Foundations of Behavioral Finance

A course held at the University of Freiburg

Summer term 2016

Lecturer: Dr. Sebastian Ebert

School of Economics and Management

1 Contents

This course gives an overview of fundamental concepts in behavioral finance. Behavioral finance posits that some financial phenomena may be better understood when assuming that some market participants are less than fully rational. We discuss some seminal and some selected topics from various sub-fields of behavioral finance, including the debate on the efficiency of markets, the foundations of behavioral finance in psychology (preferences and belief biases), behavioral corporate finance, individual investor behavior, and behavioral asset pricing.

We will discuss empirical, experimental, and theoretical work. Students have the written assignment to write a referee report on a recent behavioral finance paper. Students also take a 15 minutes mini-quiz at the beginning of the course that tests whether they have gone through the preparatory reading assignments.

2 Learning objectives

After the course, students should:

(1) be able to provide an overview of the field of behavioral finance and relevant subfields

(2) be able to form an educated own opinion on the debate about the efficiency of markets

(3) be able to apply important behavioral biases of beliefs and preferences in financial settings, e.g., overconfidence, loss aversion, skewness preference, reference-dependence, narrow framing, myopia, or time-inconsistency

(5) be able to understand and assess seminal and recent behavioral research papers when given sufficient preparation time.

3 Literature

This is a paper-based course. To date, no satisfactory textbook on behavioral finance has been written. We will discuss both seminal and cutting-edge papers in behavioral finance. You are required to do some reading before the course.

4 Grading

The grade for your course is based on written assignment (80%) and a short mini-quiz (20%). The mini-quiz takes place at the beginning of the lecture day. Rounding the resulting grade average is done according to the usual university rules. Both the grade of the written assignment and the mini-quiz will be announced by August 15, 2016.

5 Schedule

The course takes place on July 8, 2016, 10:00 - 17:00 in Freiburg. There will be several short breaks as well as a lunch break. The lecture room will be announced in due course.

6 Enrollment

You have to enroll for the course as you do usually at your university. There is no need to inform me personally of your participation.

7 Communication

Feel free to approach me by email with any questions you might have:

s(dot)ebert(at)tilburguniversity(dot)edu.

Should you have detailed or longer questions regarding content, for example, please leave a phone number so we can discuss the problem together over the phone.

8 Assignment 1: The mini-quiz

The mini-quiz takes 15 minutes and comprises simple questions on the papers you are asked to read as preparation for the lecture day (see below). You are not allowed to look at the papers during the mini-quiz or use any other material, except for a pen. The objective of the mini-quiz is to verify that you have actually read the papers and know what they are about. As such, the questions won't be deep or difficult, you won't have to do proofs or know about each and every footnote, but it will be impossible to answer the questions if you have not read *and understood* the papers. This assignment is **individual work,** i.e., you must not collaborate during the mini-quiz (but, of course, you may prepare for it together). Here are two examples of a typical mini-quiz question/ task:

1. *Using no more than 30 words, explain what "loss aversion" means.* ANSWER: Loss aversion refers to the idea that losses feel worse than gains of the same size feel good. [This is explained in Kahneman and Tversky (1979).]

2. *What are the two main assumptions in the "missing link" model of Epper and Fehr-Duda (2015)? Use no more than 50 words for your answer.* ANSWER: The model assumes, firstly, that individuals have rank-dependent utility preferences, i.e., they distort probabilities. Secondly, "something may go wrong", i.e., there is no such thing as something happening in the future with absolute certainty."

Note one thing: You need not only know and understand the papers you have to read, but you must also be able to associate their content with the authors' name and the paper's title. Otherwise, questions like the second one above are difficult to answer even when you've understood the model, because you don't know where in your memory you have to "look." A good practice for the mini-quiz is to prepare with fellow students, asking yourself questions like: "What's the paper of XYZ about? What are the main assumptions of XYZ [if the paper is theoretical]? What is the main result of XYZ? What kind of data use XYZ and how do their empirical tests work [if the paper is empirical]"?

9 Assignment 2: The written (take-home) assignment in form of a referee report

9.1 Background and motivation

This assignment is motivated by the following idea, which is how the "business of finance research" works in today's world. If a researcher has written up his or her new research (always as a "paper", never as a book), the ultimate objective is to publish this paper in a prestigious journal. For example, the *Journal of Finance (JF, for short)* is often regarded as the best journal in the field of finance. Such publications make the careers of researchers. With two JF publications (say, you're 36 years old and all your research is two papers in the JF of 20 pages each, even if you have written nothing else all the time) you are well qualified for a lifetime professor position at the best Dutch and German universities. And if you wanted to get into Harvard, aim for 5 to 6 such publications.

How does a researcher get his or her paper published in a top journal? Well, he or she *submits* it to the journal, i.e., asks the editor (typically a very famous, senior professor) whether he or she is willing to *accept* this paper for publication in the journal. What the editor then usually does is asking several other researchers (the "referees") for opinions on the paper. These referees remain anonymous to the author and to each other. Each referee writes some 2 - 10 pages about the paper – the *referee report* – in which he or she points out the strengths and weaknesses of the research described in the paper. Most of the time, based on their report the referees recommend that the paper will be *rejected,* i.e., recommend to the editor that the paper should not be accepted because it is not good enough. Even if the referees find the paper very good, they will recommend that, before accepting it, the editor asks for substantial improvements of the paper before accepting it (that is, the referee recommends a *revision* of the paper), so that the paper even better. Referees can ask the authors to prove additional theorems, collect additional data, and so forth. It can take several years from submission to acceptance: First the researcher submits, then the referees ask for improvements, the researcher works hard on the paper (i.e., *revises the paper*) and *resubmits* it, the referees read the improved version and then write a new report asking for even more improvements, the researcher revises the paper again. Eventually, typically after 2 - 5 *rounds,* the editor makes a final decision and says yes or no to publication. The whole process is called *peer-review,* because the referees (the researcher's peers) review and evaluate each other's work.

For this assignment, you must write a referee report on a recent paper in the field of behavioral finance that is not yet published in a journal (a so-called *working* or *discussion*

paper). That is, you must assess a cutting-edge research result in the field of behavioral finance. To make the task a bit easier, you are allowed to (and must) work in a groups.

9.2 Detailed instructions for writing the referee report

Your referee report should be in pdf format with 4 - 10 pages in length (font size 12, 1.5 line spacing, 1" margins). Obviously, a longer report will generally not result in a better grade. Your referee report should be structured as follows

(1) Short summary of (the contribution of) the paper

(2) Main comments

(3) Minor comments

(4) Assessment and recommendation to the editor: should he or she "Reject" the paper; "Accept the paper"; "Ask for a major revision"; or "Ask for a minor revision".

In the summary part of the paper, identify its contribution as you see it. That is, you should summarize what *you* think the paper does, which may not necessarily coincide with what the author claims that it does. In your main comments, you identify the major strengths and weaknesses of the paper and assess its importance. This may also lead you to make an early assessment of the paper. Major comments regard questions such as:

- Are the results important and novel? Obviously, you must read and compare with other recent papers in order to assess this, in particular, read the papers it cites and build on.

- Are the results correct? I expect you to check all proofs and/ or the appropriateness of statistical methods used.

- Is additional analysis needed to support the main claims in the paper? A very good report would provide additional examples of the model, generalizations, new ideas or suggestions for alternative assumptions and results, and even sketches of proofs or (if it is an empirical paper) regression specifications.

- Does the paper explain the results and their importance appropriately?

- Is the paper well written? Is the length appropriate? Does it focus on its main contribution or does it spend too much time on side results?

Minor comments regard specific suggestions such as:

- rewriting a particular paragraph, explaining something better, mention missing or related literature.

- pointing out mistakes (e.g. in formulas) that must be fixed, but can easily be fixed. Since you have checked all proofs in detail, this should be a by-product.

As a referee, it is *not* your job to point out typos or provide a proof-reading service. If high standards in this regard are not met, you may criticize that the author hasn't put enough effort in the submission. As mentioned above, mathematical mistakes and typos should be pointed out by a referee.

The assessment part can be short and will typically take reference to your "Main comments". You should also judge whether the paper fits to the journal and whether the contribution is strong enough for the journal. For this assignment, you may assume that the paper has been submitted to *The Journal of Finance.* Typically, there will be pro's and con's to a paper. You have to judge whether they are acceptable or whether a revision is worthwhile, or whether a revision is unexpected to lead to a publishable version of the paper. If you recommend a revision, you should summarize the most crucial points to be addressed. In that case, you should be very explicit so that the author is clear about what is expected from her/ him. If you are unfavorable of the paper and recommend rejection, this is clear enough. In that case, you may rather end with some encouraging suggestions.

You find further information on how to write a referee report here:

- Berk, Harvey, and Hirshleifer, 2015, Preparing a Referee Report: Guidelines and Perspectives, on SSRN at: `http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2547191`

- Ferson and Matsusaka, 2013, Tips on Writing a Referee's Report, Available online here: `http://bibliotecadigital.fgv.br/ojs/index.php/rbfin/article/view/8779/7840`

- Other materials on the *Review of Financial Studies* best practices website: `http://rfssfs.org/best-practices/`

9.3 Procedural details

The referee report must be done in **groups of two or three students,** i.e., this is a group assignment. However, groups must NOT collaborate with each other. Forming a group is your responsibility.

On **Saturday, July 9, between 9:00 and 10:00** I will send you an email with TWO papers. Then, you can choose the paper you would like to write the referee report on. To be clear, you must submit only ONE report (not two), before **Friday, July 22, 22:00**. There is no need to inform me in advance with who you form your group in writing the report and/ or which paper you choose. If the report you submit is delayed (even if only by a few minutes), you have failed the class. You must submit your report before **Friday, July 22, 22:00**to me by email as follows:

1. Email Subject: "BF_Freiburg2016_Mr/Ms_Last name_first name_student ID (Matrikelnummer) [and similarly for the other two group members]"[1]
2. Attached is your report in pdf format. The name of the pdf is identical to the email subject.
3. Put your own email and the emails of all group members in cc.
4. The email body contains exactly three lines and is otherwise empty, in the example:
   MrXiao Yi 8436790
   MsMaier Laura 123456
   MrHeinrich Thomas 2342325
   (Removing the "_" will allow me to easily copy paste your info into *MS Excel*.)

Please note that it is no fun searching emails, figuring out student id's, processing .doc or other formats to pdf, renaming pdf files,... so thanks for doing this diligently.

10 Mandatory reading assignments

Students must read the following papers in advance to the lecture. The questions in the mini-quiz are based on these papers. Make sure you read the final version of the paper – the one mentioned in the references – and not some earlier version that still circulates on the internet. It is your responsibility to get access to the papers. Note that, also for writing the referee report you must be able to download papers that are related to the one you must assess.

> Kahneman and Tversky (1979), Thaler (1980), Barberis and Thaler (2003), Epper and Fehr-Duda (2015), Gneezy and Potters (1997), Benartzi and Thaler (1995), Odean (1998), Shefrin and Statman (1985), Barberis and Huang (2008a), Barberis (2012), Ebert and Strack (2015)

[1] E.g., "BF_Freiburg2016_MrXiao_Yi_8436790_MsMaier_Laura_123456_MrKuhn_Thomas_2342325"

11 Recommended reading

The following popular science books are very much worth reading (but they are not covered by the mini-quiz): Thaler and Sunstein (2008), Kahneman (2011), Aronson et al. (2005). The former two are entirely non-technical, the latter is an undergraduate textbook for psychology students, and is great fun.

The reference list below contains further articles for further reading (also not covered by the mini-quiz), many of which will be discussed in the lectures.

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