



The disposition effect in team investment decisions: Experimental evidence [☆]



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ARTICLE INFO

Article history:

Received 10 June 2014

Accepted 22 September 2015

JEL Classification:

C92

D70

G12

Keywords:

Decision-dependent emotions

Disposition effect

Experiment

Team decision making

ABSTRACT

This paper experimentally studies the disposition effects of teams and individuals. The disposition effect describes the phenomenon that investors are reluctant to realize losses, whereas winners are sold too early. Our experiments compare the investments of two-person teams to a setting where investors trade alone. We find that subjects investing jointly exhibit more pronounced disposition effects than individuals. A closer look reveals that investor teams hardly realize losses and predominately sell winners. The data suggest that decision-dependent emotions may explain the differences. That is, teams reporting high levels of regret exhibit significantly higher disposition effects than individuals.

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1. Introduction

Investors on financial markets are commonly prone to biases and systematic errors¹ which harm their profits (Coval and Shumway, 2005). That is why, they have developed ways which attempt to overcome these biases. There is evidence that a growing number of professional traders have started to trade jointly. Bär et al. (2011) point out that from 1994 until 2003 the fraction of team-managed US equity funds increased from 12% to 57%. Similarly, more and more investors in the private sector have started to discuss the investments in stock market clubs. The “National Association of

[☆] I am grateful to Volker Benndorf, Peter Bossaerts, Sascha Füllbrunn, Tommy Gärner, Hans-Theo Normann, Stefan Palan, Charles Plott, David Rojo-Arjona, and Utz Weitzel for helpful comments. I also want to thank the journal editor Carol Alexander and three anonymous referees for helpful comments. I am indebted to conference participants of the 2011 International ESA Conference in Chicago, the Experimental Finance conference 2011 in Innsbruck, the SABE meeting in Granada 2012, the SEA meeting in New Orleans 2012, The IIOC Annual Meeting in Boston 2013, and seminar participants at the University of Duesseldorf. I would also like to thank the Duesseldorf Institute of Competition Economics (DICE), Heinrich-Heine University of Duesseldorf for financial support and Volker Benndorf for programming the z-Tree code.

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¹ See Barberis and Thaler (2003) for a survey on behavioral finance.

Investors Corporation” reports on its web page (2015)² that it encompasses 13,000 investment clubs with 120,000 members.

One of these biases is the disposition effect which can significantly harm the profit of investors (Odean, 1998). As a consequence, it is frequently studied in behavioral finance. The bias describes a behavior where investors are reluctant to realize capital losses, whereas they sell capital gains quickly (Shefrin and Statman, 1985). Explanations are provided by prospect theory (Kahneman and Tversky, 1979), mental accounting (Thaler, 1985), and emotions (Shefrin and Statman, 1985). Summers and Duxbury (2012) demonstrate that emotional responses such as regret are a necessary cause of disposition effects. The effect is confirmed for private investors (Odean, 1998; Dhar and Zhu, 2006), professional traders (Ferris et al., 1988; Garvey and Murphy, 2004), house owners (Genesove and Mayer, 2001), and students (Weber and Camerer, 1998). Recent experiments have demonstrated that nudging approaches help to debias the disposition effect of individuals. Frydman and Rangel (2014) show that disposition effects are weaker when stocks’ purchase prices are prominently displayed. Fischbacher et al. (2014) report similar findings in a setup with an automatic selling option. Although there is extensive evidence for individuals, less is known about

² see <http://www.betterinvesting.org>.

the ability of teams to attenuate disposition effects. Interestingly, the scarce results on the disposition effect in teams point in the opposite direction.

Cici (2012) empirically shows in a data set of US equity mutual funds that team managers exhibit higher disposition effects than individuals. Although these empirical findings are intriguing, it remains unclear why teams are more susceptible to the effect. In particular, it is unknown to which extent behavioral forces such as emotions and group dynamics may have caused the differences. Summers and Duxbury (2012) highlight the role of emotional responses for the emergence of disposition effects. The authors demonstrate that investors keep capital losses to avoid the experience of regret, whereas they realize capital gains to secure the feeling of rejoice. Interestingly, psychological concepts such as groupthink (Janis, 1972) and group polarization (Isenberg, 1986) find that subjects in groups are often prone to group dynamics which may affect their perceptions. Cici (2012) refers to this and suggests that his findings may be explained by groupthink.³ The groupthink theory describes a phenomenon where group members are motivated by conformity. Hence, they tend to reach their agreements without critically evaluating them (Janis, 1972). A related concept is group polarization (Isenberg, 1986), which refers to the phenomenon that group decisions may become more extreme following discussions. In that case, subjects may start to socially compare their preferences with other group members. This may result in an average shift of group preferences, when all members try to adjust their preferences above the average group tendency (Isenberg, 1986). Following Summers and Duxbury (2012) and the idea that preferences may become more extreme in teams, it is possible that teams exhibit higher disposition effects because their perception of regret is enhanced after group discussions.

Laboratory experiments offer controlled environments to study subjects' emotions and preferences which can help to better understand the emergence of decision biases. Motivated by the empirical findings of Cici (2012), we apply laboratory methods to shed more light on the more pronounced disposition effects of teams. The experiments control for the impact of emotional responses and preferences on the emergence of disposition effects. We measure the individual-level disposition effects of teams and individuals and relate them to subjects' levels of reported regret and rejoice. We also control for the impact of loss aversion. Our research is inspired by Summers and Duxbury (2012) who argue that emotional responses are a major cause of disposition effects. Following the idea that group polarization (Isenberg, 1986) may enhance emotional responses, we hypothesize that disposition effects are higher in social contexts. To test this, we conduct experiments which build on the experiment of Weber and Camerer (1998). The authors show in a setting with six artificial stocks and pre-determined prices that individuals are prone to disposition effects. Our paper extends their framework to a setup where teams of two investors can discuss their trades and decide jointly.

We find strong support for our hypothesis, i.e., the disposition effect is especially pronounced for teams. In more detail, they are reluctant to realize capital losses and predominantly sell capital gains. Thus, our findings confirm Cici's (2012) results in the lab. Subjects investing jointly report a significantly higher degree of perceived regret, indicating that the social context may have amplified teams' emotional responses. The data reveal a strong positive correlation between the perceived regret of teams and the disposition effect. Hence, we find support for the findings of Summers and Duxbury (2012) in a setting where investors decide jointly. Our results therefore suggest that the disposition effects of

teams are higher because emotional responses seem to be more pronounced in social environments.

The paper is organized as follows: Section 2 discusses the related literature. Section 3 introduces the conceptual background. Section 4 derives hypotheses and presents the experimental design. Section 5 reports the results and Section 6 discusses the findings.

2. Related literature

Our paper is related to experiments on the disposition effect and studies analyzing team decision making. Hence, we review the relevant literature of these areas. We start with experiments on the disposition effect and continue with papers dealing with team decision making.⁴

2.1. Experiments on the disposition effect

The emergence of disposition effects is well-documented in laboratory experiments. Weber and Camerer (1998) analyze an investment setting consisting of six assets with pre-determined prices. The assets differ in their characteristics, i.e., their likelihood of stock price increases. The authors find that more than 70% of their participants exhibit disposition effects. Importantly, subjects' disposition effects are stable even between different tasks. This is shown by Weber and Welfens (2007) who study a within-subjects design. The experiment analyzes disposition effects in an investment task similar to Weber and Camerer (1998) and in a framed housing task. In the housing task, the decision makers own houses of different values which change over time. In that case, the disposition effects are calculated based on subjects' willingness to realize houses which have increased/decreased in value. The paper finds a high correlation of individual-level disposition effects in both tasks. Moreover, studies analyzing gender differences find that disposition effects may differ between men and women. However, the results are inconclusive: Da Costa et al. (2008) report that the effect is more pronounced for men, whereas Rau (2014) finds the opposite.

Other papers establish that psychological forces play an important role for the emergence of disposition effects. Chui (2001) applies the setting of Weber and Camerer (1998) and investigates whether disposition effects occur as a result of a psychological concept called "locus of control." The concept argues that persons with an internal locus of control believe that their failures are directly related to their decisions, whereas persons with an external locus of control do not feel responsible for their outcomes. Chui finds that investors with an internal locus of control have more pronounced disposition effects. Other studies point out that emotions may significantly contribute to the emergence of disposition effects (e.g., Shefrin and Statman, 1985). A recent study of Summers and Duxbury (2012) builds on this idea. The authors demonstrate that decision-dependent emotions such as regret and rejoice are a necessary cause of disposition effects. The paper compares a setting where investors purchase their stocks to an environment where they are automatically endowed with stocks. The authors conclude that disposition effects only occur when investors purchased the stock themselves. Interestingly, subjects report significantly higher levels of regret when they are responsible for their trades. The importance of emotions is also confirmed by neuroeconomic approaches. Goulart et al. (2013) emphasize in a skin-conductor study that subjects with higher disposition effects sweat more.

³ Bénabou (2013) highlights in a theoretical framework that groupthink might have been an impulsive factor for the failures of companies like "Enron" and "Worldcom" or the financial crisis (see also Janis, 1972).

⁴ See Kugler et al. (2012) for a survey on group decision making.

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