The role of behavioral biases on investment decisions
Case studies: Tehran stock

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ABSTRACT: After challenging the rational theories, behavioral financial knowledge were appeared for explaining some of individual behaviors and investors. The behavioral financial knowledge does not justify the events and behaviors rationally but study the investor’s behaviors in the view of feelings and will explain it. In this study we have studied the effect of behavioral financial knowledge on the behaviors of the investors in Tehran Stock. Among the conceptual errors that is mentioned in behavioral financial knowledge. This research study six behavioral biases compatibility, familiar concept, idealistic belief, event-oriented, fresh pot, irreversibility. Investors of Tehran stock have completed the present research questionnaire and after collecting the data from the structural equation method was used for analyzing. The results showed that only event-oriented doesn’t have meaningful relationship with investor’s decisions.

Key word: behavioral and financial knowledge, investor’s decisions, stock.

INTRODUCTION

Before mentioning the behavioral finance in economic and financial management, investor’s decisions in property market were interpreted based on economic suitable theory, while the various scientific analysis and researches in the field of behavioral finance will determine the amount of the importance of psychological factors. Though behavioral finance theories are new and its background refers to one past decade, the persons’ behavioral subject in purchasing decision refers to before periods. Now according to the recent improvements in stock, all the inner and outer factors are studies exactly because we are facing with very different thoughts and believe that knowing and understanding these thoughts are so important. By ruling behavioral financial paradigm and challenging the standard financial theories and because of their inability in mentioning the observed dissonances in the capital market, study and research about the behavioral subjects of investors have high importance. So according to the mentioned subjects, in this study we have studied the specific behavioral factors that influence of purchasing decision of investors in the stock.

Research background

Researches in this field have been occurred extendedly. Prast and woor (2005) have represented a study as “Reaction investors to: analyzing the compatibility of the Euro change rate”. This research studies the factors affecting on Euro rate change. These changes occurred in 2000 and at the beginning of April 2000 to 22 September. Hang et al (2012) represented a study as “the role of idealistic belief on decision making”. In this study investors in the stock have been divided into two groups and idealistic belief variable on their behavior has been estimated. The results of this study showed that the persons who faced to this behavioral bias believed the published news in the stock and their decision has been influenced by idealistic belief. So that in some cases after observing the decision will be regretted. Roksana Rahimi Doab (2010, Doab) has represented a study as “studying
The specific behavioral factor on purchasing decision of common share of investors (contrastive study of Tehran and Mashhad stock). This studied the specific behavioral factors on purchasing decision of common share of investors in Mashhad stock and compared it contrastively with purchasing decision of investors in Tehran stock. The purpose of this research is understanding the conceptual errors among the investors and its relation with their knowledge. The theories of the study will be represented later. Saadi et al (2010 Saadi et al) represented a study as “studying the effects of investors personality and conceptual errors on their investment in Tehran stock.

The scales of investor’s decision in the stock

The purpose of investors is maximizing the related output, although along the maximizing the output they intend to reduce the risk. In the most cases risk and output have direct relation with each other in the stock. On the other hand, the more the stock risk of output the more the benefit. So, we can say that investors’ decision in the stock is on vector 2:

- **Output**
- **Risk**

The term of benefit in the future determines the easy output. Because the output shows the investors increase. So, we can say that the output as a motivational factor in investing acted and causes the investors reduce the amount of current use provided that encourage the more benefit. (Moradi and Kianfar 2012, Shamim et al 2008).

Risks generally divide into systematic and non systematic risk. Non systematic risk is the changeability of the part in general output in the stock that is not related to the general changeability of the market. This kind of risk is only for the stock we can reduce this kind of risk by creating the portfolio. That part of the general risk that will be remind and will not be reduced and the the risk related to the market is systematic risk. (Jalili and Moshiri, 2008).

Behavioral financial knowledge

Behavioral finance is a knowledge that cover psychology and sociology and completely is in contrast with kara market theory. kara market theory in 1970s have reached to the peak. In this time relative estimation of economic theory was occurred. The primary idea is achieving the whole attentions of the people. Financial models in 1970s are in relation with economic structures. In 1980s the discussion related to the Kara market. In this decade the amount of accessing to the different kind of Kara market was estimated. In 1990s more attention of the persons and researchers transferred to the academic discussion on the price and income division. In this time the discussion related to the psychology enters to the economic discussions and researchers want to have relation between financial markets. So, behavioral finance knowledge was developed. (Shiller, 2003)

After this behavior finance decade that is taken from human psychology in financial market has been changed. Researchers willing to answer to this question why behavioral finance knowledge is important? Accessing and gaining information from the customer is so difficult and expensive. Researchers say that the most common reason for paying attention to for behavioral finance knowledge is losing the customers. Understanding this subject that how the customers thought actively and or try for success is so important. Behavioral finance knowledge is the most powerful force in the field of financial problems. Some of the researchers need more researches in this field because they didn’t find any specific relation with customers.(Pomoain, 2008)

Generally, behavioral finance model and interpret variable phenomena in the massive spectrum of the investors behavior from the individual level to the output in the whole level of market. In order to create a common literature from the behavioral finance knowledge, researchers have divided this science into 2 groups that will be explained later:

- Behavioral Finance Micro(BFMI)\(^1\)
- Behavioral Finance Macro(BFMA)\(^2\)

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\(^1\) Behavioral Finance Micro(BFMI)

\(^2\) Behavioral Finance Macro(BFMA)
“Behavioral Finance Micro(BFMI)” study the investors biases in the personal level so that divide the “rational actors” in the classic economy theory. Behavioral Finance Macro(BFMA) in contrast to the rules identify and describe “Kara Market theory”. In Behavioral Finance Macro, this question is mentioned that are there Kara Markets or are influenced by behavioral effects? In Behavioral Finance Micro the question is that whether the investors behave rationally or cognitive and emotional mistakes can affect on financial decision? Paying attention to this subject is necessary that a great amount of economic and financial theories are stable on this concept that the persons behave rationally and in the decision making process consider all the information. (Yousefi and Shahr Abadi).

In this study the purpose of behavioral finance, behavioral finance is in the micro level that study the person’s intends in 2 levels as emotional and cognitive case. Emotional level of behavioral finance studies the decisions that investors select based on emotional behavioral trends. This kind of decision making is based on persons personality. The emotional level is oriented from emotional tendencies not from rational calculations, so correcting it is difficult. The cognitive level studies the rational decisions and mental tendencies of the decision makers. While the orientation and cognitive tendencies are incorrect that we can correct them with more information and consolation (Tehrani and Meymand, 2011).

Factors affecting on shareholders behavior

The first studies in the field of investors behaviors in the capital market is referred to decade 70. Cohen et al represented the risk removing the experimental documents in wealth increase time in valuable stock in the world. Also, Riley and Cho understood that there is a meaningful relation between risk removing and age, income, wealth and education. By increasing the income, wealth and education of the persons increase the risk degree. But there is an opposite relation between age of the people. (Cohen et al 1997).

Lebrean, Farly and Gella study confirmed that the risk of the persons is taken from inner factors and doesn’t have any relation with external market. The achievement of Lolyn, Lees and Sklarbam showed that there is a meaningful relation between age, sex and education of the persons. Barnyol in his studies understood that he can predict the investors behavior in the market based on the specifications of the life style and removing risk and the job of the persons. Eshpitean studied the effect of the social information on the behavior of the real investor. The output of his study says that the annual financial reports of the companies didn’t have any effect on investors decisions and are worthless. (Prest and Wover 2005).

Generally the experimental documents of the studies in the capital market say that the process of decision making of the investors and their behavior were so complicated and it is impossible that representing a unique pattern for predicting their behavior in the market.

In the most cases the behavior of the investors in the stock is non rationally and identifying the behavioral stimuli will not be possible. But researchers believe that persons behavior in the stock have, though it is not rational has biases that we can explain these behaviors and understand them. (Pompian, 2008, 57).

Pompian (2010) explained 20 biases for explaining the behaviors of investors and this study analyzes 6 variables out of 20 affective variables on behavior in the view of Pompian. The mentioned variables are:

- Compatibility
- Familiar concept
- Realistic belief
- Event-oriented
Then we have described these variables and behavioral biases.

Compatibility: Compatibility is a cognitive variable. In the psychology of cognition is mentioning the view, emotion, believes or values. (Pompian 2008).

The first theory: Compatibility has meaningful relation with investors decisions.

Familiar concept: in Familiar concept, persons often estimate the results based on the way of event in their life. The persons who show this variable understand the probabilities that are around them easily. (Badri 2009).

The second theory: Familiar concept has meaningful relation with investment decisions in the stock.

Realistic belief: Realistic belief is a kind of judge behavior meaning the persons capacity for deciding accurately and in the time of evaluating the information. (Hang et al, 2012)

The third theory: Realistic belief has a meaningful relation with investment decisions in the stock.

Event-oriented: Event-oriented occurs when the persons could be able to predict the future. In Event-oriented, investors imagine the market performance normal. (Lashkari and Mortazi 2011).

The fourth theory: Event-oriented has a meaningful relation with investment decisions in the stock.

Fresh point: this kind of bias is for the persons who emphasizes on events, happening and recent observations. Fresh point potentially explain the patterns which never there are. (Jalili, Moshiri, 2008).

The fifth theory: Fresh point has a meaningful relation with investment decisions in the stock.

Irreversibility: Irreversibility is shown via the investors who are doing a specific and special way for many years. These persons need no good and encouraging advices from other. They are easily going away from the change. (Badri, 2009).

The sixth theory: Irreversibility has a meaningful relation with investment decisions in the stock.

Population and sample

For doing field studies in this study the investors of Tehran stock were selected. Based on calculations in Cocran equation 400 questionnaire should have been supplied that this amount of questionnaire among the investors of Tehran stock were supplied. All the questionnaire were referred to the researcher. Among them 384 questionnaire were usable. So the rate of returning the questionnaire were 100% but the rate of using was 96%.

Collecting and analyzing the information methodology

The data of this study was collected by the questionnaires which were supplied. Kronbach Alfa of every variables was higher than 0.7. so had suitable reliability and validity. In this study for analyzing the data the method of structural equations and Lisler software have been used.

Achievements

Table 1 shows the summary of mean, standard deviation and variance of the variables:

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<th>Table 1. Variables inferential statistics</th>
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<td>N</td>
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<tr>
<td>Compatibility</td>
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<td>Familiar concept</td>
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<td>Event-oriented</td>
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<td>Fresh point</td>
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<td>Irreversibility</td>
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The structural research model in the phase of meaningful number:

Figure 1. Research model in the meaningful phase

The amount of t statistics for compatibility, familiar concept and realistic belief are 3.62, 2.34 and 2.27 respectively. So because their statistics are out of critical output, the hypothesis 1, 2, 3 are confirmed. The amount of statistical test of event-oriented in the output is .4927 and the hypothesis 4 is rejected. Finally the amount of t for two last biases, fresh point and irreversibility are 3.37 and 2.26 respectively and show that the hypothesis 5 and 6 are confirmed.

Studying the structural equation model:

\[ Y = 0.21M1 + 0.17M2 + 0.15M3 + 0.06M4 + 0.47M5 + 0.16M6 \], \( R^2 = 0.83 \)

According to the above equations we observe that variable of realistic belief, compatibility, familiar concept, irreversibility, fresh point and event-oriented mention in about 83% of the decision making variable. In sum according to the structural equation model and determining coefficient, we can say that this model has a very high power of determining and predicting in relation to the final dependent variable of the research meaning decision making.

CONCLUSION AND SUGGESTION

Based on statistics and the results of hypothesis test we can say that behavioral biases, compatibility, familiar concept, realistic belief, fresh point, and irreversibility have meaningful relation with investors decisions in Tehran stock and only event-oriented doesn’t have any meaningful relation with them. And we can not analyzes their behavior based on this kind of bias. After studying the structural equations we observed that compatibility, familiar concept, realistic belief, fresh point, and irreversibility and event-oriented determine about 83% of investors decision in the stock. Accordingly we can conclude that the model of this study have high power of determining and predicting in relation with investors decision makers in Tehran stock. On the other hand, most of the decision that investors make in the stock are influenced by these 6 biases and among them and based on statistics 47% of the
decisions is influenced by fresh point, 21% by compatibility, 17% by familiar concept, 15% realistic belief and 16% by irreversibility.

In this way the suggestions have been provided for future researches.

- These six biases are only estimated in Tehran stock and based on it the effective scales on investors decision were specified. We suggest that this bias will be studied for future researches in other stocks.
- We suggest that it is better to study other biases for future researches in Tehran stock.

REFERENCES

Jallil A, Moshiri A. 2008. the views of the professional and non professional investors about effectiveness of the general council and its effects on their investing decisions, Iran management science seasonal, third year, no 10, p 87-105.
Pompein M. 2009. translation Badri, Ahmad, behavioral and finance knowledge and capital management. Keyhan publication, Tehran.
Tehrani R, Meymand M. 2011. effectiveness of the different information and representing them honestly on the investment decision of the investment companies analyzers, stock seasonal, fourth year, no 15 p 5-25.
Yousofi R, Shahr Abadi A. 2009. studying and testing the behavior of the investors in the stock, development and improvement magazine, no 3, p 57-65.