Behavioral Finance

Term: Spring 2005, Summer 2005

Prof.: Jeffrey Wurgler (jwurgler@stern.nyu.edu)

Office: Tisch 9-05

Office hours: (1) Tuesday 3:30-4pm and longer as needed
              (2) Tuesday 9-9:30pm and longer as needed
              (3) Email for special appt.

Admin. asst.: Norma Rodriuguez (cubicle outside of Tisch 9-12)

Grader: Prachi Deuskar (pdeuskar@stern.nyu.edu)

Course page: Documents are maintained on the Blackboard system (http://sternclasses.nyu.edu/)

Class times:

B40.3329.30: Tuesday, 6-9pm, Kmem 4-60
C15.0029.01: Tuesday and Thursday, 2-3:15pm, Tisch LC-12
B40.3329.01: (Summer module 1) Tuesday and Thursday, 6-9pm, location n/a yet

Final exam:

B40.3329.30: Tuesday, May 3, 6pm
C15.0029.01: Thursday, May 10, 2pm
B40.3329.01: (Summer module 1): Thursday, June 23, 6pm

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.”
In recent years, however, anecdotal evidence as well as theoretical and empirical research has shown this paradigm
to be insufficient to describe various features of actual financial markets. In this course we examine how the
insights of behavioral finance complements the traditional paradigm and sheds light on the behavior of asset prices,
corporate finance, and various Wall Street institutions and practices.

The course is taught through lectures, case studies, our own discussions, and perhaps a guest speaker if
appropriate and convenient. Grading is as follows:

5% Class participation
55% Homeworks (3) and case write-up (1)
40% Final exam

For the short homeworks and case write-up, teams of up to three (but no more) students 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 day late (i.e., max grade goes from A to A- with first day late, etc.). I am required to use the
standard Stern grading curve to determine grades in each section.

Grading for PhD students is handled separately. PhD grades are based 5% on class participation and 95%
on four “referee reports” – critical, 4-5 page, in-depth reviews of selected papers. They are due on the same four
days as problem sets and case write-ups due (see schedule next page). We’ll decide on the papers to be “refereed”
as the class progresses.
### Class schedule

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| 2/8          | 1/18, 1/20, 1/25, 1/27, 2/1 | 5/17 |
| 2/15, 2/22* (1st half) | 2/3, 2/8, 2/10, 2/15* | 5/19, 5/24* (1st half) |
| 2/22 (2nd half), 3/1, 3/8** | 2/17, 2/22, 2/24, 3/1, 3/3, 3/8, 3/10** | 5/24 (2nd half), 5/26, 5/31** |
| 4/12, 4/19, 4/26* (1st half) | 4/12, 4/14, 4/19, 4/21, 4/26* | 6/14, 6/16, 6/21* (1st half) |
| 4/26 (2nd half) | 4/28 | 6/21 (2nd half) |
| 5/3          | 5/10       | 6/23       |

* = Homework due  
** = Case write-up due

**I. Non-behavioral finance:** Introduction; Why we care: The roles of securities prices in the economy; Efficient markets hypothesis (EMH): Definitions; EMH in supply and demand framework; Theoretical arguments for flat aggregate demand curve; Equilibrium expected returns models; Key methodologies; Pro-EMH evidence

**II. Some motivating evidence:** Return predictability in the stock market; Data mining; Joint hypothesis problem; Predictability in bonds, forex, futures, real estate, options, sports betting.

**III. Demand by arbitrageurs:** Definition of arbitrageur; Long-short trades; Risk vs. Horizon; Transaction costs and short-selling costs; Fundamental risk; Noise-trader risk; Professional arbitrage; Destabilizing informed trading (positive feedback, predation); Case: Strategic Capital Management, LLC.

**IV: Demand by average investors:** Definition of average investor; Belief biases; Limited attention and categorization; Nontraditional preferences – prospect theory and loss aversion; Social interaction, bubbles, and systematic investor sentiment

**V. Supply by firms and managerial decisions:** Supply of securities and firm investment characteristics (market timing, catering) by rational firms; Associated institutions; Relative horizons and incentives; Regulating inefficient markets; Biased managers

*Review*  
*Exam*
Reading list

One of the truly liberating features of this field is the fact that there is not yet any full-blown textbook. The closest thing to a textbook is *Inefficient markets* (Oxford UP) by Andrei Shleifer, and I ask you to buy this book at the bookstore ($25 in paperback). In the absence of a suitable textbook, we will be reading straight from the original research papers. In many cases these papers are less than a few years old.

Required readings are marked with a (*) below. This reading list may seem intimidating at first glance, but fear not! The most important formal models and statistical techniques will be covered in class and reviewed in problem sets. When sitting down to read a paper on your own, try to take away the key intuition and results of the paper. Don’t dwell on details. Make a special effort at the required readings, which are generally less technical. At least skim the supplemental readings. I will discuss virtually all of the articles below in class, at least briefly.

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.*


Lo, Andrew, and A. Craig MacKinlay (1990), When are contrarian profits due to stock market overreaction?, Review of Financial Studies 3: 175-206.


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”*


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*


Revised January 17, 2005