International Journal of Finance and Managerial Accounting, Vol.6, No.21, Spring 2021 IJFMA

Analysis of Financial Distress Caused by Managers' Cognitive-Emotional Biases Based on the Narcissistic Approach

Mojtaba Maleki Chubari
Ph.D Student, Department of Accounting, Rasht Branch, Islamic Azad University, Rasht, Iran.

Sina Kheradyar
Assistant Professor, Department of Accounting, Rasht Branch, Islamic Azad University, Rasht, Iran.
(Corresponding Author)
sinakheradyar@gmail.com

Keyhan Azadi Hir
Assistant Professor, Department of Accounting, Rasht Branch, Islamic Azad University, Rasht, Iran.

Bahman Akbari
Associate Professor, Department of Psychology, Rasht Branch, Islamic Azad University, Rasht, Iran.

Submit: 27/07/2020 Accept: 29/07/2020

ABSTRACT

Recent research on financial distress in organizations shows that the mental prejudices of managers, due to their cognitive-emotional biases, can play an important role in identifying and creating financial distresses. With this end in view, this study, based on the narcissistic approach, aims at analyzing the emergence of financial distresses due to cognitive-emotional biases of managers in companies listed on the Tehran Stock Exchange. The statistical sample, which included 147 companies in the year 2019, was selected based on six criteria that determined the financial distresses in previous research. The results of the correlation and regression analysis showed that there is a direct and statistically significant relationship between managers' cognitive-emotional biases (i.e., over trust, control illusion, conservatism, optimism, loss avoidance, and avoidance regret) and financial distresses, to the degree that the higher the organizational cognitive-emotional biases in managers exist, the more financial distresses would appear in the organizations. Based on the results, it is concluded here that the occurrence of financial distresses in companies could be due to the high level of cognitive-emotional biases in managers with narcissistic prejudices.

Keywords:

Financial Distress, Cognitive-Emotional Biases, Narcissism Approach, Behavioral Finance.

1. Introduction

Nowadays, managers are a key factor in the emergence of financial distresses in organizations, and the decisions they make will determine the failure or success of the organizations. This means that despite the existence of strengths such as resources, technologies, and manpower in any organization, the poor performance of management in that organization may cause its malfunction and failure to achieve its goals (Gholipor et al. 2009). Therefore, the behaviors of managers, which are based on their personality traits, influence the evolution, dynamism, and prosperity of any organization (Novinnam et al. 2001). Moreover, the effect of personality on managerial behavior on the one hand, and the effect of managerial behavior on the company performance on the other hand, reveals the importance of the fact that the personality traits of managers should be investigated more deeply. Individuals' personality traits underlie their behaviors, and considering that some behavioral factors involved in managers' personalities will guide their decision-making, identifying these factors and their effects can improve the decision-making process of managers and prevent financial distresses in organizations. Among these identified factors, one of the most important one is the cognitive-emotional biases of managers in the framework of the narcissistic approach. Behavioral biases that prevent investors from being rational are important financial-behavioral tools that are used to explain the irrational behaviors of investors due to perceptual errors and how these errors affect financial decisions and create financial distresses (Rahnamarodposhti & Tajmir Riahi, 2014). Therefore, in the current study, the occurrence of financial distresses caused by cognitive-emotional biases of managers with the perspective of narcissism approach is analyzed and evaluated.

2. Literature Review

2.1. Theoretical Fundamentals and Background

A financial distress occurs when the operating systems in a company lose its normal function due to internal or external factors, and the elements in the system undergo fundamental changes, and an abnormal situation is imposed on the system in an unstable and unstable manner. Such distress can have internal and external reasons. The internal reasons are directly rooted in the behavioral inefficiency of management in their decisions and judgments, which leads to a lack of liquidity or decreasing of the company's financial resources. Moreover, the results of recent studies show that financial distresses in organizations are rooted in the term *animal spirit*, which refers to the point that humans, contrary to Adam Smith's theory, are not rational in their decisions and are driven by other behavioral stimuli. This view argues that the free market assumption that individuals rationally pursue their personal goals is largely flawed. Managers' behaviors originate from their personality traits and in the organizational environment affect the course of change, dynamism, and also the emergence of financial distresses (Novinnam et al. 2001). As a result, the financial distresses in a company can be influenced by the interpretation and judgment of managers due to their social biases and prejudices. Since in today's competitive era, the development and optimal performance of companies plays an important role in national development, identifying the level of cognitive-emotional biases of managers and therefore preventing financial distresses and controlling them to achieve the organizational goals is important (Gholipor et al. 2009). According to *behavioral financial theories* behavioral patterns, in contrast to *neoclassical theories*, are not rational but because of their preferences or cognitive biases are normal and attempt to construct financial market assumptions in a realistic context (Raei & Fallahpour, 2004). As a result, identifying the irregularities in the financial market due to irrational behavioral patterns can lead to a better performance of the market, and if an order is found in these irregularities, financial distresses might be significantly avoided. In behavioral finance, behavioral characteristics that influence the decision-making process of individuals are called *behavioral distresses* (Rahnamarodposhti, 2013). Nowadays, behavioral biases under the influence of narcissism approach, which cause narcissism to emerge as a growing cultural disease in individuals, have different forms. A narcissist is a human being who has extreme self-confidence that makes him/her not have a realistic view of himself/herself and his/her abilities (Shaeebi, 2013). Such unrealistic self-views affect the level of behavioral biases of managers.

Various studies have been conducted on the classification of behavioral biases and their impacts on financial decisions and the creation of financial distresses in the capital market. Rahnamarodposhti and Tajmir Riahi (2014) investigated the modeling of the effect of behavioral biases on the capital market recession based on an interpretive-structural approach. The results of their research showed that, according to the views of the experts, out of 20 listed biases, 13 biases had impacts on the recession in the capital market. The ISM modeling, which is an expert-centered model, also shows that the four biases of ambiguity avoidance, regret avoidance, change aversion, and loss avoidance act as the cornerstone of the model, and in terms of behavioral biases these four variables can be the main cause of the recession in the capital market. Over trust bias, as an important mediating variable in the capital market recession, is affected by various biases itself and affects the creation of other biases. Nikoomaram et al. (2009), with the aid of canonical correlation analysis and by selecting two models of predicting financial distresses, measured the relationship of cognitive-emotional biases and financial distresses in organizations. The research findings showed that there was a statistically insignificant relationship between different alternatives of the set of variables, and different alternatives of the set of variables did not show similar financial relationships. Moreover, it seemed that the existence of behavioral financial effects led to irregularity of factors and their relationships.

Kordlouie et al. (2015) made a comparative study of behavioral factors in investing financial assets. The effect of behavioral factors including regret avoidance, willingness effect, mental accounting, over trust, representation intuition, mass behavior, and conservatism and the effect of ownership on the investment of financial assets and a comparative study of these factors were investigated. The results showed that all factors except the over trust factor affected the investment, and the amount of this effect was different for each factor. The ranking order of these factors in terms of the amount of impact were as follows: Relative gains and losses - willingness effect - conservatism - mass behavior - intuition of representation - effect of ownership – regret avoidance.

Babajani Mohammadi et al. (2017), using the meta-analysis method, studied the main biases of investors in the Iranian capital market. Based on their results, these biases were excessive trust, reliance and moderation, representation, self-attribution, conservatism, ambiguity avoidance, mental accounting, recent events, shaping, situational effect, self-control, and emotional biases including optimism, loss avoidance, and regret avoidance.

By studying the mental prejudices and psychological, social, and anthropological characteristics of market investors, Shiller (2000) introduced some behavioral biases, including reliance, over trust, and cultural roots in investor decision-making. Following this study, Anderson and Lenos (2007), in a study on 859 members of a sample from US bankrupt companies during the years 1986-2008, concluded that the financial and income behaviors of managers in the years before the financial distress were the main causes of the distress due to unusual accruals.

Schrand and Zechman (2012) stated that over-trusting managers are more prone to optimism and are therefore more likely to make wrong decisions, which can lead to intentional misrepresentations or deception and create a financial distress in a company. Jia et al. (2014), in a study entitled *Masculinity, Testosterone and False Financial Reporting*, by examining 1,500 companies in the period 1996-2010, concluded that with the increase in testosterone hormone in managers, the level of self-confidence among them has increased. This in turn led to an increase in false financial reporting because in most cases managers with high self-confidence seek the attention and encouragement of other people to submit their financial reports according to their desires through deceptive activities.

As a result, according to previous studies and above literature review, behavioral biases in this study have been selected and classified into two general categories and six types.

2.1. Hypotheses Development

The first category of behavioral biases is the cognitive bias, which includes three types of over-trust bias, control illusion bias, and conservative bias. Cognitive biases cause deviation in judgment and reasoning, and due to them, conclusions drawn about other people and situations may be irrational. Thus, cognitive biases may ultimately lead to perceptual

distortion, misjudgment, irrational interpretation, or what is commonly called irrationality (Haselton et al., 2015). The first cognitive bias is the over trust bias by which individuals overestimate both their ability to predict and the accuracy of the information provided to them. Individuals exaggerate their abilities including their predictive power, information perception, and knowledge and assume themselves as excessively intelligent. The more expertise there is in people, the more people will be exposed to this type of bias (Armistead, 2014). The second bias is the illusion of control, to the degree that in the case of some phenomena for which there is not much control, people mistakenly imagine those phenomena under control. People's desire to control all phenomena, or at least to be able to influence them, when in fact they are not, is called the illusion of control (Rajagopalan & Gurusamy, 2015). The third bias is conservative bias, which is a mental process that causes people to cling to their previous predictions and ignore new information or underestimate it. This factor causes people to overestimate their initial estimates, so, when faced with new evidence, they would not be able react as a rational person (Armistead, 2014).

The second category of behavioral biases is the emotional bias, which includes three types of biases: optimism bias, loss avoidance bias, and regret bias. Emotional biases are caused by feelings and emotions that are not easily manageable. The first emotional bias is the optimism bias by which a person incorrectly overestimates his/her probability of success higher than the actual objective probability and believes that undesirable investments will not happen to him/her (Lovallo & Kahneman, 2003). The second emotional bias is the loss avoidance bias, which shows that people tend to avoid loss more than they tend to make a profit, and it can actually be interpreted that loss avoidance means that a person would be too much upset of potential losses in the organization (Suresh, 2013). The third emotional bias is regret avoidance, which often causes managers to remain loyal to their loss-making investment situations for a long time, thus avoiding accepting mistakes and making further losses (Saeedi & Farhanian, 2012).

According to the theoretical foundations of the research and the results of previous research in the literature, the research hypotheses of the current study are posed as follows.

1) The scale of organizational over trust bias of managers leads to financial distress.
2) The scale of bias of the illusion of organizational control of managers leads to the creation of financial distress.
3) The scale of organizational conservatism bias of managers leads to financial distress.
4) The scale of organizational optimism bias of managers leads to financial distress.
5) The scale of organizational avoidance bias of managers leads to financial distress.
6) The scale of bias of organizational regret avoidance of managers leads to financial distress.

3. Methodology

This research is classified as the applied research, which is to perform based on descriptive and correlation analysis. Therefore, the purpose of this study is to describe the conditions or phenomena under study and better understand those conditions, and correlational, because the relationship among variables is sought here. Another point not to forget here is that the present study examines the relationships among variables, and based on historical data, seeks to prove the existence of this relationship in the current situation of organizations. The post-hoc approach is used when the researcher examines the subject after the events have taken place.

The statistical population of this research is all companies listed on the Tehran Stock Exchange in the year 2019. However, due to some heterogeneity among members of the target population, six indicators of financial distress determination were considered for the selection of a statistical sample, which are shown in Table 1.

According to the conducted investigations here, 187 companies had the above conditions for the desired period, which due to the lack of access to and accountability of the managers of 40 companies, 147 companies were selected as the statistical sample of the current study. In this study, the information concerning the variable (financial distress) was collected through field and sometimes library methods and included the financial statements of companies along with the notes attached to these financial statements and periodic reports published by regulatory parties supervising the performance of the listed companies. These regulatory parties included the

stock exchange and security organizations whose data was analyzed and collected through databases such as the *New Strategy Software*, and *IRBOURSE* and *CODAL* websites.

Moreover, in order to measure the cognitive-emotional bias in the current study, the financial-behavioral questionnaire (Pompian, 2006) was used that includes 6 components of the scale of over trust, control illusion, conservatism, optimism, loss avoidance, and regret avoidance. Moreover, the EXCEL software was also used to organize and sort the collected information, and the final analysis has been done with the aid of Eviews software version 9.

In this study, according to previous studies, the dependent, independent, and control variables have been defined and measured as follows.

The independent variable in this study is the cognitive-emotional bias. To measure it, Pompian's (2006) questionnaire, with the analysis of 6 components including over trust, control illusion, conservatism, optimism, loss avoidance, and regret, was used. Given the importance of cognitive-emotional biases in psychological pathology and the comprehensiveness and shortness of the Pompian's (2006) questionnaire, and because of its adaptation to the angels of cognitive-emotional bias, it is a suitable tool for measuring bias and prejudice in the collective.

The dependent variable of this research is the financial distress. Different indicators have been considered for selecting companies with financial distress. In this study, six financial indicators have been defined for companies with financial distress and if the company has any of the above issues, it is considered as critical. These indicators are shown in Table 1.

The control variables used in the present study, similar to the studies of Jia et al. (2014), Frino et al. (2014), and Olsen and Stekelberg (2016), are as measured in Table 2:

Table 1- Selecting the Statistical Sample

Conditions reflecting financial distress	Total number of companies	Number of companies after removing companies that were not in the status of previous indices.	Number of critical companies
1. 40% decrease in cash profit compared to the previous year (Dennis, 1995)	126	126	187
2. Losses to the company equal to half of the company's capital (Ward and Foster, 1997)	23	12	
3. Having a loss for two consecutive years (Article 141 of the Commercial Code)	20	6	
4. Profit before interest, tax, and depreciation less than 80% of interest cost (Asquis et al., 1994)	90	32	
5. Book value of the stock less than its nominal value (Apple and Tatman, 1994)	47	3	
6. Negative stock returns of at least 30% with reduced sales (Gilbert et al., 1990)	29	8	
Lack of access to managers of companies with financial distress index			(40)
Number of sample companies			147

Table No. 2 - Control variables

Row	Variable	Measuring method
1	The size of the company (FSIZE)	The natural logarithm of the company's stock market value at the beginning of the period
2	Financial Leverage (LEV)	Dividing total liabilities by total corporate assets
3	Equity rate of return (ROE)	Operating profit divided by the average total assets
4	The ratio of book value to market value (BTM)	Book value of equity divided by the market value of the company
5	Percentage of institutional ownership (INOWNER)	The number of ordinary shares of the company in the hands of the legal owners divided by the total number of ordinary shares of the company at the beginning of the period

4. Results

Table 3 shows the descriptive statistics for the research variables according to the mentioned time period. As can be seen, the average index of organizational emotional-cognitive bias of managers is about 0.41, which, compared to its maximum and minimum, indicates the probability of bias by almost half of the financial or organizational officials of the sample companies.

Table 4 presents the results of testing the first hypothesis. According to the value of F statistic at the level of all companies, which is equal to 5.305, the pattern is statistically significant at the significance level of 95%. In addition, due to the value of Durbin–Watson statistic, which is equal to 2.020, the existence of sequential autocorrelation in the regression disturbance components is ruled out. The value of R2adj is equal to 0.152. Therefore, 15.02% of the dependent variable changes can be predicted by the independent and control variables. As a result, according to Table 4, the significance of the variable of over trust bias of managers indicates that the index of organizational over trust bias of managers leads to financial distress. In other words, according to the coefficient of over trust bias index, it can be concluded that no matter how much the slope of managers' over trust bias index moves towards positive numbers, the rate of financial distress in the company will increase.

Table 5 presents the results of the testing of the second hypothesis. According to the value of F statistic at the level of all companies, which is equal to 6.420, the pattern is statistically significant at the significance level of 95%. Furthermore, given Durbin-Watson's statistic value of 1.992, the existence of sequential autocorrelation in regression disturbance components is ruled out. The value of R2adj is equal to 0.182; hence, 18.02% of the dependent variable changes can be predicted by independent and control variables. Consequently, according to Table 5, the significance of the variable of managers' control illusion bias indicates that this bias leads to financial distress. In other words, it can be concluded that no matter how much the slope of the illusion control bias of managers moves towards positive numbers, the financial distress in the company will increase.

Table 3 - Descriptive statistics of research variables

Statistic/verivable	Mean	Median	SD	Minimum	Maximum
Cognitive-emotional bias index	0.41	0.00	0.493	0	1
Financial distress index	1.18	1	0.389	1	2
Size of the company (FSIZE)	27.9791	27.7241	1.4572	25.4236	32.2574
Financial leverage (LEV)	0.6259	0.6294	0.2332	0.0191	1.6479
Equity rate of return (ROE)	0.2282	0.1728	0.8688	-3.4393	8.0133
The ratio of book value to market value (BTM)	0.4409	0.4440	0.4848	-3.7854	1.6720
Percentage of institutional ownership (INOWNER)	0.6773	0.7156	0.2073	0.0000	0.9728

Table 4 - Summary of testing hypothesis 1 of the study:
The scale of organizational over trust of managers leads to financial distress

Variables	Coefficients	Standard error	*t* statistic	Significance level
Constant	2.683	0.584	4.593	0.000
Over trust bias	0.148	0.060	2.474	0.015
Size of the company (FSIZE)	-0.064	0.020	-3.153	0.002
Financial leverage (LEV)	0.360	0.155	2.320	0.022
Equity rate of return (ROE)	-0.026	0.034	-0.747	0.456
The ratio of book value to market value (BTM)	-0.102	0.075	-1.350	0.179
Percentage of institutional ownership (INOWNER)	0.068	0.147	0.464	0.644
Coefficient of determination	Moderated Coefficient of determination	Durbin–Watson statistic	Fisher statistic	Significance level
0.187	0.152	2.020	5.350	0.000
FD = β0 + β1 Overconfidence Bias +β2 SIZE+ β3 LEV+ β4 ROA+ β5 BTM+ β6 INOWNER+ε				

Table 5 - Summary of testing hypothesis 2 of the study:
The scale of the illusion control bias of managers leads to the creation of financial distress

Variables	Coefficients	Standard error	*t* statistic	Significance level
Constant	2.320	0.590	3.930	0.000
Over trust bias	0.208	0.061	3.402	0.001
Size of the company (FSIZE)	-0.050	0.021	-2.462	0.015
Financial leverage (LEV)	0.375	0.153	2.460	0.015
Equity rate of return (ROE)	-0.027	0.034	-0.794	0.428
The ratio of book value to market value (BTM)	-0.132	0.074	-1.793	0.075
Percentage of institutional ownership (INOWNER)	0.031	0.143	0.213	0.832
Coefficient of determination	Moderated Coefficient of determination	Durbin–Watson statistic	Fisher statistic	Significance level
0.216	0.182	1.992	6.420	0.000
FD = $\beta 0 + \beta 1$ Illusion of Control Bias +β2 SIZE+ β3 LEV+ β4 ROA+ β5 BTM+ β6 INOWNER+ε				

Table 6 presents the results of the third hypothesis test. Based on the value of F statistic at the level of all companies, 5.739, the pattern is statistically significant at the significance level of 95%. Also, given Durbin-Watson's statistic value of 2.016, the existence of sequential autocorrelation in regression disturbance components is ruled out. The value of R2adj is equal to 0.163; therefore, 16.03% of the dependent variable changes can be predicted by the independent and control variables. Also, the significance of the variable of managers' conservatism bias indicates that this bias leads to financial distress, that is, it can be concluded that no matter how much the slope of the conservatism bias of managers moves towards positive numbers, the financial distress in the company will increase.

Table 7 presents the results of the fourth hypothesis test. According to the value of F statistic at the level of all companies, which is equal to 5.882, the pattern is statistically significant at the significance level of 95%. In addition, given Durbin-Watson's statistic value of 1.960, the existence of sequential autocorrelation in regression disturbance components is ruled out. The value of R2adj is equal to 0.167. Thus, according to this value, 16.07% of the dependent variable changes can be predicted by independent and control variables, and the significance of the variable of managers' optimism bias indicate that this bias leads to financial distress. This means that according to the coefficient of optimism bias, it can be assumed that no matter how much the slope of the optimism bias of managers moves towards positive numbers, the financial distress in the company will increase.

Table 6 - Summary of testing hypothesis 3 of the study:
The scale of the conservatism bias of managers leads to the creation of financial distress

Variables	Coefficients	Standard error	*t* statistic	Significance level
Constant	2.812	0.577	4.876	0.000
Over trust bias	0.168	0.059	2.847	0.005
Size of the company (FSIZE)	-0.067	0.020	-3.297	0.001
Financial leverage (LEV)	0.323	0.154	2.099	0.038
Equity rate of return (ROE)	-0.028	0.034	-0.810	0.420
The ratio of book value to market value (BTM)	-0.105	0.075	-1.408	0.161
Percentage of institutional ownership (INOWNER)	0.022	0.145	0.149	0.882
Coefficient of determination	Moderated Coefficient of determination	Durbin–Watson statistic	Fisher statistic	Significance level
0.197	0.163	2.016	5.739	0.0000
FD = $\beta 0 + \beta 1$ Conservatism Bias +β2 SIZE+ β3 LEV+ β4 ROA+ β5 BTM+ β6 INOWNER+ε				

Table 7 - Summary of testing hypothesis 4 of the study:
The scale of the optimism bias of managers leads to the creation of financial distress

Variables	Coefficients	Standard error	*t* statistic	Significance level
Constant	2.552	0.584	4.373	0.000
Over trust bias	0.176	0.059	2.972	0.003
Size of the company (FSIZE)	-0.058	0.020	-2.825	0.005
Financial leverage (LEV)	0.323	0.154	2.105	0.037
Equity rate of return (ROE)	-0.025	0.034	-0.727	0.468
The ratio of book value to market value (BTM)	-0.106	0.074	-1.429	0.155
Percentage of institutional ownership (INOWNER)	0.000	0.145	-0.001	0.999
Coefficient of determination	Moderated Coefficient of determination	Durbin–Watson statistic	Fisher statistic	Significance level
0.201	0.167	1.960	5.882	0.000
FD = β0 + β1 Optimism Bias +β2 SIZE+ β3 LEV+ β4 ROA+ β5 BTM+ β6 INOWNER+ε				

Table 8 presents the results of the fifth hypothesis test. According to the value of F statistic at the level of all companies, which is equal to 5.200, the pattern is statistically significant at the significance level of 95%. In addition, given Durbin-Watson's statistic value of 1.970, the existence of sequential autocorrelation in regression disturbance components is ruled out. The value of R2adj is equal to 0.147. Moreover, according to this value, 14.07% of the dependent variable changes can be predicted by independent and control variables. As a result, the significance of the variable of managers' loss avoidance bias indicates that this bias leads to financial distress. In other words, according to the coefficient of loss avoidance bias, it can be concluded that no matter how much the slope of the loss avoidance bias of managers moves towards positive numbers, the financial distress in the company will increase.

Table 9 presents the results of the sixth and last hypothesis test. Based on the value of F statistic at the level of all companies, which is equal to 6.316, the pattern is statistically significant at the significance level of 95%. Moreover, given Durbin-Watson's statistic value of 1.962, the existence of sequential autocorrelation in regression disturbance components is ruled out. The value of R2adj is equal to 0.179; hence, according to this value, 17.09% of the dependent variable changes can be predicted by independent and control variables. According to Table 9, the significance of the variable of managers' regret avoidance bias indicates that this bias leads to financial distress, that is, it can be concluded that no matter how much the slope of the regret avoidance bias of managers moves towards positive numbers, the financial distress in the company will increase.

Table 8 - Summary of testing hypothesis 5 of the study:
The scale of the loss avoidance bias of managers leads to the creation of financial distress

Variables	Coefficients	Standard error	*t* statistic	Significance level
Constant	2.647	0.588	4.500	0.000
Over trust bias	0.142	0.061	2.314	0.022
Size of the company (FSIZE)	-0.062	0.021	-3.033	0.003
Financial leverage (LEV)	0.338	0.155	2.178	0.031
Equity rate of return (ROE)	-0.013	0.035	-0.383	0.703
The ratio of book value to market value (BTM)	-0.104	0.075	-1.373	0.172
Percentage of institutional ownership (INOWNER)	0.042	0.147	0.289	0.773
Coefficient of determination	Moderated Coefficient of determination	Durbin–Watson statistic	Fisher statistic	Significance level
0.182	0.147	1.977	5.200	0.000
FD = β0 + β1 Loss Aversion Bias +β2 SIZE+ β3 LEV+ β4 ROA+ β5 BTM+ β6 INOWNER+ε				

Table 9 - Summary of testing hypothesis 6 of the study:
The bias scale of managers' organizational regret avoidance leads to financial distress

Variables	Coefficients	Standard error	*t* statistic	Significance level
Constant	2.756	0.572	4.823	0.000
Over trust bias	0.197	0.059	3.323	0.001
Size of the company (FSIZE)	-0.069	0.020	-3.418	0.001
Financial leverage (LEV)	0.373	0.153	2.440	0.016
Equity rate of return (ROE)	-0.029	0.034	-0.860	0.391
The ratio of book value to market value (BTM)	-0.099	0.074	-1.332	0.185
Percentage of institutional ownership (INOWNER)	0.100	0.146	0.686	0.494
Coefficient of determination	Moderated Coefficient of determination	Durbin–Watson statistic	Fisher statistic	Significance level
0.213	0.179	1.962	6.316	0.000
FD = $\beta 0 + \beta 1$ Regret Aversion Bias +β2 SIZE+ β3 LEV+ β4 ROA+ β5 BTM+ β6 INOWNER+ε				

5. Discussion and Conclusions

Because the general condition of any company is a direct result of the decisions of its managers, and as managers have judgments and feelings in their decisions that will affect the overall condition of the company, it is important to consider the fact that when managers engage their personal feelings and moral norms in business decisions, their personal judgments and cognitive-emotional biases may affect the outcome of their decisions, and the outcome of their decisions may differ from the outcome of rational decisions. Such managers insist on their wrong decisions and spend a lot of time and money that is problematic for the company whose damage will be irreparable and may cause financial distress and might lead the organization to destruction. Therefore, based on the evidence obtained from the research hypotheses in the current study, the results of the financial distress caused by each bias can be expressed as follows:

In over trust bias, managers exaggerate their capabilities, including their predictive power, perceptual perception, and knowledge, and expose the company to irreparable risks in the face of a financial distress. Armistead (2014) believes that if the more expertise in people, the more they are exposed to this type of bias. In the illusion of control bias, managers assume that they can control consequences, when in fact this is not the case, and they might cause incurable damages to the company. Consistent with such results, Rajagopalan and Gurusamy (2015) showed that the more managers feel that they are in control of operations, the more risk the company might face.

In a conservative bias, managers trust their predictions and ignore new information; therefore, they are inflexible when confronted with new information and would risk the company's interests. Saeedi and Farhanian (2011) also believe that managers who suffer from this bias due to lack of speed in responding appropriately, are always behind the market and cause losses and loss of profitable opportunities in the company.

In the optimism bias, managers tend to be overly optimistic about their markets, economies, and performance potential, and the organization may be on the verge of collapse and financial distress. In the loss avoidance bias, managers' tendency to avoid losses is more intense than their attraction to profit, and in the long run, they cause irreparable damages to the organization. Thaler (2015) also believes that the result of this bias will be excessive risk aversion of managers. Of course, in practice, the opposite of what the manager wants is achieved, that is, the risk increases while the return remains low. In regret avoidance bias, managers do not make any decisions to change the organization's misguided strategies to get the organization out of distress. Consistent with this result, Shiller (2000) also showed that managers, in order to avoid accepting mistakes and realizing losses, remain loyal to their harmful situations and decisions for a long time.

According to the results of the current study, there is a statistically positive and significant relationship between the indices of cognitive-emotional biases (i.e., over trust, control illusion, conservatism, optimism, loss avoidance, and regret avoidance) and financial

distresses of companies listed on the Tehran Stock Exchange. The results of the current study are compatible with the results of the studies by Jia et al. (2014), Schrand and Zechman (2012), Shiller (2000) and Anderson and Lenos (2007), all indicating that managers' cognitive-emotional biases will lead to financial distress and weakening of the level of performance of the company (Murphy, 2012).

According to the results of this study, based on which cognitive-emotional biases will affect the financial distresses of any company, controlling the biases of managers seems necessary. Therefore, it is suggested that companies must draw managers' attention to the point that paying attention to the basic needs of the organization, shaping and strengthening the corporate governance system, monitoring the performance of managers, creating a mechanism for criticism and suggestions, strengthening the working group in the organization, employing ethical managers, setting a goal for the company and making rational decisions are among the solutions to reduce the effect of bias and preventing wrong decisions of managers on the performance of the organization and preventing the occurrence of financial distresses.

References

1) Anderson, N. L. & Lenos T. (2007). Managerial discretion in distressed firms. The British Accounting Review, 39(4), 323–346.
2) Armistead, N. (2014). Comparative analysis of individual investor portfolios based on behavioral finance and efficient market theories. North central University.
3) Babajani Mohammadi, S., Mortazavi, S., Maharati, Y., Tehrani, R. (2017). Identifying the main biases of investors in the capital market of Iran: A meta-analysis study. Iranian journal of management sciences, 12(46), 61-80.
4) Frino, A., Lim, M. Y., Mollica, V., & Palumbo, R. (2015). CEO narcissism and earnings management. Retrieved from http://ssrn.com/abstract= 2539555.
5) Gholipor, A., Khanifar, H., Fakheri Koozeh kanan, S. (2009). Effects of manager's narcissism on organizational disturbance. Organizational Culture Management, 6(18), 79-93.
6) Gilbert, L. R., Menon, K., & Schwartz, K. B. (1990). Predicting bankruptcy for firms in financial distress. Journal of Business Finance & Accounting, 17(1), 161-171.
7) Haselton, M. G., Nettle, D., & Murray, D. R. (2015). The evolution of cognitive bias. The handbook of evolutionary psychology, 1-20.
8) Jia, Y., LENT, L. V., & Zeng, Y. (2014). Masculinity, testosterone, and financial misreporting. Journal of Accounting Research, 52(5), 1195-1246.
9) Kordlouie, H., Dashti, N., Seifollahi, R. (2015). A comparative survey onbehavioral factors on financial assets investment. Journal of Investment Knowledge,4, 33-52.
10) Lovallo, D., & Kahneman, D. (2003). Delusions of success. Harvard business review, 81(7), 56-63.
11) Murphy, P. R. (2012). Attitude, Machiavellianism and the rationalization of misreporting. Accounting, Organizations and Society, 37(4), 242-259.
12) Nikoomaram, H., & Varzamanai, Z. (2009). Investigating the relationship between financial crisis prediction patterns (Study patterns: Altman and Dickin). The financial accounting and auditing researches, 62-80.
13) Novinnam, Gh., Shokrkon, H., & Mehrabizadeh Honarmand, M. (2011). Investigation of relationship between personal characterizes and managers leadership styles. Educational and Psychological Sciences Journal of Shahid Chamran University of Ahvaz, 3&4: 87-106;
14) Olsen, K. J., & Stekelberg, J. (2016). CEO narcissism and corporate tax sheltering. The journal of the American taxation association, 38(1), 1-22.
15) Opler, T. C., & Titman, S. (1994). Financial distress and corporate performance. The Journal of finance, 49(3), 1015-1040.
16) Pompian, Michael M. (2006). Behavioral Finance & Wealth Management,Published by Jon Wiley & Sons , Inc., Hoboken , New Jersey.
17) Raei, S., & Fallahpour, S. (2004). Behavioral finance. A different approach in financial arena, Tehran University Financial Researches Quarterly, 18, 77-106.
18) Rahnamarodposhti, F. (2013). Behavioral management accounting (Innovative, value-creating and applied approach). Islamic Azad University Publications - Printing and Publishing Organization.

19) Rahnamarodposhti, F., & Tajmir Riahi, H. (2014). Modeling the effect ofbehavioral bias on capital market stagnation based on the interpretive-structural approach of ism. Financial engineering and securities management, 19, 111-130.
20) Rajagopalan, P., & Gurusamy, S. (2015). Behavioral biases and perception of retail investors in stock market-an empirical approach. Sumedha Journal of Management, 4(1), 113-140.
21) Saeedi, A., & Farhanian, S.M.J. (2012). Fundamentals of behavioral economics and finance. Stock Publications affiliated with the Exchange Information and Services Company.
22) Schrand, C. M., & Zechman, S. L. (2012). Executive overconfidence and the slippery slope to financial misreporting. Journal of Accounting and economics, 53(1-2), 311-329.
23) Shaeebi, F. (2013). Narcissism personality. Tehran: Sabz Publications.
24) Shiller, R. J. (2000). 2000: Irrational exuberance. Princeton, NJ, Princeton University Press.
25) Suresh, A. (2013). Understanding behavioral finance through biases and traits of trader vis-à-vis investor. Journal of Finance, Accounting and Management, 4(2), 11-25.
26) Thaler, R. H., & Ganser, L. J. (2015). Misbehaving: The making of behavioral economics. New York: WW Norton.