

Written Exam for the M.Sc. in Economics winter 2014-15

Behavioral Economics and Finance

Master's Course

19/12/2014

(2-hour closed book exam)

Please note that the language used in your exam paper must correspond to the language of the title for which you registered during exam registration. I.e. if you registered for the English title of the course, you must write your exam paper in English. Likewise, if you registered for the Danish title of the course or if you registered for the English title which was followed by "eksamen på dansk" in brackets, you must write your exam paper in Danish.

This exam question consists of 4 pages in total

1) Prospect Theory and Myopic Loss Aversion:

1.a) What is “loss aversion” and what is “myopic loss aversion”?

- General definition: losses loom larger than comparable gains.
- For a definition of loss aversion see also: Shefrin (2008), A Behavioral Approach to Asset Pricing Theory, Elsevier. Second edition (section **24.1.6 Loss Aversion**)
- For a definition of myopic loss aversion see e.g.: Bernatzi and Thaler (1995), Myopic Loss Aversion and the Equity Premium Puzzle, Quarterly Journal of Economics, 110(1), **74-75**

1.b) Explain how prospect theory captures myopic loss aversion?

- See Bernatzi and Thaler (1995), Myopic Loss Aversion and the Equity Premium Puzzle, Quarterly Journal of Economics, 110(1), **74-75** and lecture 9 “Myopic Loss Aversion” slides **12-22**.

1.c) Explain why expected utility theory does not capture loss aversion?

- Expected utility theory is the classical tool to analyze decisions under risk
- Expected utility theory assumes that we weight the utilities of the possible states of the world according to the likelihoods with which these states of the worlds materialize. Given this we choose the (possibly degenerated) “gamble” with the highest expected utility.
- Different to prospect theory, in expected utility theory losses and gains are treated equally. In fact, we do not speak of losses and gains in expected utility theory because we do not evaluate the possible states of the world relative to a reference point but in absolute terms.
- It only makes sense to speak about loss aversion in a context in which potential losses and a gains can be defined (relative to a reference point like e.g. the buying price of a stock).
- Thus expected utility theory does not capture a tendency to be more affected by losses relative to comparable gains.

2) Ambiguity Aversion.

2.a) Please explain what ambiguity aversion is and give examples highlighting the consequences of ambiguity aversion for our behavior outside the laboratory it is usually tested in.

- Please see lecture 11 "Decisions under uncertainty" slides **4-18** and **32-35** for an answer to this question.

2.b) Trautmann et al. (2008) [Trautmann, Vieider & Wakker (2008), Causes of Ambiguity Aversion: Known Versus Unknown Preferences, Journal of Risk and Uncertainty, 36 , 225-243] describe a certain factor that might cause ambiguity aversion. In their experimental analysis they specifically test for the importance of this factor. Please explain this factor, explain their experiment and their findings.

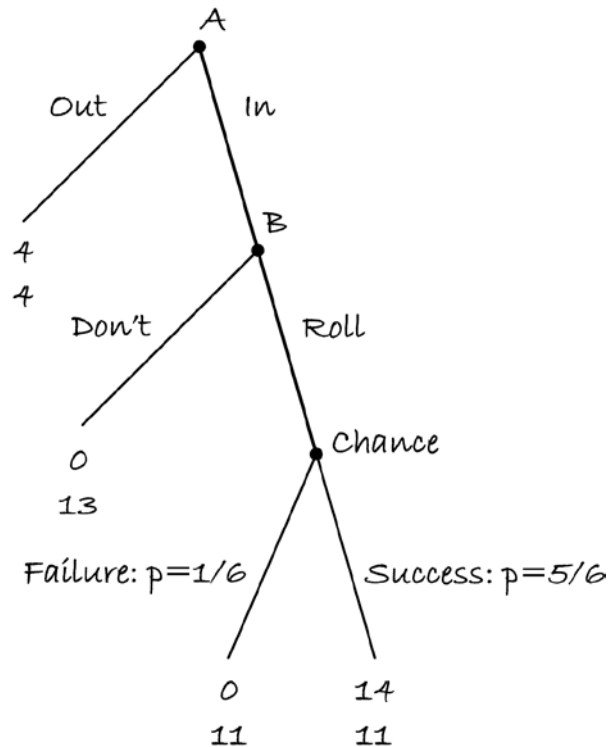
- The specific factor they test for is: fear of negative evaluation (If people choose an ambiguous option and receive a bad outcome, then they fear criticisms by others. Such criticisms are easier to counter after a risky choice, when a bad outcome is more easily explained as bad luck, than after an ambiguous choice)
- More details in: Trautmann, Vieider & Wakker (2008), Causes of Ambiguity Aversion: Known Versus Unknown Preferences, Journal of Risk and Uncertainty, 36 , **229-232**

2.c) Explain how the "Maxmin Expected Utility" by Gilboa and Schmeidler (1989) captures ambiguity aversion.

- Please see lecture 11 "Decisions under uncertainty" slides **23-26** for an answer to this question.

3) Guilt Aversion.

3.a) Charness and Dufwenberg (2006) [Charness & Dufwenberg (2006), Promises and Partnership, *Econometrica*, 74(6), 1579-1601] use a trust game to test their idea regarding guilt aversion. Please explain their idea of guilt aversion using the following trust game:



In particular (i) explain the importance of higher order beliefs in the context of their model of guilt aversion and (ii) explain the significance of the “chance move” in their game.

- Charness and Dufwenberg (2006) suggest that in this strategic context B-players might feel guilty towards player A when playing “Don’t” (they will not feel guilty from choosing “Roll”).
- The size of this feeling depends upon the belief of the B-players regarding the belief of the A-players regarding the likelihood with which the B-players choose “Roll”.
- The higher this (second order) belief, the more B-players believe to let down A-players from choosing “Don’t”
- More details in: Charness & Dufwenberg (2006), Promises and Partnership, *Econometrica*, 74(6), **1583-1585 (note however that payoffs are different here)**
- Regarding point (ii): see Charness & Dufwenberg (2006), Promises and Partnership, *Econometrica*, 74(6), **1582**

3.b) Please explain their experimental set-up (i.e. the treatments) and explain the connection between communication and the model of guilt aversion they test for.

- More details in: Charness & Dufwenberg (2006), Promises and Partnership, *Econometrica*, 74(6), **1585-1987 (section 3. DESIGN AND HYPOTHESES)**

3.c) Explain their experimental results.

- More details in: Charness & Dufwenberg (2006), Promises and Partnership, *Econometrica*, 74(6), **1987-1991** (section 4. Results)