INFLUENCE OF EMOTIONAL QUOTIENT ON DECISION-MAKINGS OF INDIVIDUAL INVESTORS ACTIVE IN TEHRAN STOCK EXCHANGE

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Abstract. This research aims to investigate influence of Emotional Quotient (EQ) on decision-makings of individual investors active in Tehran Stock Exchange. In this study, according to nature of subject of the research, the survey method was used. Statistical population of the study includes individual investors of Tehran Stock Exchange and sample was chosen 360 people active in the Exchange. In this study, Bar-On Emotional Quotient Questionnaire and Tony Brid's Questionnaire of Investors' Decision-making Indexes were used. Results indicated that emotional quotient has a positive influence on decision-making of individual investors.

Keywords: emotional quotient, decision-making of investors, Tehran Stock Exchange

1 Introduction

Perhaps all of dealers in Tehran Exchange have observed sentimental behaviors and mental excitements of stock market over and over and even they have made many mistakes in investment by following mental environment. The interesting point is that investors mostly repeat these mistakes and seek their reasons while they neglect that praxeology or in other words psychology of stock market is considered as an expertise for which now in valid universities all over the world district subjects and schedules are considered in financial majors. In fact, all over the world and of course in two recent years in Iran, in stock market psychology has been overarched as an auxiliary tool along with scientific (substantial and technical) analysis for decision-making of investors so that many investors and active persons in Iranian Stock Market tend to learn psychology along with learning techniques such as substantial and technical analyses (Baghbani, 2011).

According to modern investors theory, dealers and generally active people in stock markets take their decisions based on rationality and this assumption leads that all information related to innate value of securities reflects in their price through 'invisible hand of market' (Roshangar and Ahmadi, 2011).

In other words, according to this perspective, prices of stock reflect all information related to future cash flows of each share. This perspective is called 'market efficiency' which based on it attempt to earn efficiency is useless through technical and substantial analyses (Shahbazi et al, 2013).

On the contrary of rationality assumption, financial praxeology believes that men are influenced by a wide range of emotions and mental forces while making a decision which can effect on their rationality. Therefore, influenced by theses factors, price of properties can take some distance from their innate value. Researchers have tried to identify and analyze common behavioral patterns among active people in financial markets (Baghbani, 2011).

Behavioral financial decisions are for considering cognitive and sentimental components which influence on the process of an individual's decision-making and expand over the assumption of rational thoughts while considering different conditions or decisions. In the discussion related to behavioral financial decisions, as mentioned emotional effects play role in investing decisions.

After investing previous researches, to present evidences from this natural relation, Cemdoll and Montgomery (1997) stated that sentiments act as an integral component through all the process of decision-making. These include factors before decision-making and also factors after it. Therefore, mistake in decision-making may be resulted from cognitive mistake and or emotional effects or both of them. This indicates that goodness of emotions of an investor can influence on his/her decision-making.

Slovick (2010) stated that most of aspects of analysis of investment are naturally mental. It is clear that assessing men's abilities to incorporate information in judgment or decision-making is one of such aspects. Ecrloof about importance of psychological elements in economy believes that feeling and supposition of an individual from himself affects on consequences of economy (Ecrloof and Conton, 2000).

One of the most important cognitive factors influencing on a person's decision-making is emotional quotient (EQ) (Cemdoll and Montgomery, 1997).

Emotional Quotient refers to some abilities, for example, a person can keep his stimulus and tolerate against diversities, control his impulses and postpone success, align his mental states and does not allow disturbance blemish his thought (Mirdrikvandi, 2011).

Therefore, related to investing hypothesis based on value in stock market, those who have learned their psychological lessons well and activate based on this principle, know negative and unflavored positions of market as golden opportunities and not scary threads for themselves and use them best. Therefore, this study aims to investigate influence of emotional quotient on decision-making of individual investors active in Tehran Stock Exchange in order to identify and investigate existing scientific and practical vacuums.

2 Practical background of the research

2.1 Domestic background

In a research by Ahadi and his colleagues (2009) investigated the relationship between emotional quotient, document style and self-efficiency with satisfaction from life of employed women and concluded that there is a medianingful positive relationship between emotional quotient and self-efficiency with satisfaction from life. Also, they indicated that self-efficiency has the ability to predicate satisfaction from life.

- According to Keramati et al. (2009), in the investigation to find the relationship between emotional quotient and strategies of managers' conflict management, there is a positive and significant correlation between emotional quotient and resolvism strategy. Among experienced managers there was a negative and medianingful relationship between emotional quotient and strategy of control and lack of opposition. In addition, there is a medianingful difference between emotional quotient and kind of the strategies used by male and female managers.

Khusrasgani (2005) in this research has investigated dominant styles of investors in Tehran Stock Market. Results show that decisions of investing are not only influenced by economic and rationality indexes, but also by components such as investing horizon and amount of risk tolerance and such components have significant effects on behavior of decisions of investors.

Shahrabadi (2007) has introduced behavioral and financial domain and has posed its use in Stock Exchange. Results indicate that behavioral financial and what is discussed in psychology introduce men's behavior better and says men are influenced by behavioral biases although he is very reasonable. These biases cause limit cognition or biased cognition of fact and as a result leads to unreasonable reactions.

Nikumaram and Saeedi (2008) investigated possibility of predicting efficiency through this index based on index of emotions of stock market. Results indicated that possibility of predicting efficiency is verified via this index. In this study, using regression, the relationship between cash efficiency index and price of Tehran Stock Exchange and index of investigating behavior of investors was tested. Also, in this study, using Grenger's causality test, this result was verified that sentimental index is cause of changes in total efficiency of Tehran Stock Exchange and in other words, ability of explanatory of efficiency changes by emotions index (index of behavioral reaction of stock market) was verified.

2.2 Foreign background

According to Lahm and Cerby (2002), emotional quotient, modification of feelings and emotional understanding influence on functional effectiveness of an individual even more than what one can obtain only by 'General Quotient'. The authors have described general quotient as an individual's ability to obtain initial knowledge and use it in new positions. In relation to emotional quotient, Lahm and Cerby considered three adjective of sentimental argument based on Maier and Saloy's explanation about emotional quotient. The first investigated adjective which was focus on understanding feelings and the second emotional adjective was an individual's ability to understand conditions and emotional events and the final adjective proceeds to the way persons modify their feelings while it was verified that general quotient is important in mental activities. Also, it was revealed that emotional quotient has positive influence on individual's mental function.

Troy Betards (2010) indicated that there is no meaningfulness relationship between indicator biases, mental accounting and risk aversion about general loss with emotional quotient or its components. Also, several verifications were found for indicating biases and mental accounting in item level. In this research, 148 undergraduate students and faculty members participated from two private universities in Central United States. In attempt to identify the relationship between different investment biases and different components of emotional quotient, parametric and non-parametric analyses were used. Also, findings showed that generally women more than men are challenging with indicating bias and in item level. In addition, results indicated that the youngest participants significantly have lower points than their professional counterparts in general emotional quotient and intra-personal components and its adaptability.

Benartsi and Taller (1991) indicated that many risk-averted people were more possible to take risk if their properties instead of return of annual property would come back to more than a long-term time framework such as 30 years on the average. This kind of judgments of investigator was not static and did not lead to favored results. Mental accounting causes the investigators operate in conservative manners with avoiding every position so that assessing separate position was more than assessing property.

Shefrin (2000) stated that behavior of a person can be different because there is dependency to the fact that how information is presented or interpreted in many cases. This behavior can affect decision-making of investors. Two ambiguous framework

worries which are considered are mental accounting and risk-taking.

Researches performed by Scot Scotplsomalov (2000-2001) provided more verification to use emotional quotient in doing cognitive affairs. Investigated persons in researchers' study were identified in three groups of problems to be proceeded to. Problem groups 1 and 3 have three average levels of complexity related to them while the second group was identified as problem group. This study indicates that those who were successful in Group 1 in dealing with average problem issues are those who are higher emotional quotient. Even after dealing with the second group of hard problems, those who have higher emotional quotient have been more effective in facing with final problem group.

3 Methodology

Methods to collect data were in library (gathering texts and contents using books, articles, publications, etc.) and field (as interview, observation and questionnaire) manners. To collect information, two main methods are used, first to explain theoretical literature of a research it is tried to collect theoretical bases using library method, and then to study theoretically, data was gathered using data questionnaires required to analyze hypotheses of the research.

Statistical population includes individual investors of Tehran Stock Exchange. Because number of individual investors in Tehran Stock Exchange is not available, it is taken into account as an unlimited society. To determine sample volume, tables of Morgan and Cerjsi were used. Based on these tables, number of samples for an unlimited society was considered 384.

Of course, in practice and due to have more confidence and increase of accuracy, volume of sample was considered 360 people. Data used to this research was collected by two questionnaires: (1) Standard Bar-On Emotional Quotient Questionnaire including 51 questions which has been standardized in Iran by Samui (2006) and its reliability was reported 87%; and (2) Tony Brid's (2010) Questionnaire of investors' Decision-making Indexes.

Validity and reliability of this questionnaire were verified by Jalili and his colleagues (2014) in Iran. It reliability was reported 75%. Analysis method was used in two kinds of descriptive and inferential. In descriptive part, diagram, percentages, median, mean, standard deviation etc. were used and also in inferential part to analyze hypothesis of research, simple linear regression was utilized by spss software.

4 Findings

4.1 Descriptive statistics

1- Major of investigated people

According to Table (1), from 360 investigated people, 336 persons (93.3%) have answered to this question. Among these 336 people, 72 persons' (21.4%) major was management, 87 persons (25.9%) accounting, 47 persons (14%) economy, 11 persons (33%) technical and 19% persons (5.7%) medicine.

Table 1- Frequency percentage of major of the investigated people

Major	Frequency	Percentage	Correct percentage	Cumulative Percentage
management	72	20	21.4	21.4
accounting	87	24.2	25.9	47.3
economy	47	13.1	14	61.3
technical	111	30.8	33	94.3
medicine	19	5.3	5.7	100
total	336	93.3	100	

| Without answer | 24 | 6.7 | | |
| Sum total | 360 | 100 | | |

2- Degrees of the investigated people

According to Table (2), 360 people answered to the questions. From 360 people who were investigated 194 persons (53.9%)

were undergraduates, 152 persons (42.2%) graduate and 14 persons (3.9%) Ph.d.

Table 2- Frequency percentage of degrees of the investigated people

Degree	Frequency	Percentage	Correct percentage	Cumulative percentage
undergraduate	194	53.9	53.9	53.9
graduate	152	42.2	42.2	96.1
Ph.d	14	3.9	3.9	100
Total	360	100	100	

3-Experience level of the investigated people

According to Table (3), from 360 people 352 persons answered to this question. Among 352 people, 131 persons (37.2%) were without investment experience, 123 persons (34.9%) had the

least investment experience, 79 persons (22.4%) had average investment experience and 19 persons (54.4%) had significant investment experience.

Table 3- Experience level of the investigated people

Experience level	Frequency	Percentage	Correct percentage	Cumulative percentage
Without investment experience	131	36.4	37.2	37.2
Minimum investment experience	121	34.2	34.9	72.2
Average investment experience	79	21.9	22.4	94.6
Significant investment experience	19	5.3	5.4	100
Total	352	97.8	100	
Without answer	8	2.2		
Sum total	360	100		

4- Descriptive statistics of independent and dependent variables

According to Table (4), mean of emotional quotient was calculated 158.98, its median was 163, its index is 156 and its

standard deviation is 25.64. Also, mean of individual decision-making was calculated 26.06, its mean was 26, its index was 28 and its standard deviation was 4.23.

Table 4- Descriptive statistics of independent and dependent variables

Variables	Mean	Median	Index	Standard deviation	Skewness	The least	The most
emotional quotient	158.9806	163.0000	156	25.64852	-2.077	34	203
Individual decision-making	26.0250	26.0000	28	4.23106	-0.825	11	35

4.2 Inferential statistics of the research:

Investigation of hypothesis of the research:

-          Emotional quotient influences on decision-making of individual investors active in Tehran Stock Exchange.

To investigate this question of the research, linear regression was used. But using this method has its own conditions. One of its most important conditions is linearity of independent and

dependent variables. To consider linearity of data and flatness of the model, variability diagram and analysis of regression variance were used. According to Table (5), because meaningfulness level of E test is less than 0.05 and diagram is linear, therefore this condition held true.

Table 5- Analysis of regression variance to investigate flatness and linearity of data about emotional quotient and decision-making of individual investigators

Model	Sum of squares	Degree of freedom	Mean of squares	F	Meaningfulness level
Regression	780.433	1	780.433	49.483	0.000
remained	5646.342	358	15.772		
total	6426.775	359			

Also, based on the results obtained from Table (6), one can predict decision-making of individual investors based on emotional quotient on level 0.000. That is, emotional quotient has positive effect on decision-making of individual investigators and shows that the higher is the mark of a person in emotional quotient test, the more is the decision-making of individual investors (figure 1).

Table 6 – Results from analyzing regression coefficients to investigate power of prediction of decision-makings of individual investors based on emotional quotient

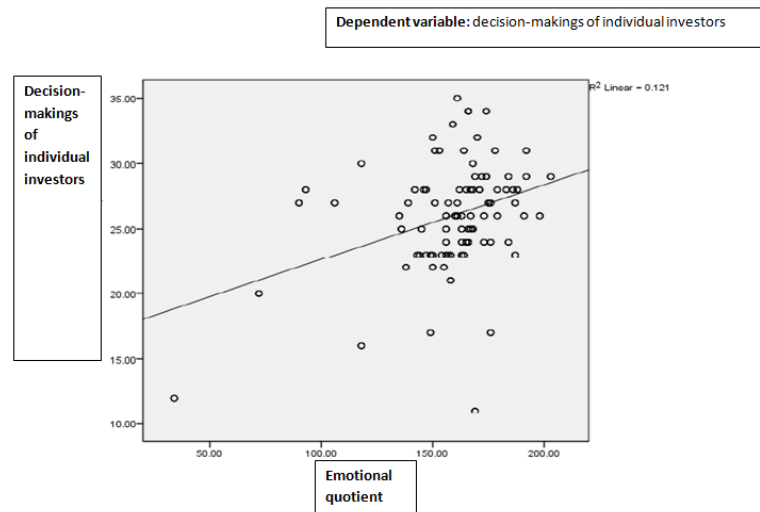| Model	Non-standard coefficient		Standardized coefficient		
	B	Standard error	β	T amount	Meaningfulness level
Static coefficient	16.886	1.316		12.832	0.000
Emotional quotient	0.057	0.008	0.348	7.034	0.000

Figure 1- Investigation of linearity of the relationship between decision-makings of individual investors and emotional quotient

5 Discussion and conclusion

Results indicated that emotional quotient effects on decision-makings of individual investors positively. Conclusion of this research corresponds with conclusion of Bontmpo's researches (2010) which indicated that there is a meaningful relationship between emotional quotient and bias. Discovering representativeness occurs when an individual decides to abbreviate some information which knows from an especial item. For example, when an investor makes relationship between different cases of investment and existing information, if the relationship is incorrect, decision-maker will be faced with tendentious reactions resulting from a weak relationship and will judge wrongly.

Shefrin (2000) believes that when individuals' judgment is based on stereotype, a kind of discovering representativeness will occur. According to the result of this research, one can say personal and internal characteristics of people such as shyness, bashfulness and emotionality have no effect on discovering representativeness of Exchange's people and in this case it was concluded that those who are shy and bashful cannot be among investors. Conclusion of this research corresponds with conclusion of Troy Betard's research (2010).

The present study investigated that whether there is a relationship between emotional quotient and investor's decision-making or not. While further survey of the hypotheses presented at this study is required, a natural progress in this research can be to determine this issue that whether performance of investor is influenced by emotional quotient and decision-making or not. Therefore, future researches should investigate that whether there is such a relationship or not. Future studies should especially consider effect of experience of investor and his age on his ability to overcome bias of investment. The present research found verifying evidences that indicate they affect on a person's ability to overcome bias of investment but it is not possible to determine that whether age, experience of investment and or both of these factors are related to these differences or not.

In an attempt to identify this important factor, future researches should investigate influence of age and experience of investment. Therefore, other studies are required to identify the methods which can help people to overcome biases of investment,

Investigating emotional quotient toward investment biases has been based on such approach. Other researches are necessary to correctly identify the factors which by using it investors can effectively minimize influence of behavioral biases.

6 Recommendations for future researches

a)   Investing effect of variables of emotional quotient on decision-making of managers of organizations;
b)   Investing effect of other variables effective on investment decision-making;
c)   Assessing validity of investment decision-making questionnaire and domesticating it consistent with Iran

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