IMPACT OF PSYCHOLOGICAL FACTORS ON INVESTMENT DECISION MAKING IN STOCK EXCHANGE MARKET

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ABSTRACT

Today, the impact of psychological issues in detail Life issues is undeniable. Promoting decision- making will be possible in the worldeconomy of course by paying attention in mental issues in decision-making. Capital markets also tend to be less developed in emergingcertain cultural factors of investors and also the lack of knowledge in relation to the behavioral factors and capital markets and its mechanisms. The study aims to evaluate the influence of psychological factors on investors' financial decision making in Iran's stock exchange (Tehran). This study aims to examine the personality factors of investors in stock exchange including beliefs, confidence, sense of remorse and regret and snake bites as the independent variable and Investment decision as the dependent variable. The population of the study is the investors in Iranianstock exchange (Tehran) thata total of 384 questionnaires were distributed among them. Structural equation modeling was used to analyze the data and hypotheses test.According to the results of this study, four variables, including beliefs, confidence, and sense of remorse and regret and snake bitesinfluence the investment decision-making. Among the aforementioned variables, the two variables of belief and confidence affectthe investment decision-making positively, and the two variables of sense of remorse and snake bitesaffect them negatively.

Keywords: Decision-making, beliefs, confidence, remorse, snake bites

INTRODUCTION

Explaining the behavioral finance as behavioral finance, Olsen does not try to show that rational behavior is wrong, but is trying to show the use of psychological decision-making processes in understanding and forecasting the financial markets (Olson, 1998). According to the above definition, behavioral finance can be represented as follows:

1) Behavioral finance is the integration of classical economics and finance with psychology and the decision-making sciences.
2) Behavioral finance attempts to explain the causes of exceptions in the financial literature.
3) Behavioral finance is the study of how investors systematically make errors in judgement, or "mental mistakes.

Much research has been done in the field of behavioral finance during the 1990s. For the literature focuses on the behavior of individual investors**,** it can be cited thearticle ofSlovic(1972) entitled the misconception people of the risks and Tversky(1979) on heuristics and framing the decision in 1974 and 1979 that play a fundamental role in this field.

Daniel et al. (1998) in an article titled Investor psychology and security market under and overreaction and underreaction than the stock exchange (1998) has identified the phenomenon of self-attribution. Jegadeesh and Titman (1993) showed that stocks have higher returns (in the past 6 months) will provide more return next year than less efficient stock. In contrast, Debont and Taler (1985) showed when the stock is ranking based on the historical performance over 3 to 5 years, stocks that are more efficient (historical winners) have lower returns in the following years (i.e.Future Losers) this return in productivity was attributed to investors' overreaction.

In their view, since investors will focus on the rules of intuitive representation, they are very optimistic about previous winners and very pessimistic about previous losers and the canopy can skew prices from their intrinsic value.

Two articles by Barberis and Shleifer and Vishny(1998) and Daniel,Hirsheifer and Subramantam(1998) provided the behavioral models to explain overreaction and underreaction because of Conservation Bais.

1. Availability heuristic by Kahneman and Tversky(1982) explains that people tend to heavily weigh their judgments toward more recent information, making new opinions biased toward that latest news.
2. Security availability heuristic by Edward (1968) or underreaction that is defined as the slow updating of models in the face of new evidence**.**

In a model byDaniel, Hirsheifer and Subramantam,there are two categories of informed and uninformed investor. Informed investors are formed andmakes them to exaggerate in believing the authenticity of private symptoms on vale of stocks andself-attribution tend less to reports about stocks, especially when general symptoms are inconsistent with its private signs. Consequently, overconfidence to private information and underreaction to public information makes themimpound in a behavioral finance.

LITERATURE REVIEW & HYPOTHESES

In the investment discussion-making, the most important factors were: type of decisions made by investors and investors'factors affecting their decision making. In **recent decades**, there has also been two different approaches in financial theories.The first approach is the neo-classical approach in financial sciences, these theories assume that people, for the most part, behave rationally and the market reaches to high efficiency.Financial assets, in other words, are always priced rationally**.** Many financial and investment theories are becoming automated on the basis of efficient market, which is a manifestation of rationality.Therefore, rationality and being rational is the fundamental standard for the financial issues and investment.This approach of finance began with capital asset pricing model (CAPM) andefficient market hypothesis (EMH) in the 1960s and medium-term capital asset pricing model byMiller and Modigliani arbitrage (APT) in the late 1970s.Over time and more studies, researchers noticed a lot of movement andTurmoil in financial markets that was not justified using the efficient market theory,it is also found that capital market participants are not really rational**.**There are many cognitive and behavioral factors playing a role in directing investors.This has led to the emergence of behavioral revolution in financial discussions with the article of "Kahnman" and "Tversky" In 1979.Behavioral finance bridges the gap between theory and practice bypointing out that investment decision-makings are not only influenced by economic indicators and rationality but other factors also can significantly affect the behavior and type of decisions,andsome of these factors are presented within two theories: prospect and heuristics theory. Kahneman and Tversky's prospect theory is proposed as the basis for an alternative to how investors systematically violate the utility theory**.** The theory encompasses three important parts of the behavior of investors: 1.snake bites, 2.mental

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accounting, 3. stay away from regret and remorse, and heuristics theory that the word in the dictionary meaning of behavior a decision-making is based on past experiences, it is another theory that behavioral factors are expressed within it. It also refers to a process that people developthe behaviors based on trial and error. The theory includes the following behavioral factors: 1. to find and anchor 2. Representing stereotype, 3 – overconfidence, 4.Availability heuristics, 5. Gamblers fallacy.

Kahneman was among the researchers that the results of his researchesshook rational investment. The first empirical studies on the behavior of private investors in the capital market were conducted in 70s. Wharton has conducted one of the first studies on the behavior of individual investors. In general, it can be said that behavioral finance theory was examined at the macro levelfar from beinginvestigated at the micro level. Of course, there are valuable researches in which the behavior of individual investors has been studiedincluding researches conducted by Baker and Haslem in 1974. They found that dividend, expected return and stability of the company's financial situation is the most important decision criteria in capital market, as well as the results of their study was that mainly the behavior of investors behave rationally in the stock exchange, and they try to establish a rational link between risk and return on investment in their decision to buy a share.

In 1992, the results of research conducted by LeBron, Farrell and Gela showed that the risk aversion of each person is influenced by internal factors and environmental elements are ineffective. Two years later, another study was conducted by two scholars namedNagy and Obenberger. They found that although the investors employ different metricsfor stock selection, but classical standards (wealth-maximization) are the most important factors influencing investors' decision-makings. Another study conducted in 1998 by Epstein showed that although the later has not confirmed, but is still very important.

The results byMerikas et.al (2003) showed that, in the Greek stock exchange, investors do not benefit only from economic criteria to enter into investmentbut also consider the psychological factors.

According to expected utility theory (EUT) investors are risk-averse and risk aversion is equivalent to concavity of the utility function, which means marginal utility decreases. Although utility theory is interesting, but this theory was failedin predicting human behavior systematically, at least in precarious conditions.Kahneman and Tversky(1979) presented the prospect theory that shows how investors in some cases systematically ignore utility theory. Regarding the EUT, utility function is concave, but in accord with Kahneman and Tversky's value function, the utility function gradient of wealth rises before inflection point and then decreases with increasing wealth, the turning point is different for everyone and depends on how much wealth he has considered. Accordingly, unlike previous theories that stated investors are risk-averse,Kahneman and Tversky indicated when investors are in the negative wealth (losses), then change direction from risk aversion to risk appetite.

Snake Bite Effect is actually a term refers to a danger that might threaten investors. Research has shown that loss roughly corresponding to doubled profit, stimulate feelings or perceptions of people. Snake bite is aforecasting feature that in the context of the theory is considered as the dominant theory to explain the behavior of decision-making in an uncertain situation (Kahneman and Tversky, 1979). In behavioral finance literature, the tendency to notbe far from safest asset replaces the risk averse. Investors are not alwaysrisk averse, but in general, they are loss averse. In other words, willing to take the risk has no fixed routine and it's not like that investors are always risk averse, but according to the situation (whether in profit or loss) will berisk appetite or risk averse. Loss aversion refers to a feature of human behavior, doubled loss corresponding to profit, and stimulates people's sensitivity that's why tend to avoid losses from a desire to earn more profits. Research has shown that approximately doubled loss corresponding to profit, stimulate feelings or perceptions of people. Loss aversion is a forecasting feature that has been pointed out in the context of the theory as the dominant theory to explain the behavior of decision-making in an uncertain situation (Kahneman and Tversky, 1979).

Thus, investors are willing to take one unit of risk per two units of profit. Therefore, investment opportunities are not acceptable if they do notgenerate 2 units risk -adjusted returns. So after receiving the proposed investment, it is expected that the first question is concerned withthe risk. A feature that motivates investors to sell shares after the purchase of the shares and profit,is loss-aversion, because they worried about stock falling and loss of profit. People usually evaluate their short-term losses and are loss averse. Of course, this behavior can be seen on company directors and shareholders who emphasize usually on profit of this year more than any other variable in the time horizon and transactions and decision-makings are taken accordingly. Profit per share, P/E ratios and other indicators focus mainly on the year. The term of myopic loss aversion in 1995 was presented by Benartzi and Thaler (Benartzi, Thaler, 1995) that refers people to focus on short-term loss averse. Of course in the financial markets, the daily trader who try the short-term investments in securities, are considering the myopic loss aversion correctly. Loss aversion is not a feature that can easily be retracted in investment decisions. Regret is always accompanied by loss, and makes the human spirit to be fatigue and depressed, and the defeat would solidify the confidence and peace of soul. This is why man is regretaverse and loss averse. Overall, in situations where there is loss, loss aversion causes risk taking in situations where there is no loss (in situation that investment horizon ends with positive returns), loss aversion results in risk aversion.

Belief is a term related to the field of social psychology topics and studies the mental phenomena such as the belief as a social behavior. For a belief, it can be said a person's beliefs are the ideas that are "true for him/her**.** Kirche and Kirchfeld definedbelief as, "belief is and organization in accordance with stable perception and understanding of certain aspects of the world of a person. By definition**,** self-confidence means to have faith in or trust yourself. In other words means that the person believes he has a lot of abilities- and, if necessary, can use them. Self-confidence allows people to have a positive self-image. Building Self-Confidence for more tips on developing a strong belief in yourself, in general, confident people haven't allowed those fears and insecurities to control their destiniesand they are able to focus intently and they can make plans**.** Having self-confidence does not mean that individuals will be able to do everything**.** Self-confident people have expectations that are realistic. When those expectations are not met, they will try to justify their actions and retain their self-concept.

Regret isthe main basis of this theory if a person were given two equal choices**,** one expressed in terms of possible gains and the other in possible losses, people would choose the former, but a theory will form that says people anticipate regret if they make a wrong. Minimizing expected regret is equivalent to maximizing expected utility, Bell, Lopez and Sajana defined following a series of experimental studies. The main basis of this theory is that when someone chooses between two alternatives, he solely does not think aboutthe directional option earnings covered, but he thinks also for earnings lost not selecting another option. In other words, people are allergic to missed opportunities and costs. Therefore, people consider the selection of the options in earnings and losses arising from the lack of choice or other options (to happiness from selecting an option and regret due to lack of options or other options) and both variables are important. Lopez added regret to losses on

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the utility function and numerous empirical studies have been done to test this theory. Maintaining self-esteem and self- confidence lead him to 'happiness' until he learns to be at peace with himself.

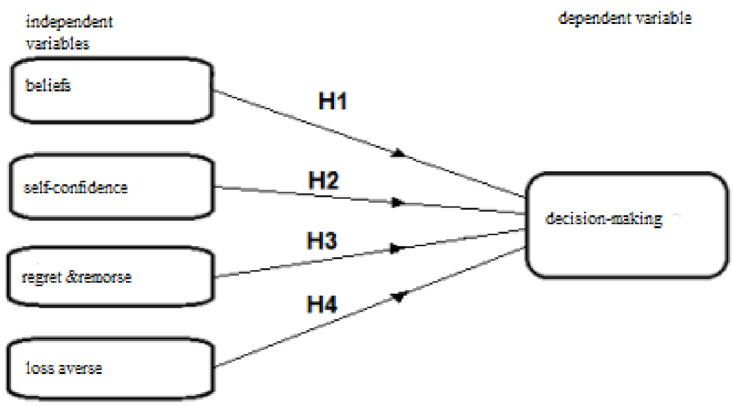
Maintaining self-esteem and self- confidence lead him to 'happiness' until he learns to be at peace with himself and he's ready to spend his life successfully. To maintain self-esteem is a condition that the persontry not to be wrong and/or not to have losses in financial markets good feeling and not to hurt his self-esteem and self-confidence and thus not to lose his mental peace. In fact, the losses may not be so important, but in terms of losses, the self-esteem is damaged and the loss of self-esteem will cause the regret. People tend to not sell damaged stock to make the loss not to be realized. In other words, the person by not selling the damaged stock and not to recognize the losses, can satisfy his inner sense because to sell the securities and realized losses make him to lose his self-confidence. However, this is different amongpeople whether material loss can make more sufferings or loss of self-esteem and self-confidence. Investors during investment decision process are concerned about the regret caused by the loss incurred as a result of investment.

Regret aversion leads the investors to analyze the decisions that have been taken in the past. There are two kinds of regret: 1) committing mistake 2) ignoring wrong. Committing mistake is the result of poor decision and poor action istaken, but the outcome is not favorable. In this case, a man regrets because of his decision and his action. Wrong ignorance happens when the decision is made not to do something, whereas if it was done, the performance was standard. But, the regret resulting from committing wrong,is higher than wrong ignorance. When the results of the decision are objective and measurable, the regret factor affects more on the decision-maker.

Continuing the research, we are trying toidentify the most influencing factor in investing decision of individual investors. The main question in this research is to what extent to the four factors of beliefs, self-confidence, sense of regret and loss aversion are effective in making investment decisions?

According to the above, hypotheses arise as below.

1. Beliefsof an investor has a significant influence on decision-making.
2. Investor’s self- confidence has a significant impact on his decision.
3. Sense of regret of the investor has a significant influence on his decision.
4. Loss aversion factor has a significant impact on investment decisions.



Conceptual model of Research

METHODOLOGY

This research is descriptive-applied research. Data collected by a questionnaire. The questionnaire is extracted from Audrey Lim Chin Lee of the questionnaire survey (2012) entitled "psychological biases and investment behavior: investigate evidence of the Malaysian stock market".

Confirmatory factor analysis **(**CFA**)** is a statistical technique used to verify the factor structure,CFA uses structural equation modeling to test a measurement model**.** LISREL is used for studying the relationship between variables in structural equation modeling analysis.

The study population consisted of all investors in Iranian market (Tehran). In addition, sample sizing formulas assume populations of unlimited size. According to Morgan table**,** 384 persons were selected as sample**.**

In this study, Cronbach's alpha is a statistic generally used as a measure of internal consistency or **reliability**. As a result, the Cronbach's alpha coefficient of the questionnaire was estimated at 0.832, its amount is more than 0.7 and is at an acceptable level.

Variable	*Type of variable*	*Questions*
Beliefs	Independent	4-1
Self-confidence	Independent	7-5
Being far from regret & remorse	Independent	11-8
Loss averse	Independent	15-12
Decision-making	Dependent	19-16

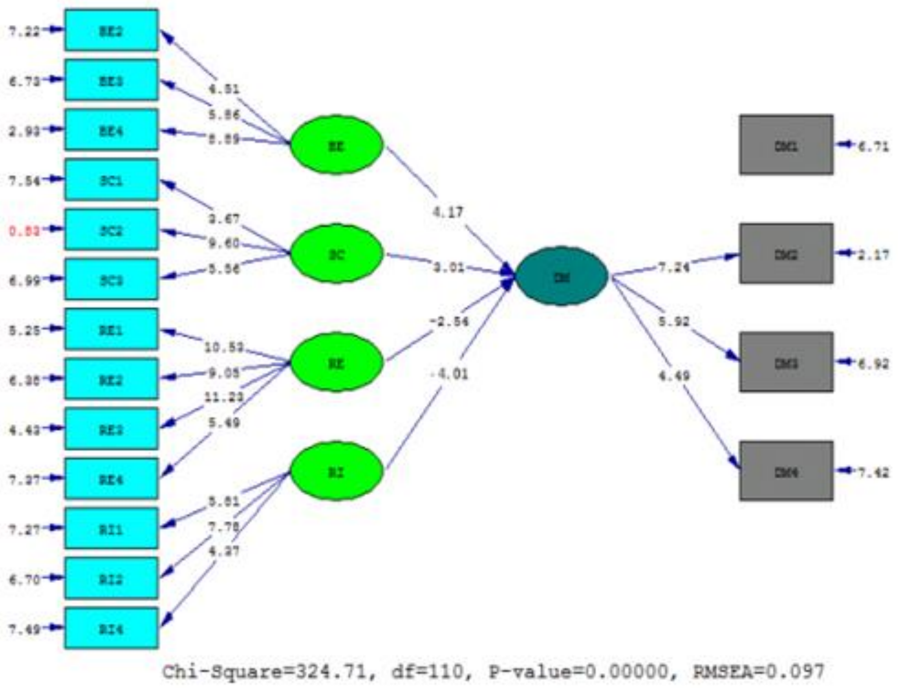


Fig. 21-4. Research model in significant coefficients

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Results	t-value	Impact factor	Hypotheses	
Confirmed	4.17	0.91	Effect of beliefs on decision-making	H_1
Confirmed	3.01	0.75	Effect of confidence on decision-making	H_2
Confirmed	-2.54	-0.69	Effect of a sense of remorse in decision-making	H_3
Confirmed	-4.01	-0.87	Aversion detrimental effect on decision-making	H_4

In test hypotheses using structural equation modeling, software output indicates the suitability of structural model fitted to test hypotheses. RMSEA = 0.097 showed the fitness of structural model. In other words, the observed data to a large extent is based on the conceptual model**.** The AGFI, GFI and NFI value are respectively 0.91, 0.96, and 0.97, which represents a high fit.

CONCLUSION

The results of this study showed that four variables, beliefs, self-confidence,snake bite effect, sense of regret are effective on investment decisions.The belief and self-confidence have a positive impact, and thetwo variables of snake bite effect, sense of regret have a negative impact on investment decision-makings.Among the four variables, beliefs with determination coefficient of 0.87 has a maximum effecton investment decisions. Then snake bite effect with a determination coefficient of 0.75 is the second effective factor.Then,self-confidence with coefficient of 0.56 and the sense of regret with a determination coefficient of 0.47are other factors affecting the investment decisions.People believe to **get** local **news** and information from others.They are sure about their own beliefs, when have heard “latest” news orsome rumors.Due to the great impact of beliefs and direct variable investment decision, it seemsif the stock exchange establishes a center for the documented and valid information about the return on investments in the past and/or launch or publish publications to provide thecorrect information required by investors, can have a positive impact on investor beliefs to prevent rumors and wrong information lead investors to opt out of their investment. Due to the great and direct influence of self-confidence variable on investors' decisions, it seems the stock exchange can strengthen the self-confidence of investorsby identifying the people and participate them in training courses that highly qualified individuals are present, promote the conditions to exchange the information and experiences these two groups. In this way, the stock exchange can strengthen these two groups sharing the knowledge, reinforce their sense of self-confidence and consequently provide their presence in investments.

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