The effect of emotional intelligence on the financial behavior of investors in the Tehran Stock Exchange

Amir Ziyaee Pour[1], Hossein Miladiyan[2]*

[1] *MSc student, Department of Management, Marvdasht Branch, Islamic Azad University, Marvdasht, Iran*

[2] *Assistant Professor, Department of Management, Sarvestan Branch, Islamic Azad University, Sarvestan, Iran*

ARTICLE INFO

ABSTRACT

Objective: The present study evaluates the effect of emotional intelligence on the financial behavior of investors known as orientation. **Methodology:** This study has a descriptive-correlation nature. The statistical population is consisted of investors of Tehran stock exchange in the first 6- month period (interval) of 1394. Data collection instruments are questionnaire including demographic questions, Bar-On EQ and pompian financial behavior that were distributed between natural and legal investors which are active in Tehran stock exchange. The results were analyzed using the Spearman correlation tests in the SPSS software version 21. **Results:** The results show that emotional intelligence has a direct and positive effect on orientation such as prediction over confidence, certainty over confidence, ambiguity aversion bias, status quo bias, recency bias, **Conclusion:** and it also has a negative and inverse (indirect) effect on orientations such as sample size neglect, availability bias, optimism, mental accounting, base rate neglect, anchoring and adjustment and in other cases not has been seen any significant relationship.

1. Introduction

Intelligence is considered as one of the considerable aspects in the adaptation of persons with the environment and also it is considered as one of the important factors of personal differences. Some of the knowledgeable persons consider the intelligence as a single quiddity and some other consider it possessing numberless elements and subject. From the time that the concept of "intelligence" moved from laboratory studies, puzzle – shaped and paper – pencil tests to the society and interpersonal relations, concepts such as social intelligence, interpersonal intelligence, and emotional intelligence have engaged the mind of researchers to themselves (Samany & Tahmasebi, 1386). In the investigation of results which has been obtained from the decisions of investors, understanding and comprehending factors, which are effective in the process of making decisions, is necessary. Every investor should have a set of choice and decisions for himself. Also, he should determine the optimal point of selling a stock. While making multiple decisions as an investor, considering the role of emotions and excitements is so important in the process of making decisions (Shefrin, 2000). Tressi expresses that the two-fold factors in decision-making are thought and emotion. In fact, emotion is a motive power which provokes the mind. Though without emotion doesn't make any reaction in our life. Wisdom and legal intelligence help the reasoning power, but the ability for predicting out comes of decision only is obtained from emotional intelligence. The talent for using emotional intelligence can help you in the moment of choosing things and also helps you to control yourself more effectively and have an extra effect on others. (kashani,1385). Emotional intelligence is an ability that enables the person to control his emotions in different situations and conditions and make legal decisions with self-confidence and concentration. Therefore, it is necessary to investigate the effect of emotional intelligence on the results of investor's decisions based on overcoming behavioral tendencies. If ideal results are obtained, it can be a considerable help to the investors, economy development and investment knowledge (Jalili et al.,1392). Cultural and special features of investors and also having not any awareness and recognition about behavioral-financial traps and capital market have caused the capital market of the country, which is considered as the heart of the economy figure of the country, to have not enough dynamism and the investors make mistakes due to not recognizing these factors in making their investment decisions; so this matter provides a condition for them to exit from capital market and the exit of capital from this market can have dangerous economical and cultural aftermaths for the country (Arahmany,1391). Regarding this matter that stock exchange is one of the economical principles of the country, and growth and development of this organization will follow national economy development; for this reason,

internal mentalities and external behaviors of persons (investors of future) should be considered scientifically through recognizing mental factors much more; so that the necessities of ideal recognition of viewpoints, conditions, behaviors of investors and also growth and progress of stock exchange should be provided (Jalili et al., 1392).

1.1 Literature Review

1.1.1 Emotional intelligence

emotional intelligence is an ability which enables the person to use his emotions effectively and usefully for legal deduction and solving problems by recognizing, interpreting, using and controlling emotions (Mayeer & Salovey, 1997). My and his colleagues have also defined emotional intelligence more completely in 1999. Emotional intelligence points out the ability of recognizing meaning and concepts of affections, relations among them, arguing about them and also solving problems based on them. This intelligence includes the ability for receiving affections, harmonizing affections and related emotions, understanding the information related to affections and also management of affections. From the viewpoint of Daniel Golman, emotional intelligence is defined as person's capacity for accepting realities, flexibility, ability for solving problems, ability for confronting with stress, and impulses. So, Golman considers emotional intelligence as an ability for keeping motivation, stability against adversities, controlling against impulses, post pointing the success, sympathy with others and being hopeful. In another definition, Golman points out that emotional intelligence is a talent which it's possessor can control his morales via self consciousness, he can improve it through his self-management, he can understand their effect via sympathy and he can improve his and other's morale through managing the relations (Doostar,1385, Golman, 1995).

Bar-On, in his definition about emotional intelligence, considers it as a set of talents, skills, and non-cognitive abilities which increases the person's success ability against environmental pressures (Bar-On, 2000, Dehkordi, 1386).

1.1.2 The effect of excitements on financial decisions

Lodox from NewYork university, reached the recognition of some curls in the brain and he found that these curls cause the affections to issue their orders before the time that wisdom and intelligence have the chance of interference. Legal wisdom and intelligence help the reasoning power, but the ability for predicting decision-making out comes only comes from emotional – sentimental intelligence. Antoni damasiv, the head of the neurology section of dentistry college (Iva) says: In fact reasoning, decision – making, affections, and excitements cross each other in the brain; there are a set of systems in the brain which are allocated to a targeted thinking process which we call it "reasoning" and also to the response choice which we call it "decision - making" . This set of brain systems also interferes in affections and emotions. Emotions have powerful effects on decision-making. Moreover, the results of decision-making have also powerful effects in emotions (Mayeer et al., 2000).

1.1.3 Financial Behavior

The attitude and viewpoint of persons toward money is called financial behavior. (how is the money spent? How is it saved? How is it invested?). In other words, the role that money plays in the life and it's style is idiomatically called financial behavior (jalili et all, 1392). Behavioral – financial is the merger of classic economy with psychological sciences and decision- making. Behavioral – Financial is an attempt for describing the reasons of exceptions in financial literature. Behavioral- Financial studies that how the investors are involved in systematic errors or, in other words, they are involved in mental errors (Russel & Fuller, 2000). The relation of financial science and other majors of social sciences has been well-known as the financial psychology; this science investigates the decision-making process of investors and their reactions regarding the different condition of financial markets and it's emphasis is much more related to the effect of personality culture and judges of investors on decision – making of investment. The financial psychology is based on the all given financial models against the paradigm of legal behaviors of investors. Taler believes that it is sometimes necessary that we accept this possibility , for finding an answer for experimental-financial puzzles, that some factors in economy are not behaved rationally which this behavioral-financial subject (ShahrAbadi & Yousefi,1386). The definition of behavioral bias: In the minor behavioral financial, we are faced with a subject called (Bias). In behavioral financial , the behavioral features which are effective on the decision – making process are investigated. These features are called behavioral biases.

Briefly, the behavioral bias has been defined as the systematic mistakes in judgment. Those mistakes which cause us not to observe logic and wisdom considered by the standard financial attitude. Some of the writers remind the behavioral tendencies as the fingertip rules; while another group calls them as believes, judgments or preferences. (Mayeer et al., 2004)

1.1.4 All kinds of behavioral biases

Table 1. Behavioral biases

Kind	Description	Intelligentsia (year)
Over confidence	the investors trust their abilities in the prediction so much.	kelark and stetman (2000)
Representativeness	investment in a special company via locating it in a familiar and apprehensible classification.	kanman, solyek and toorski (1982)
Cognitive dissonance	Most of humans try to prevent themselves from incompatible situations.	Festinger (1977)
Anchoring and adjustment	Investment act on the basis of personal and non – principal preferences clearly.	north craft and Ni-L (1987)
Self-Attribution	persons relate their failures to environmental factors and their successes to innate factors.	Dan (1989) grois and edvin (2001)
Availability bias	persons mostly suppose unconsciously that imaginations, ideas or thoughts, which are available, represent non-biased markers of statistical probabilities.	Santa klara and valkanof (2003)

Hindsight bias	predictable from before , describing an event in order to decrease the shame caused by not being careful, distraction and being surprised in making unpleasant decisions.	kooper, Gootirz and markiom (2005)
Illustion of control bias	expecting a personal success which it's occurrence probability is inappropriately higher than it's objective and admissible probability.	felner (2004)
Conservatism	The investor reacts to the new information lower or higher than expected and he keeps his previous imaginations and mentalities instead of acting on the basis of obtained information.	mantir (2002)
Ambiguity aversion bias	Humans don't show any tendency to accept risk in confronting with the distribution of uncertain-probability and they usually have doubts in ambiguous conditions.	graham, Harwi and hang (2003)
Mental accounting	the person's tendency for coding, classifying and evaluating economical aftermaths through grouping, their privileges in a set of mental records.	D-verz, church, charpet and akret (2003)
Confirmation	the ideas are emphasized which are confirmed by our believes and they appear in an unimportant way against every matters which are against our opinions.	stetman and fisher (2000)
Framing bias	the decision – makers show different reactions to a special situation on the basis of it's way of Representativeness.	kanman and toorski (1984)
Self control bias	it provokes the persons to spend their money today instead of saving for tomorrow (future).	Benartzi and taller (2004)
Endowment bias	when the persons have the ownership right of a property , they value it much more than the time that this property is not theirs.	list (2003)
Recency bias	the persons remember the recent events and observations more than the previous events in an obvious way and also they concentrate on them.	Mantir (2003)
Optimism	the investors tend to think about markets, economy and potentials of ideal function of their investment more than the optimal extent.	loot-j and man haf (2004)
Loss aversion bias	The persons' tendency for preventing losses is more than their tendency for obtaining profit; in such way that it prevents the person to relieve himself from non – profitmaking investments; even if he doesn't expect any fundamental changing and improvement in them.	Banartzi and taller (1995)
Status quo bias	the person is forced to select a choice which confirm the present conditions/	kanman, Netesh and taller (1991)
Regret aversion bias	evasiveness from feeling regret and ; consequently, preventing doing certain actions in weak decision-makings; in the way that it causes the investors to be legal to their lost investment situations and prevent themselves from accepting the mistake of loss accomplishment.	stetman and shefrin (1984)

2. Materials and methods

2.1 Research Method

The quiddity and method of the present research is located in the category of descriptive researches. In this research, on the basis of the relation among variables based on the purpose of the research , the approach of the research is of correlation type and it is sectional , due to this reason that It has been done in a determined interval , from the viewpoint of time horizon. /3-3- statistical society and statistical sample:

The society of this study are the investors of the stock exchange in Tehran which are so active in the market directly, these investors have different features and the sample has been chosen in such a way that it includes all investors with different features. According to the formal statistics of the central deposit-making company of stock exchange and payment of fund, the number of stockholder is more than 8 millions in the stock exchange form which a number of 6 millions and seven hundred thousand investors have an active code of exchanges. In this study, the persons who have active code are selected as the target society of the study; because the selection standard has been the active investors in the stock exchange. For selecting the sample, a simple random sampling method has been used. In this sampling , all the investors heave been considered such as real and legal ; so that regarding the high number of people in the society in this study, the society is considered as an unlimited community and the minimum number of samples was obtained 384 by using the Cochran formula for estimating the minimum of the samples in the unlimited society in the error level 5%.

For selecting the sample from this society, the following relation has been used:

$$n = \frac{z^2 p(1-p)}{d^2} \qquad (1)$$

where in

n = sample's volume

z= the standard variable of normal distribution

P= The expected ratio

d= The estimated error

2.1.1 The collection method of data

At the beginning, the collection of data was done via interviewing personally through going to the salon of stock exchange of Tehran, But because of the existence of some limitations, the distribution activity and collection of questionnaires, by hand and personal interview, were decreased. Therefore, by considering existed facilities for extensive availability to all the investors and stock holders of tehran's stock exchange such as personal referral and persons who have on – line purchases, software questionnaires with android operating system of cell-phones have been designed and distributed. So that this action was considered by stockholders so much, and a high number of samples which includes all of investors such as "real and legal" and persons who have on –line and under network purchases , was obtained.

2.1.1.1 Tools for collecting data
1-The behavioral-financial behavior questionnaire: this questionnaire is consisted of 24 questions which includes 22 elements of the behavioral – financial tendencies of investors (Pompian, 2006).
 2-the questionnaire of Bar- On emotional intelligence measurement 2002, which includes 90 locutions.

2.1.1.2 Validity and constancy of tools in the study
In this study, the international and standard questionnaires of learned person and experts of this field were used; which it doesn't need further validity to be confirmed and Cronbach's alpha coefficient was used for investigating the constancy of all studied factors, so that it's results have been expressed in the following table:

Table 2. Cronbach's alpha coefficient pre-test sample studied factors

variable	amount of Cronbach's alpha
Financial Behavior	0/74
Emotional intelligence	0/78

As it is observed, the amount of Cronbach'salpha coefficient is more than 70 percent for factor under study; therefore, the studies factors in this study have acceptable constancy and no question is needed to be deleted.

2.1.2 The analysis method of data
Finally, through collecting a number of 576 questionnaires, these data were analyzed by software spss, copy 21. Regarding the hypotheses of study, the pearson correlation coefficient was used for quantitative variables test and the Spearman correlation coefficient was used for qualitative variables test in order to determine the existence of meaningful relation among them.

3. Discussion and results

3.1 Data analyze
3.1.1 The Main hypothesis
Emotional intelligence affect the financial behavior of investors of stock exchange in Tehran.

Table 3. Pearson's correlation between variable (as a whole)

variable	Emotional intelligence	amount
Financial Behavior	correlation coefficient	-0/128
	meaningfulness	0/002

As it is considered in the above table, the amount of the meaningfulness level of financial behavior is lower than 5% about emotional intelligence, so we reject the hypothesis of zero according to the pearson correlation test rule and we accept the hypothesis of "one" ; that is, there is a meaningful relation (meaningful correlation) between financial behavior and emotional intelligence; and since this amount is negative, the relation between two variables is reverse.

3.1.2 Secondary hypothesis
Emotional intelligence affects on the elements of financial behavior of investors in the stock exchange of Tehran.
About this matter, we want to investigate the meaningful relation between emotional intelligence and elements of financial behavior of investors in the stock exchange. Or in other words, they are effective on each other or not. For this reason, we investigate the effect of emotional intelligence on the elements of financial behavior of investors in the stock exchange which we use the spearman correlation coefficient amount for investigation. The real spearman correlation coefficient between emotional intelligence and financial-behavioral elements of investors in the stock-exchange (two-by-two) is quantitative-qualitative in the statistical society p regarding the studies variables; so the following hypothesis have been tested via spearman correlation test.

3.1.3 Hypothesis

$$\begin{cases} H_0 : \rho = 0 \\ H_1 : \rho \neq 0 \end{cases}$$

(2)

Hypothesis of zero means lack of relation between two variables X and Y hypothesis of "one" mean the existence of meaningful relation between two variables. The rule of "zero hypothesis" test against hypothesis of "one" is as the following:

If the meaning fullness level of test is lower than 5%, we reject "hypothesis of zero" and accept "hypothesis of one".

Table 4. Spearman correlation test between emotional intelligence and financial behavior of investors

variable	Emotional intelligence	amount
prediction over confidence	correlation coefficient	0/223
	meaningfulness	0/001
certainty over confidence	correlation coefficient	0/223
	meaningfulness	0/001
sample size neglect	correlation coefficient	-0/92
	meaningfulness	0/027
Self-Attribution	correlation coefficient	-0/028
	meaningfulness	0/497
Ambiguity aversion bias	correlation coefficient	0/097
	meaningfulness	0/019
Illustion of control bias	correlation coefficient	0/003
	meaningfulness	0/935
Availability bias	correlation coefficient	-0/159
	meaningfulness	0/001
Optimism	correlation coefficient	-0/103
	meaningfulness	0/013
Status quo bias	correlation coefficient	0/093
	meaningfulness	0/025
Loss aversion bias	correlation coefficient	0/014
	meaningfulness	0/733
Mental accounting	correlation coefficient	-0/097
	meaningfulness	0/020
Endowment bias	correlation coefficient	-0/007
	meaningfulness	0/874
defect Representativeness of basis	correlation coefficient	-0/118
	meaningfulness	0/005
Conservatism	correlation coefficient	0/034
	meaningfulness	0/411
Self-control bias	correlation coefficient	-0/005
	meaningfulness	0/900
Recency bias	correlation coefficient	0/129
	meaningfulness	0/002
Anchoring and adjustment	correlation coefficient	-0/161
	meaningfulness	0/001
Cognitive dissonance	correlation coefficient	0/058
	meaningfulness	0/167
Confirmation	correlation coefficient	-0/075
	meaningfulness	0/073
Hindsight bias	correlation coefficient	-0/052
	meaningfulness	0/212
Framing bias	correlation coefficient	-0/044
	meaningfulness	0/292
Regret aversion bias	correlation coefficient	-0/060
	meaningfulness	0/148

As it is observed in the table, the amount of meaningfulness level of elements such as self – attributes, illusion of control bias, loss aversion bias, overrating properties conservatism, Ideology, framing bias, self-control bias, cognitive dissonance, tendency for events, and regret aversion bias is more than 5% about emotional intelligence; therefore , according to the rule of spearman correlation test, we don't reject "hypothesis of zero" and we don't accept the hypothesis of "one"; that is a meaningful relation (meaningfulness correlation) is not existed between financial-behavioral elements about emotional intelligence. But the amount of the meaning fullness level of other elements is lower than 5% ; so we reject the hypothesis of zero according to the correlation test rule and we accept the hypothesis of "one" that is ,there is a meaningful relation (meaningfulness correlation) between elements such as over confidence in prediction, over confidence to trust, ambiguity aversion bias, evasiveness from changing, recency bias and emotional intelligence; this relation is direct and positive and there is meaningful relation (meaningful correlation) between elements of a defect Representativeness of samples size, availability bias, optimum consideration, mental accounting, defect Representativeness of basis, anchoring and adjustment with emotional intelligence and this relation is reverse and negative.

4. Conclusion

In this study, the effect of emotional intelligence on the financial behavior of investors in the stock exchange of Tehran has been investigated. In this study the information has been obtained from a 517-person sample of investors in the stock exchange of Tehran in a time –duration of first three months of year 1394. In the first step regarding the hypothesis, both variables are considered quantitatively and the relation of these two variables was investigated by using the pearson correlation test. Finding of the study showed that emotional intelligence has been effective on the financial behavior of investors without considering behavioral elements and it can predict persons behavior. In the first view, it seem that financial behavior of persons is a function of their emotional intelligence rate; while the findings of this study showed that this variable has had some effects on the behavior of investors, generally. In the second step, regarding the hypothesis of financial behavior study, we investigate the investors through separating them by behavioral tendencies one by one and, after analyzing data by using searman test, the obtained results expressed this matter that emotional intelligence causes some changes to be happened in the bias of investors in some of the behavioral tendencies and it doesn't have any effect on other tendencies. Emotional intelligence has a positive effect in over confidence tendencies in prediction, over confidence to confidence, disambiguity, evasiveness form changing and recency bias, and if the emotional intelligence is increased, these behavioral biases are also become more. While it has a negative effect in tendencies such as defect representation of sample's size, availability bias, optimum consideration, mental accounting, defect Representativeness of basis, anchoring and adjustment, and if emotional intelligence is increased, the tendency for these behavioral biases is decreased. In the tendencies such as Self-Attribution, illusion of control bias, loss aversion bias, recency bias , endowment bias, conservatism, self-control bias, cognitive dissonance, ideology framing bias, and regret aversion bias, no meaningful relation was observed which expresses lack of any effect by emotional intelligence on such these behavioral tendencies.

REFERENCES

Arahmany, A. 1391. Evaluation of behavioral and non-behavioral factors influencing purchasing decisions of ordinary stock investors in the Tehran Stock Exchange. Senior thesis, School of Management, University of Sistan and Baluchestan.

Bar-On, R. 2000. "Emotional and social intelligence: insights from the Emotional Quotient Inventory. In R. Bar-On & J. D. A. Parker (Eds.)", The handbook of emotional intelligence. 363–388. San Francisco: Jossey-Bass.

Dehkordi, M. 1386. Identify and compare the composition of the nine age, gender and husbands of working women in Ahvaz city in terms of mental health, marital satisfaction and emotional intelligence. Martyr Chamran University doctoral dissertation in the field of education.

Doostar, M. 1385. Explain the influence of emotional intelligence managers on organizational commitment with regard to the role of Leadership styles.PhD thesis, Faculty of Humanities. Tarbiat Modares University.

Golman, D. 1995. Emotional intelligence: Why it can matter more than IQ. USA: bantam Books.

Jalili, M., Ahmadi, M., and Firuzi, A. 1392. The behavior of financial management of personal finances postgraduate students of Islamic Azad University Abe, senior thesis, Year IV (2), 197-187.

Kashani, M. 1385. The Dell Management, Industrial Management Institute publications.

Mayeer, J., & Salovey, P. 1997. Emotional development and emotional intelligence: Educational implications. New York: Basic Books.

Mayeer, j; Caruso, D; & salovey, P. 2004: Selecting a measure of emotional intelligence; the Handbook of Emotional Intelligence, Jossey- Bass, San Francisco, CA.

Mayeer, Y., Salovey, P., & Caruso, D. 2000. Models of emotional intelligence In R.Y Sternberg (ed) Hand book of intelligence. 396- 420. New York.

Pompian, M. 2006. Behavioral Finance & Wealth Managemant, Published by Jon Wiley & Sons, Inc., Hobken, New Jersey 2006. Published Simultanceouslyin. Psychology of investing. Boston ،MA: Harvard Business School Press.Published by Jon Wiley & Sons, Inc., Hoboken, New Jersey 2006. Published Simultanceouslyin.

Russel, J., & Fuller, C. 2000. Behavioral Finance and The Sourse of Executive, Year I, Number 38.53-73(in Persian).

Samany, A., & Tahmasebi, F. 1386. The relationship between emotional intelligence and academic achievement in students. Journal of Mental Health, 35, 36, 121-128.

Shahrabadi, A.; Yousefi, R. 1386. An Introduction to Behavioral finance, stock Magazine, 69.

Shefrin, H. 2000. Beyond greed and fear: Understanding behavioral finance and the psychology of investing. Boston ،MA: Harvard Business School Press.