be thought of – e.g., social entrepreneurship is a viable venue in some cases where profit opportunities are not available but correcting a bias would have great social value).

Specific topic/idea choice must be approved by me in advance. In each case the main deliverable is in a form of a ``pitch'' to potential clients: institutional investors in the case of portfolio managers, corporate clients, or venture capitalists. This must contain the following elements:

1. Description of a behavioral anomaly to be exploited (or corrected)
   This must include specific behavioral biases and an explanation of how these biases lead to the observed behavior/anomaly, including why market forces alone may not act to eliminate them.
2. Description of the proposed strategy for taking advantage of this anomaly (e.g. in the case of asset mispricing) or for correcting the bias, either profitably or with benefit to society.
3. Evidence supporting the idea behind the strategy (why should it succeed?)
4. Description of risks and challenges (why might it fail?)

The pitch will be delivered both in the form of an in-class group presentation and a formal write-up to be submitted by the due date. I will provide interim feedback on your progress along the way. The Term project grade will be based on the submitted write-up and take into account your incorporation of the provided feedback. There will also be two Term related surveys throughout the semester (Term project check-in and project choice surveys). Not submitting the Term surveys by the due date may negatively affect individual Term project grades.

Groups cannot exceed a maximum of four students, and given the emphasis on the Term project in this class, I strongly recommend a minimum of three students per group.

I will provide detailed instructions regarding the Term project, together with all important deadlines and a list of project ideas, in a separate document on Canvas.

Grades

Each exam counts for 20% of the final grade. The Term project counts for 50% of the final grade. Assignments (problem sets, cases, and Canvas quizzes) and class participation count for 10% of the final grade.

In addition, a student whose final grade is just below the margin between two letter grades may have their grade adjusted upward based on their work in assignments and class participation.

Piazza

Students often benefit form questions/answers by other students. To make this process more interactive, I have added Piazza to Canvas. You don't have to do anything – you are automatically enrolled. Instead of email, I ask that you submit questions about the course material or logistics over Piazza. Piazza is a forum, visible to everyone in both sections, where you can both ask and answer questions about the course. You have the option to ask questions anonymously as well.

Providing good answers to your classmates' questions can earn you extra credit.

More sensitive questions that you don't want shared with others are of course welcome over email.

Academic Integrity

No member of the class may engage in or tolerate academic fraud, such as cheating, plagiarism or lying. I believe strongly in giving certain liberties to students, and in return I expect honest and honorable conduct, including compliance with the University of Pennsylvania's Code of Academic Integrity. You may discuss problem sets and exams with your classmates (after completing them), but you may not use materials obtained from students who took this course in previous years. You must follow all the exams instructions very carefully and only use the explicitly permitted resources. If at any time you have a question concerning the Code of Academic Integrity and course work, please email me.

Sharing **any** material from this course – including, but not limited to, slides, exam questions, and exam solutions – with **anyone** not in your section will be considered a violation of the University's Code of Academic Integrity. This includes posting such material to any other website. Any such violation will result in a failing grade.

Tentative Course Schedule
<mark>Dates and topics are subject to change</mark>

Date	Class	Topic	Assignments*
19-Jan	1	Introduction	
Asset Pricing			
24-Jan	2	Efficient Market Hypothesis	
26-Jan	3	Stock Market Puzzles and Anomalies	
31-Jan	4	Nonstandard Beliefs (I)	PS 1 due (G)
2-Feb	5	Nonstandard Beliefs (II)	
7-Feb	6	Nonstandard Preferences	Case 1 due (G)
9-Feb	7	Bounded Rationality	
14-Feb	8	Limits to Arbitrage and Degrees of Freedom Critique	
16-Feb		Exam 1	
21-Feb	9	ESG Investing	Term Project Check-In due (I)
Corporate Finance			
24-Feb	10	Market Timing(I)	
28-Feb	11	Market Timing (II)	
2-Mar		*No Class*	
7-Mar		*No Class*	
8-Mar		*No Class*	
14-Mar	12	Behavioral Managers: Why or Why Not?	Case 2 due (G)
16-Mar	13	Managerial Biases and Firm Investment (I)	Term Project Choice due (I)
21-Mar	14	Managerial Biases and Firm Investment (II)	
23-Mar	15	Managerial Biases and M&A (I)	PS 2 due (G)
28-Mar	16	Managerial Biases and M&A (II)	
30-Mar	17	Managerial Biases and Financing Decision & Biases in Corporate Governance	
4-Apr		Exam 2	
6-Apr	18	Term Project Presentations	
11-Apr	19	Term Project Presentations	
13-Apr	20	Term Project Presentations	
18-Apr	21	Term Project Presentations	
20-Apr	22	Term Project Presentations	
3-May		Term Project Write-Up due**	

* All assignments are due at noon ET
Assignments marked with (G) can be answered in groups of 4 students or less. Assignments marked with (I) are to be completed individually.