

# The Influence of Investor Psychology On Regret Aversion

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*Emotions have a powerful impact on our lives: They shape our behavior, and their influence is so pervasive that no decision theory could be complete without taking their role into account. When markets are as volatile as they currently are, then there is no doubt that emotions play even more of a role. As investment consultants, we need to be aware of these various emotional biases, and how they affect decision making. In this paper we look at bias that can affect investors and that is regret aversion and examine the influences four psychological factors include disposition effect, Herding Behavior, cognitive dissonance and Conservatism the investors regret aversion .*

JEL Codes: G8, G11

## 1. Introduction

The field of modern financial economics assumes that people behave with extreme rationality, but they do not. Traditional finance theory is usually based on efficient market hypothesis (EMH<sup>1</sup>), assuming that investors are rational and the prices of securities fully reflect available information while price changes should be random. In 1980s, many empirical researches' findings (i.e., Shiller (1984), Thaler (1985) did not support EMH. However, most of studies were based on the overall market data. There is little research focusing on the empirical study of the effects of psychological factors. This study will examine investors' decisions to realize gains and losses in a market setting. Specifically, the attention is focused on the stock market and seeks to determine the influence of investor psychology on the regret aversion. Four

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psychological factors suggested by former researches are concerned in this study. These four factors include disposition effect, Herding Behavior, cognitive dissonance and Conservatism. The question of this study is whether these four factors really affect the investor regret aversion in TSE<sup>2</sup> and the objectives of this study are to examine the influences of these four factors on the regret aversion.

## **2. Literature Review**

Recent literature in empirical finance is surveyed in its relation to underlying behavioral principles, principles which come primarily from psychology, sociology and anthropology. In a study of verbal expressions of emotions, shimanoff (1984) found that regret was the most frequently named negative emotion. Lankman (1993, p.110) confirms that regret is a common, if not universal, experience. Lakonishok and Smidt (1986)[11] find evidence for a relevant volume discrepancy on NYSE and Amex: there is more volume for winners over several time periods (from 5 to 35 months). Ferris, Haugen, and Makhija (1988)[4] empirically analyzed thirty US stocks and showed further evidence for the disposition effect current volume was negatively correlated with the volume on previous days when stock prices were higher than the current price. Further empirical evidence from the Tokyo Stock Exchange was added by Bremer and Kato (1996)[2]. Also, Odean (1998)[12] found in a survey of some 10,000 individual investor accounts that there was a greater tendency to realize paper gains than paper losses. Evidence for regret aversion has been documented in areas as varied as sexual Behavior (Richard, van der Pligt, de Vries, 1996), negotiation behavior (Larrick & Boles, 1995), health-related decisions (Connolly & Reb, 2003), lottery ticket purchases (Zeelenberg & Pieters, 2004), and monetary gambles in the laboratory (Zeelenberg, Beattie, van der Pligt, & de Vries, 1996), among others.

## **3. Conceptual Framework and Hypotheses**

### **3.1 Regret Aversion**

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 appeared correct with information available ex-ante. Regret aversion arise from the investors desire to avoid pain of regret arising from a poor investment decision .this aversion encourages investors to hold poorly performing shares as avoiding their sale also avoids the recognition of the associated loss and bad investment decision. Regret aversion creates a tax inefficient investment strategy because investor can reduce their taxable income by realizing capital losses.Past research on regret aversion can be broadly divided into two streams based on the scientific tradition: mostly economic

research developing formal theories of choice and psychological research focusing more on empirical investigation. Most empirical research in the psychological tradition has been heavily influenced by earlier economic theories of regret aversion, which will be presented first.

### **3.2 Relationship Between Disposition Effect and Regret Aversion**

Shefrin and Statman (1985) suggested regret is an emotional feeling associated with the ex post knowledge that a different past decision would have fared better than the one chosen, as one of the factors leading to the disposition effect. Baber and Odean (1999) suggested investors want to avoid regret. when investors hold the paper gains stock, investors worry about the stock price will fall, so investors sell paper gains stock to become realized gains. Conversely, when investors ride the paper losses stock, investors will expect the stock price will go up in the future, so they will ride the loss stock. Shiller (2000) argued that regret theory may apparently help explaining the fact that investors defer the selling of stocks that have gone down in value and accelerate the selling of stocks that have going up in value. Since the fear of regret leads investors to postpone losses, symmetrically, the desire for pride leads to the realization of gains. In summary, we can infer that investors might feel regret when they realize a loss, and, conversely, feel pride when they realize a paper gains. In summary, this study proposes hypotheses 1: Disposition Effect is positively related to regret aversion.

### **3.3 Relationship between Herding Behavior and Regret Aversion**

Regret aversion forces investors to herd. The rationale is that the market cannot be wrong. Besides, if the investment does turn wrong, the investor can at least console herself stating she was not the only one who got it wrong! And other example of investor herding behavior is to invest in 'respected companies' as these investments carry implicit insurance against regret (Koenig 1999). In summary, this study proposes hypotheses 2: Herding Behavior is positively related to regret aversion.

### **3.3 Relationship Between Cognitive Dissonance And Regret Aversion**

Cognitive dissonance is the mental conflict that people experience when they are presented with evidence that their beliefs or assumptions are wrong; as such, cognitive dissonance might be classified as a sort of pain of regret, regret over mistaken beliefs. As with regret theory, the theory of cognitive dissonance (Festinger, 1957) asserts that there is a tendency for people to take actions to reduce cognitive dissonance that would not normally be considered fully rational: the person may avoid the new information or develop contorted arguments to maintain the beliefs or assumptions. There is empirical support that people often make the errors represented by the theory of cognitive dissonance. McFadden (1974) modelled the effect of cognitive dissonance in terms of a probability of forgetting contrary evidence and showed how this probability will ultimately distort subjective probabilities. Goetzmann and Peles (1993) have argued that the same theory of cognitive dissonance could explain the observed phenomenon that money flows in more rapidly to mutual funds that have performed extremely well than flows out from mutual funds that have performed extremely poorly: investors in losing funds are unwilling to confront the evidence that they made a bad investment by selling their investments. In summary, this study proposes hypotheses 3: cognitive dissonance is positively related to regret aversion.

### **3.5 Relationship between Conservatism and Regret Aversion**

The first and most obvious effect of regret aversion is that investors will be too conservative in their choices content with the pain of a missed opportunity rather than an active mistake. Once they've made one bad move, they are more hesitant to start making bold investment choices again. To a degree this is only natural, it's once regret aversion continues over a long period of time that underperformance starts to become an issue. Conservatism appears when in the face of new evidence individual do not change their beliefs as much as would be rational. Actually, the more useful the evidence, bigger the gap between actual updating and rational updating appear to be. One explanation for conservatism is that processing new information and updating beliefs is costly. There is evidence that information that is presented in a cognitively costly form (information that is abstract and statistical, for example) is weighted less. In summary, this study proposes hypotheses 4: Conservatism is positively related to regret aversion.

## **4. The Methodology and Model:**

### **4.1 Measurement**

Survey by questionnaires is conducted and five-point scales are anchored from strongly disagree to strongly agree. The scales are combined from several other relevant studies, such as Shefrin and Statman(1985), with new items to make an initial list of questions. Before the formal investigation, a pilot test was conducted to make sure investor's understanding of each item and good reliability of scales. Forty eight investors completed the questionnaires. Consistency of scale was measured in term of Cronbach's  $\alpha$ , and the results show that five scales have greater than the suggested threshold value of 0.68. It shows that all the scales display a good reliability

### **4.2 Data Collection**

The subject of this study is survey of behavior investors of stock market. Data is collected from Tehran Stock Exchange. 60 investors were asked to complete the questionnaires. 48 of the 60 returned questionnaires are usable. Eighty four percent of all the respondents are male and 16% are female.

## **5. The Findings:**

Factors analysis was presented that response to the 11-items scales were extracted 4 optimum factors. Every item's loading are over 0.5, so there was no item to be eliminate. On the other hand, the accumulated percentage of variance is equal to 63.58%, sufficient to represent the original data. To assess the reliability of the study constructs, we used Cronbach's alpha. The Cronbach's alpha of each latent variable was as follows: disposition effect (0.8717), herding (0.853), Cognitive dissonance (0.7549) and Conservatism (0.7486) .The five scales have greater than the suggested threshold value of 0.70. The alpha value for the four composites demonstrates adequate internal consistency. To establish discriminant validity, we constructed models for all possible pairs of latent constructs. According to Bagozzi (1991) argued discriminant validity methods to test correlation between the two constructs and fix the correlation between the constructs at 1.0. A significant difference in chi-square values for the fixed and free solutions indicates the distinctiveness of the two constructs. For the four constructs, a total of 6 different discriminant validity checks were conducted. All

the differences between the fixed and free solutions are significant, providing strong evidence of discriminant validity among the theoretical constructs. The results are presented in Figure 1. There was a satisfactory fit between the proposed model and the data. The estimated standardized path coefficients were used to test each hypothesis. Overall, all the signs of coefficient are consistent with the expected signs. The relationship between disposition effect, Herding Behavior, cognitive dissonance and Conservatism are positive and statistically significant effect on regret aversion.

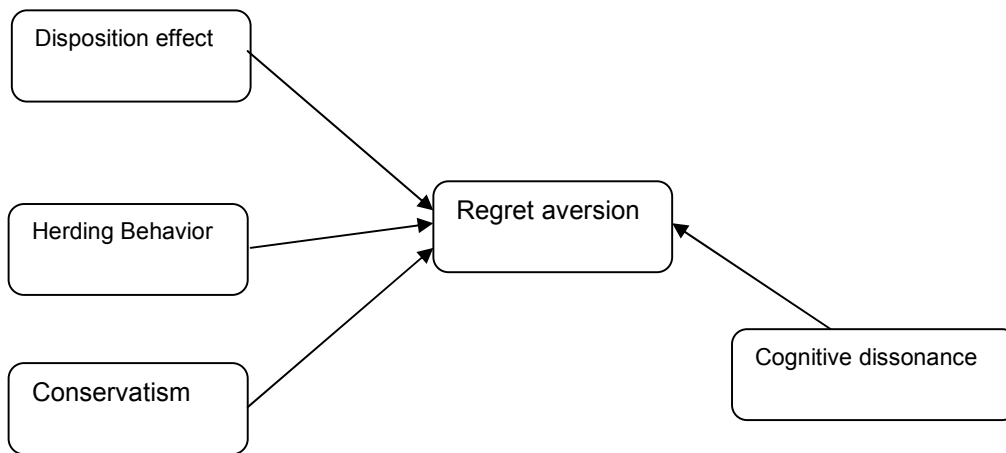


Figure 1: research formwork

## 6. Summary and Conclusions

This research finds that investor psychology tend to feel sorrow and grief after having made an error in judgments. Investors deciding whether to sell a security are typically emotionally affected by whether the security was bought for more or less than the current price. Therefore, investor must recognize this fact and try to practice some mechanisms to control his (her) irrational behavior Based on the prospect theory of Kahneman and Tversky (1979), Shefrin and Statman (1985). The disposition effect implies that investors, in trying to avoid regret, will have a greater tendency to sell winners than losers. Investors will tend to hold losers too long and sell winners too soon. Therefore, investor must try to practice some mechanisms to control his (her) irrational behavior.

## End Notes

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<sup>1</sup> Efficiency Market Hypothesis

<sup>2</sup> Tehran Stock Exchange

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