Behavioral Finance: Arbitrage and Psychology in Financial Markets

Term: Spring 2013
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Course page: Key course documents are maintained on the Blackboard system (http://sternclasses.nyu.edu/)

Class meetings:
FINC-UB.0029 01 MW 11:00am-12:15pm Tisch-200
FINC-GB.3329 20 MW 3:00-4:20pm KMEC 3-60
FINC-GB.3329 30 M 6:00-9:00pm KMEC 3-60

Final exam: For first two sections above, TBD by registrar; for Langone section, exam will be 5/13 in class.

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 highly “efficient” and rational. In recent years, however, research has shown this paradigm to be insufficient. We will examine how the insights of behavioral finance complements the traditional paradigm and sheds light on the behavior of asset prices, corporate finance, and various financial institutions and practices.

The course is taught through lectures, case studies, and our own discussions. Participation—whether in the form of questions, answers, or relevant comments—is strongly encouraged. Grading is as follows:

- 10% Class participation
- 55% Problem sets (3) and case write-up (1) and midterm (1)
- 35% Final exam

For the problem sets and case write-up, teams of up to two (no more than two under any circumstances, please don’t ask) may hand in a joint solution. These assignments are due at the beginning of class (see schedule next page), with a 1/3 letter grade penalty for each calendar day late (i.e., max grade goes from A to A- with first day late, etc.).

This course assumes comfort with basic finance topics. The following terms should make sense to you: stock, bond, yield, capital structure, dividend, Modigliani-Miller theorem, efficient markets hypothesis, portfolio, diversification, expected return, exchange rate, beta, capital asset pricing model (CAPM), variance, covariance, regression, probability.
## Approximate class schedule (amendments will be made in class and on course page)

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<thead>
<tr>
<th>Course Code</th>
<th>Time</th>
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<th>Notes</th>
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<td>1/28, 1/30, 2/4, 2/6, 2/11</td>
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<td>2/11, 2/25</td>
<td>I. Non-behavioral finance: Misbehavioral finance?</td>
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<td>4/29, 5/1, 5/6, 5/8*</td>
<td>4/29, 5/1, 5/6, 5/8*</td>
<td>4/29*, 5/6</td>
<td>V. Supply by firms and managerial decisions: Smart and dumb CFOs</td>
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<td>5/13</td>
<td>5/13</td>
<td>5/6 (end)***</td>
<td>Review</td>
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<td>5/13</td>
<td>Final exam</td>
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* = Problem set due  
** = Case write-up due  
*** = Last problem set due 5/10, not 5/6  
**** = Case write-up due 4/11, not 4/8
Reading list

One of the liberating though frequently inconvenient features of this field is that there is not yet any full-blown textbook. The closest thing is *Inefficient markets* (Oxford UP) by Andrei Shleifer, and you should buy this book in paperback at the bookstore. In the absence of a suitable textbook, we will read straight from original academic research papers. In some cases these papers are only a few years old.

Required readings are marked with a (*) below. This reading list may seem intimidating, but fear not! The most important parts of each article will be covered in class. When sitting down to read a required reading, try to take away the key intuition and results of the paper. Don’t dwell on the details unless you have a particular interest in the topic. I will discuss all or almost all of the articles below in class, at least briefly, but I generally won’t connect their message to the specific article.

I. Non-behavioral finance

*In the beginning (i.e. the 1960s), there was the efficient markets hypothesis.*


*Early authors found strong empirical support for the efficient markets hypothesis.*


II. Some motivating evidence

*Over the past few decades, a number of curious patterns in asset returns have been discovered. Such patterns include the market reaction to news and non-news.*


*And patterns of return predictability in stocks.*


*There are also curious predictability patterns in bonds, options, forex, futures, real estate, and sports bets.*


Bodoukh, Jacob, Matthew Richardson, YuQing Shen, and Robert Whitelaw, 2002, Do Asset Prices Reflect Fundamentals?: Freshly Squeezed Evidence from the FCOJ Market, NYU working paper.


III. Demand by arbitrageurs

Market prices reflect supply and demand. Aggregate demand can be usefully broken down into the demand of rational and/or highly sophisticated investors, which we’ll call arbitrageurs, and the demand of typical human investors.


There are a range of costs and risks that deter would-be arbitrageurs.


In certain circumstances, the smart-money trade may actually reduce market efficiency.


This case reviews the limits of arbitrage.

(*) Mitchell, Mark, Todd Pulvino, and Erik Stafford, 2002, Strategic capital management, LLC series, Harvard Business School case # 5-202-028

IV. Demand by average investors

Typical human investors hold divergent opinions about individual assets, but on any given day opinions tend to move in the same direction.


Barber, Brad, Terrance Odean, and Ning Zhu, 2003, Systematic noise, UC Davis working paper.

Systematic investor sentiment ultimately derives from common cognitive limitations and systematic biases in investors’ perceptions.


These individual-level biases are consolidated and amplified by social interaction.


Armed with some understanding of arbitrageurs’ and average investors’ demands for securities, we are ready to take a more nuanced look at what goes on in “bubbles”

(*) Shleifer, Andrei, Inefficient Markets (sixth chapter, p. 169-174).


V. Supply by firms and managerial decisions

Rational managers try to ‘time’ inefficient capital markets to reduce their overall cost of capital – they supply more of the currently overpriced securities, and buy back the underpriced ones.


Dong, Ming, David Hirshleifer, Scott Richardson, and Siew Hong Teoh, 2003, Does investor misvaluation drive the takeover market?, Ohio State U. working paper.

Rational firms also try to keep their stock prices high by “catering” to investors – i.e., adopting whatever characteristics that investors currently demand.


Managers, like average investors, are also subject to psychological biases.


Malmendier, Ulrike, and Geoffrey Tate, 2003, CEO overconfidence and corporate investment, Stanford University working paper.


Malmendier, Ulrike, and Geoffrey Tate, 2003, Who makes acquisitions? CEO overconfidence and the market’s reaction, Stanford University working paper.

Survey of behavioral corporate finance