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THE REGRET AVERSION AS AN INVESTOR BIAS

Sümeyra Gazel

Bozok University, Turkey

The regret aversion is one of behavioral finance's topics and is the subject of this study. Investors tend to avoid regret that will live in the future. However, this tendency is damaging to their portfolio. The purpose of this study is to examine theorically the regret aversion, its impact on investors' behavior and how to deal with biases.

Keywords: Behavioral finance, Biases, Regret aversion.

Introduction

In classical economic theory, human psychology can not be considered as a factor affecting decisions. According to the theory, people are rational and only act with economic incentives. Behavioral finance have questioned rational people called as homo economicus which is often mentioned in classical economics theory. In other words, behavioral finance argue that it is impossible to mention full rationality for all participants in market. The axioms are believed to represent the basis for rational choice under uncertainty. However there are a number of economic, financial and experimental data that are not consistent with the rational agent hypothesis. In order to explain these puzzles a number of researchers try to incorparate ideas from psychology into asset pricing models. The majority of these models assume some kind of irrationality in people's behavior. Another approach (Dodonova and Khoroshilov, 2005) assumes that people are rational but care not only ablut their consumptionlies in between the two extreme approaches of traditional consumption-based asset pricing models and models involving some irrationality in peoep' s behavior. Prospect theory proposed by Kahneman and Tversky (1979) is probably the best-know representative of this approach. Kahneman and Tversky allow the consideration of the neglected psychology. Prospect theory developed as an alternative to expected utility theory. Expected utility theory is criticized for taking into account the assumption of rationality. In contrast to the expected utility theory, aim of prospect theory is to describe human behavior realistically and make inferences. According to this approach investors can not give completely rational decisions as they are exposed to various cognitive biases. Cognitive bias is defined deviations from a standard of rationality, that ocur in certain situations. Regret aversion is one of the biases and based on regret theory.

Regret Theory

Kahneman and Tversky (1979) provided the first model of decision under risk that expilicitly and deliberately deviated from the rational expected utility of homo economicus, but that could still be sufficiently tractable to permit economic modelling and predictions. Unfortunately their model had some theoretical problems. With the exception of Kahneman and Tversky, authors did not restrict their model to descriptive applications, but also calimed a normative status of their models. All generalisations maintained one of the most basic assumptions of economic optimisations: transitivity. Transitvity underlies the axioms of revealed preference for choices between multiple options. In 1982, three papers independently proposed a theory that gave up transitivity: regret theory. That papers was Fishburn (1982), Bell (1982) and Loomes and Sugden (1982). Loomes and Sugden (1982), clearly described the emprical and normtive status of regret theory. The three papers reinforced each other, with cross-referances and mutual recognitions from the beginning (Bleichrodt and Wakker, 2014).

Regret theory rests on two fundamental assumptions: first, that many people experience the sensations called as regret and rejoicing; and second that in making decisions under uncertainty they try to anticipate and take account of those sensations. In other words, regret theory assumes that agents are rational but base their decision not only on expected payoffs but also on expected regret (Pompian, 2006). Loomes and Sugden (1982) don't claim that acting according to their theory is the only rational way to behave. Nor do they suggest that all individuals who act according to their theory must violate the conventional axioms. They shall challenge the idea that the conventional axioms constitute the only acceptable basis for rational choice under uncertainty. They shall argue that it is no less rational to act in accordance with regret theory, and that conventional expected utility theory therefore represents an unnecessarily restrictive notion of rationality.

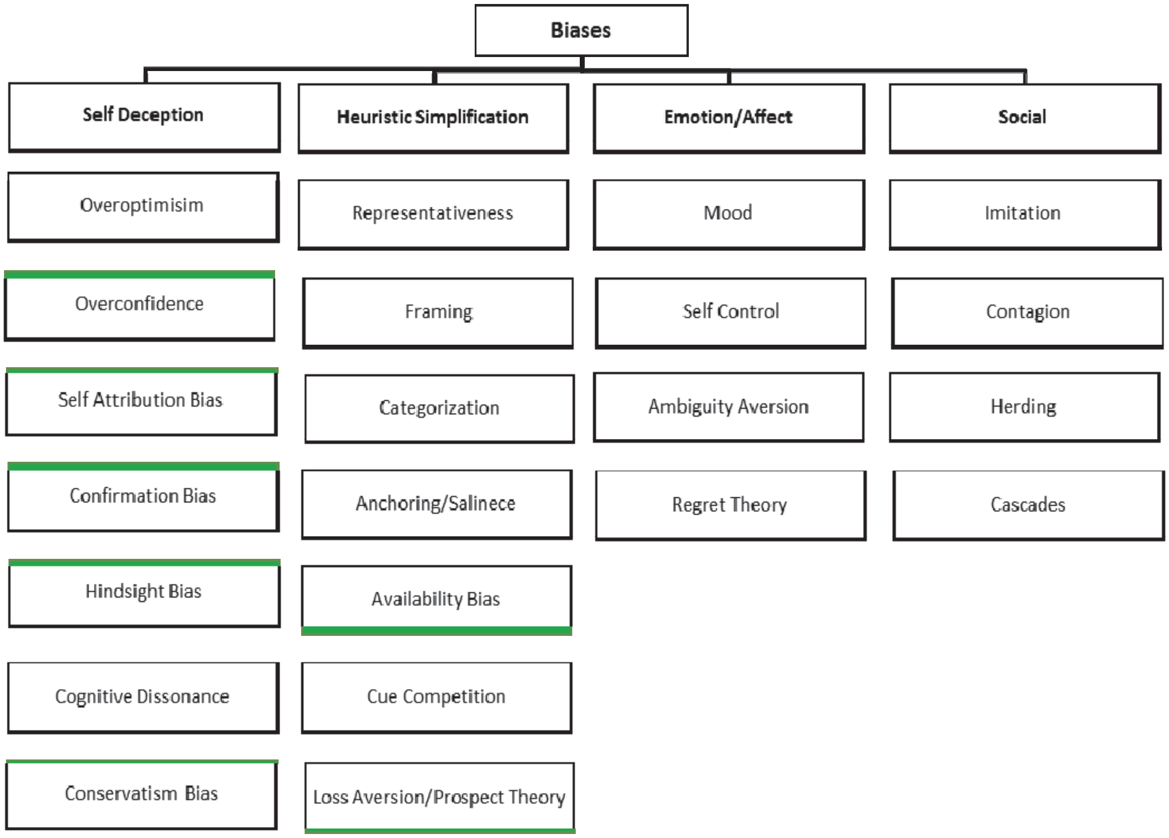
Both prospect and regret theories were used to explain numerous evidences of violations of the expected utility theory axioms. Even though these two theories describe two different well documented behavioral biases they both assume that a person compares his well being (consumption, wealth, portfolio return, etc.) with some benchmark. Prospect theory assumes that this benchmark is defined by the past while in regret theory this benchmark is not fixed ex-ante but rather depends on the future state of the world. So the main assumption of regret theory is that people after making their decisions under uncertainty may have regrets if their decision turn out to be wrong even if they appeared correct with information available ex-ante. This very intuitive assumption implies that person's utility function among other things should depend on the realization of not chosen and in this sense irrelavent, alternatives (Dodonova and Khoroshilov, 2005). Both regret theory and expected utility theory (EU) assume that the expected utility of an option depends on the calculus of pain and plesuare associated with the outcomes of that option. Regret theory differs from EU theory in that the expected utility of an option additionally depends on the regret that on emay experience by comparing the outcomes of that option to the outcomes of a rejected option. People experience regret when the outcome of the rejected option would have been better and rejoicing when the outcome of the rejected option would have been worse (Zeelenberg, 1999).

Decision making is a complex process which includes analysis of several factors and following various steps. It is believed that decision-making is based on primarily two things: personal resources or factors, and technical factors. But decisions should never be made only by relying on the personal resources and complex models which do not consider the situational factors. So, in order to make appropriate decision, one needs to anlayse the variables of the problem by mediating them applying cognitive psychology (Chandra, 2008).

Cognitive Biases

In the early 1970s, Amos Tversky and Daniel Kahneman introduced the term 'cognitive bias' to describe people's systematic but purportedly flawed patterns of responses to judgment and decision problems Their research program (the heuristics and biases program) addressed the question of how people make decisions given their limited resources. The program was inspired by Herbert Simon's principle of bounded rationality (Wike and Mata, 2012). The core element of regret is cognitive in the sense that in order to experinece regret one needs to compare the current state of affairs with what it would have been had one decided differently (Zeelenberg and Pieters, 2004).

Montier (2007), presents taxanomy of biases in Figure 1 that spans the self deception, heuristic simplification, emotion/affect and social factors. Naturally, the goal was to provide explanations of these violations due to reliance on a small set of cognitive principles, the most popular judgment and decision mechanisms proposed being representativeness, availability and anchoring-and-adjustment (Wike and Mata, 2012).


Biases
Self Deception
Overoptimisim
Overconfidence
Self Attribution Bias
Confirmation Bias
Hindsight Bias
Cognitive Dissonance
Conservatism Bias
Heuristic Simplification
Representativeness
Framing
Categorization
Anchoring/Salinece
Availability Bias
Cue Competition
Loss Aversion/Prospect Theory
Emotion/Affect
Mood
Self Control
Ambiguity Aversion
Regret Theory
Social
Imitation
Contagion
Herding
Cascades

According to figure, we can separate self deception into seven part; overoptimism, overconfidence, self attribution bias, confirmation bias, hindsight bias, cognitive dissonance and conservatism bias. Most popular biases – reprensentativeness, anchoring and availability- is in heuristic simplification. Regret aversion forming the subject of this study is one of the emotional factor.

Regret Aversion and Purchase Decision

Generally, the term regret is used to describe the sense of sorrow or disappointment over something done or not done (Landman, 1987). Sorrow may result from both the comparison of the actual outcome with the alternative outcome and from the feeling of responsibility or self-blame for the disappointing outcome. According to Bell (1982) and Loomes&Sugden (1982) regret seems most relevant emotion in the context of deicsion making. Of course other emotions are relevant for decision-making as well, such as worry, fear, happiness, and elation. However, these emotions may also ocur in absence of a decision, since they are related to aspects of outcomes or to uncertainty. Regret is directly linked to the choce or decision at hand (Zeelenberg and Pieters, 2004). Regret aversion is the term used to describe the emotion of regret experienced after making a choice that either turns out to be a bad choice or at least an inferior one. Regret aversion is primariliy concerned with how the a priori anticipation of possible regret can influence deicision making (Baker and Nofsinger, 2010).

People exhibiting regret aversion avoid taking decisive actions because they fear that, in hindsight, whatever course they select will prove less than optimal. It is a cognitive phenomenon that often arises in risk averse investors, causing them to hold onto losing positions too long in order to avoid admitting errors and realizing losses. Regret aversion also makes poeple unduly apprehensive about breaking into financial markets that have recently generated losses (Pompian, 2006). Consider a regret averse investor who is thinking whether he should invest in the S&P 500 or NASDAQ. Assume that he decides to invest in the S&P 500 and gets %9 return in a year. In this case, he/she will fell better about his investment decision if during the same year NASDAQ gave %4 than if NASDAQ gave %15. In contrast to the expected utility theory, prospect theory assumes that people's utility is defined over their gains or losses in comparison with some reference point and not over the value of their final assets. It also assumes that people's utility from gain w is lower than their disutility from the same loss w and that people are risk-averse over gains and risk-loving over losses. In addition to these loss aversion assumptions, prospect theory assumes that people tend to overweight low probabilities and underweight high probabilities (Dodonova and Khoroshilov, 2005).

Consumers often need to determine the optimal time for making a purchase. If the consumer decides to make the purchase early, then there is the possibility of regret if the consumer finds out that the same product was offered on better terms later. Alternatively, if the consumer decides to wait for a better deal, there is the possibility of regret if the earlier opportunity turns out to be more attractive than later options. Buying now on the basis of the currently available information might be seen as the default option that does not involve any initiative or strategy on the part of consumer. Conversely, deciding to wait for a better deal may be more of a gamble and reflect a deliberate strategy on the part of the consumer for getting a better deal than what is currently available (Simonson, 1992). In other words, people exhibiting regret aversion can be reluctant to sell. For example, to sell a stock whose value has climbed recently even if objective indicators attest that it's time to pull out. Instead, regret averse investors may cling to positions that they ought to sell (Pompian, 2006).

Otherwise the amount of regret and responsibility that the consumer would feel in each situation is likely to depend on whether the consumer selected the well-known or the cheaper alternative. The findings of Simonson (1992) suggest that decisions regarding purchase timing and brand choice can be systematically influenced by asking consumers to consider possible decision errors. These results generally are consistent with the notion that when consumers evaluate alternatives that are associated with different levels of regret and responsibility, preferences can be influenced by making the possibilitiy of failure more salient. Research suggest that if the buyers consider how they would feel if they made the wrong choice, they would be more likely to maket he purchase earlier.

To summarize briefly, decision-making under risk is directly associated with the decision maker's attitudes towards risk. He makes investment decisions on the basis of his appetit for risk and return (Chandra, 2008). Whenever consumers need to make a choice, they might consider the possibility of later regret and self-blame (Festinger, 1957).

Errors of Commissions and Omission

In accordance with Kahneman and Miller's (1986) norm theory, people are expected to feel greater regret and reponsibility for actions that deviate from the norm or default options because it is easy to imagine doing the conventional thing. For example when searching for a name on a list, it is reasonable to assume that starting at the beginning rather than at the end of te list is seen as the default option. Consequently, an individual who decided to start at the end and finally found the name at the begining of the list would be expected to feel greater regret and be more upset with the search strategy than one who started at the beginning and found the name at the end of the list (Simonson, 1992).

People who are regret averse try to avoid distress arising from two types of mistakes: (1) errors of commission and (2) errors of omission. Errors of commission ocur when we take misguided actions. Errors of omission arise from misguided inaction, that is, opportunities overlooked or foregone. One problem used by Kahneman and Tversky for comparing the regret associated with action versus inaction involves two investors. One investor considers selling his stock, does not sell, and finds he would have done better to sell. The other investor sells his stock and finds he would have done better not to sell. In this problem there is general agreement among subjects that the investor who acted(i.e., sold the stock) would feel greater regret. The greater regret occurs because the investor who sold would be more inclined to compare his outcome wiht the outcome of doing nothing, whereas the other investor who did not sell will tend to regard his outcome as simply the thing to be expected. In addition the investor who acted and deviated from the status quo is likely to feel greater responsibility for outcome. Regret is stronger for errors of commission than for errors of omission (Pompian, 2006).

	Are Doing	**Aren't Doing**
Should Be Doing	(I) NO PROBLEM	(II) PROBLEMS OF OMISSION
Shouldn't Be Doing	(III)PROBLEMS OF COMISSION	(IV)NO PROBLEM

In real-life decision people may occasionaly receive information about forgone outcomes. For example people choosing to invest in particular stocks will learn about future stock prices for the chosen stocks, but also for the non-chosen stocks. How might this feedback influence our decisions? An important assumption to be made is that people are regret averse. This means that people consider the experince of regret to be unpleasant and that they tend to make so-called regret minimizing choice. In many of the past studies reget minimizing choices were regret averse choices (Zeelenberg, 1999).

Regret Aversion and Investment Mistake

Regret aversion is a well established psychological theory that suggests that some people have regrets when they see that their decisions turn out to be wrong even if they appreared correct with information available ex-ante. The idea of regret extends naturally to finance by assuming that investors compare their returns with exogeneous benchmarks. Using this assumption, the model predicts that the market will over-react on good or bad news, so that there will be an excess volatility of stock returns. It also helps to explain such well-established empirical puzzles as the positive short-run and negative long-run autocorrelation of stock returns and it predicts a positive correlation between future trading volume and the dispersion of realized stock returns (Dodonova and Khoroshilov, 2005).

Briefly, regret aversion bias can cause various investment mistakes: (i) Regret aversion can cause investors to be too conservative in their investment choices; (ii) Regret aversion can cause investors to shy away, unduly, from markets that have recently gone down; (iii) Regret aversion can cause investors to hold onto losing positions too long; (iv) Regret aversion leads investors to prefer stocks of subjectively designated good companies, even when an alternative stock has an equal or a higher expected return; (v) Regret aversion can cause "herding behvior" because, for some investors, buying into an apparent mass consensus can limit the potential for future regret (Pompian, 2006).

Conclusions

Ignoring psychology facilitates analysis which examining economic behavior of individuals but it make we out realitly. In Last thirty-five years researches show that the psychology should be considered for a real analysis. Traditional finance assumes that people are rational. Alternatlively behavioral finance studies how people actually behave? Especially ın recent years, behavioral finance trying to demonstrate how psychology affects investor behavior catches the attention. Behavioral finance has led to the emergence of many studies which related to how perceptions, attitudes, heuristics briefly psychology affect psychology of investing. Regret aversion is one of the topic examining by behavioral finance. Regret is an emotional pain that occurs with the earlier decision to become a bad decision. According to expect expectancy theory the pain of losses are higher than the joy of gain. For this reason, investors tend to avoid activities that creat regret in the future. In other words, people avoid action that creat regret and seek actions that cause pride. This is referred to regret aversion in the finance literature. Regret aversion leads to many investment mistakes. For example, investor who tend to avoid regret may be too conservative about investment options or may exhibit herd behavior. There is no principle more fundamental in securities trading then "buy low, sell high". Why is it so diffucult to implement a simple rule. Psycholgy of investment may be a good descriptor.

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