

## THE INFLUENCE OF BEHAVIORAL FEATURES OF THE MANAGERS UPON FINANCING OF THE COMPANIES ADMITTED IN TEHRAN STOCK EXCHANGE

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### ABSTRACT

One of the most significant duties encountered by the managers of an enterprise is decision-making. Just like other individuals of the society, the managers have specific individual differences, talents, motivations, inclinations and desires and enjoy from different attitudes, knowledge and value system which can be influential upon the financing policies.

The present research deals with review of the influence of the managers' optimism upon the financing policies and its consequences upon the companies admitted in Tehran Stock Exchange

Regarding the purpose, this is an applied research and with respect to the execution, it is descriptive-correlational. In line with this goal, the information of 125 companies in Tehran Stock Exchange during a time period of 2015-2019 were studied. In this research, in order to measure the management overconfidence, the three metrics based on the managers' bias in prediction of the revenue, investment decisions made by the managers and the investment were used. To test the hypotheses, the multivariable regression with combined data were used.

The research findings indicated that the managers' optimistic behavioral features resulted in an increase in managers' use of financing patterns through the lever of debt in the companies admitted in Tehran Stock Exchange

**Keywords:** Revenue Error, Managers' Optimism, Debt Structure, Leverage, Overinvestment

### INTRODUCTION

The subject of debts structure is one of internal issues of the companies; however, since the company's financing decisions are related to its surrounding environment, the conditions and status of the capital market have some influences over the debt structure decisions. Many factors such as the agency's troubles, information asymmetry, the size of the company, financial distress and etc. are influential over decision-making of the managers of an enterprise. Since the overconfident managers overestimate the profitability of their enterprise and are optimist toward it, they feel that the capital market, values their securities less than what they really value. For this reason, in cases where their enterprise needs to be financed, they prefer to finance by issuing bonds instead of release of shares[1]. In this case, Heaton argues that the overconfident managers may undervalue the price of the securities market issued by the companies, and consequently they are not willing for external financing[2].

When the companies intend to have external financing, they might imagine that the costs of release of shares are much more than the costs of issuing bonds; therefore, they prefer debt financing; because, they believe that the price of shares expresses more sensitivity to the market's expectations rather than the price of the bonds. Furthermore, Hackbarth declares that the overconfident managers are more willing for debt financing; because they believe that the companies are often profitable or have less profits[3]. According to the results of a research conducted by Malmendir et.al, the overconfident managers are willing for debt financing rather than issuing bonds; because they believe that the bonds value less than debt, and it results in a leverage more. Generally, most of researches have indicated that the overconfidence is one of personality features of the managers which has influences on decision-makings in the company [1].

By conducting researches in this section, we can attain a clear comprehension of the manner of effectiveness of the managers' behavioral features upon financing methods, and also evaluate its effectiveness. Also, with regard to little knowledge of the academic community on this subject and shortage of information resources, conducting this research

can have a contribution, even if a small one, in enriching information about this subject, and it may ground for conducting more researches on this subject in the future. Since conducting this research can be an incentive for interest in conducting more researches in this regard, the obtaining results enable the researchers as both the behavioral researchers and professional accountants, not only to identify the managers' problems and behavioral challenges encountered by the company despite the agency troubles, to others, but also to analyze the manner of dealing with them and solving them. The results of this research, providing a scientific comprehension of the manner of effectiveness of the managers' behavioral features as well as the stock exchange may be useful for different groups including the investors in financial markets, stock exchange managers, portfolio managers, brokers, financial analysts and capital market researchers as well as the companies' directors at the stock exchange.

Therefore, by considering the abovementioned items, the main research question is that if the managers' behavioral features are influential upon the financing patterns of the companies that are active in Tehran Stock Exchange.

### **Thematic Literature Review**

One of the most important researches encountered by the managers of the enterprises, is the financing-related decisions. Financing is one of the essential components of operation at each enterprise. In this regard, the managers of an enterprise decide which of financing methods to use. Many factors such as agency troubles, asymmetry of information, size of the company, financial distress and etc. can be effective on decision-making of the managers of an enterprise. In addition to such issues existing in the companies, a number of personality features of the managers are counted as significant subjects in decision-makings inside the companies[4].

As a matter of fact, the financial psychology is proposed in contrary to the logical paradigm of the investors, that is the basis and foundation of all the presented financial patterns. Taler believes that sometimes to find a solution for experimental financial dilemmas, we need to come along with this possibility that sometimes some of factors in the economy do not act completely wisely and this is the financial – behavioral issue. This approach of the psychology has been used to perceive the behaviors of the investors and the markets and to understand the psychological aspects of the individuals' behavior at financial markets. Up to this time, various behavioral factors in financial decision-makings have been proposed. One of the most important behavioral disorders is overconfidence[5]. Overconfidence is one of the most important findings of psychology in domain of judgment and decision-making. The researchers found out that the individuals overstate their capabilities including their prediction power, information perception and their knowledge; in other words, they are overconfident to their capabilities and their knowledge; Of course, they may not to express this internal feeling or even be unaware about it. Generally, overconfidence or excessive self-confidence are summarized as a baseless believing in perceptive capabilities, judgments and intuitive reasoning of the individuals. The notion of overconfidence has been reviewed through a widespread set of psychological inspections and examinations in cognitive form, and it indicates that the individuals have overestimation both for their abilities in prediction and for the precision of the information provided for them. On the other hand, they have a weak performance in estimating the probabilities, and consider the events as imminent which have a contingency much less than a hundred percent[6], [7].

The trait of overconfidence in managers has influences on the manner of identifying the interests, losses and the book amount of the assets and the debts. The overconfident manager overestimate the future interests arising from the company's investment projects; therefore, they may postpone identifying the losses and have optimistic estimations in determining the value of current or longtime properties and by choosing an inappropriate and inefficient project, they may use the existing resources in a wrong context and waste them and in this way the company is led toward overinvestment (investment in the projects with negative current net value) or toward underinvestment (as a result of losing the resources due to investment in inappropriate or inefficient projects and losing the opportunity of investment in appropriate projects with positive current net value)[8].

In former researches, a number of pioneering theories for foundations related to the debt maturity structure were presented including the agency expenses theory; leverage, maturity compliance, tax and signaling theory[9].

The first group of theories about the debt maturity structure considers the agency expenses as an important indicator in determining the debt structure. The agency issue is one of common issues in the market resulting from the conflict of benefits of the managers and the owners. The managers of private joint stock companies might follow their personal goals and it is necessarily not aligned with the goals of the shareholders out of the company. The agency issues between the managers and the shareholders result in extreme investment and it may be manifested in the form of extreme tendency of the managers in managing the great companies. Those managers who worry about their reputation in the

labor market might have motivations to take some actions resulting in their short-term performance improvement and their long-term performance expenses[10].

Lialand and Taft explained that the companies with more leverage, tend to choose a longer debt maturity and vice versa. An optimized leverage depends on the debt maturity and when the company is financed through the short-term debts, the enterprise value decreases drastically. They argued that due to lack of any costs, the short-term debt does not create any tax saving interests and it just increases the company's risk and put a negative influence on the enterprise value. Muoris also argues that the companies with higher rate of debts are more willing to distribute long-term debts so that they are put at the bankruptcy risk with a longer delay[11]. Also the ownership and agency theories predict the negative effect of the debt's maturity structure; therefore, the influence of the leverage upon the debt maturity is still unknown. The researches have shown different results about the relation between the leverage and the debt maturity. Flannery showed that the companies with higher amount of debts, may make least the risk of their refinancing by borrowing long-term debt. Denis et.al. argue that the leverage shall have a negative influence on the debt maturity; because the agency expenses may put down the problem of under-reality investment through the two strategies of decline of leverage or shortening the debt maturity. The two strategies can be used interchangeably[12].

The overconfident managers overstate the probability and the influence of desirable events in the company's cashflow and underestimate the probability and influence of the negative events. It may result in the managers' bewilderment in adopting financing methods; such that the managers always imagine that their companies are undervalued with respect to the reality. The overconfident managers wrongly believe that by adopting the debts with shorter maturities, they can increase the shareholders' wealth. That is because the overconfident managers consider the probability of this issue excessive that by the time of receiving (reaching) good and desirable news in the future, using the short-term debts with lower costs, new financial resources can be supplied. They also over-believe in the good news resulting in a positive cashflow and in this way they overestimate the input cashflow and they think that they can reimburse the short-term debts; therefore, they use this type of debt to decrease the cost of capital.

The overconfident managers, due to a false self-confidence, overestimate the future earnings of the projects of the trading unit; therefore, they may overestimate the probability of happening and effects of the positive shocks of the future cashflows arising from such projects and on the other hand they might have an underestimation of negative shocks. They believe that the trading unit under their management has been undervalued at the capital market; therefore, if the trading unit needs to be financed, they prefer issuing bonds rather than distributing the shares and by adopting a debt with shorter maturity they can increase the wealth of the shareholders. The overconfident managers believe that the wrong valuing is more prevalent for the long-term debt, in comparison to the short-term debt; therefore, the overconfident managers believe that by using the short-term debt (to minimize the influence of a wrong valuing) together with a less expense by the time of receiving good news in the future, they can finance new financial resources. The overconfident managers with a higher probability, overestimate the company's success in future; because they believe that they have some confidential information of which the market is still unaware. While a company has some confidential information about the predictions, the securities are not valued correctly in the market. Such false valuing is more severe for the long-term debts in comparison to the short-term debts, and on this basis, the overconfident managers prefer the short-term debt to minimize the influence in false valuing; because, such managers believe that by the short-term debts at lower expenses, they may be able to finance at a time by having the positive news. The predictions of this research are like the predictions of Malmendir et.al in which the managers' overconfidence results in the belief that valuing the rights of the shareholders with respect to the debt is more likely to be mistaken, and in case accessing to foreign financing, the overconfident managers prefer the debt to the shareholders' rights. If the shareholders' rights are considered as the lifelong debt, the overconfident managers seem to prefer the short-term debt to long-term debt and the long-term debt to lifelong debt (the shareholders' rights)[13].

In this direction, the most important studies conducted in this domain are discussed as follows:

HE et.al in their essay reviewed the influence of excessive self-confidence of the managers in internal financing selection and the return on investment (investment scale, large investment and small investment) using a sample of the companies in Shanghai Stock Exchange, China and Shenzhen Stock Exchange as of 2010 through 2015. They made it clear that the internal financing can result in improvement of the business opportunities and a decline in shortage of capital; however, it might result in overinvestment, particularly in the companies with overconfident manager. The problem of overinvestment is more related to overconfidence of the managers in governmental companies rather than the nongovernmental companies[14].

Ying et.al, in a research reviewed the relation between the managers' overconfidence, internal financing and the return on investment. During the time span of 2010-2015, this research was conducted using the Chinese companies' data. The findings of this research indicated that the managers' overconfidence has a meaningful influence over the internal financing and the return on investment. Yijunand Yinb, in a research, reviewed the influence of relying on the financing expenses. This research was conducted over 22 countries during the time span of 20 years. The findings of this research indicated that trust has a meaningful influence over the countries' financing expense.

In this regard, Huang et.al argue that the management's overconfidence has a meaningful influence on the debt maturity. Experimentally, they indicated that the companies with overconfident managers, by choosing a higher percentage of the short-term debt, adopt a shorter debt maturity structure.

Furthermore, in a research with the title of "The financial-behavioral influence (trust, optimism, and pessimism) on the capital market of the emerging companies, and through the daily data of the stock market index of Brazil and Romania, Aprin and Tansesco, came to this conclusion that the turnover on Romania is mostly influenced by the pessimism and in Brazil it is influenced by the optimism. Dhaoui and Khraief in 2014, reviewed the influences of the pessimism and optimism on the turnover and the market trend and came to this conclusion that although such attitudes are more influential upon the market trend, they have some influences over the turnover as well[15].

### Development of Hypotheses

Some researches argue that the management's overconfidence has a meaningful influence on the debt maturity. Experimentally they indicated that the companies with overconfident managers, by choosing a higher percentage of short-term debt, adopt a shorter debt maturity structure. In this regard, using the data gathered from different Latin America's countries, the researcher, through his research, could not find any relations between the size of the company and the debt maturity; however, in USA, the researcher observed a negative relation between the size of the company and the debt maturity. Gomariz, M, C., and Ballesta studied the influence of financial reporting and the debt maturity in the investment efficiency. The results of their research indicated that an increase in financial reporting's quality and a decline in debt maturity, promote the investment efficiency[16]. Kirch, G., and Terra studied the effective factors on debt maturity of the companies in south America. The results of their research indicated that the companies' business risk and the tangible assets proportion has a major and positive influence on their debt maturity. The financial development level is, generally, not related to the debt maturity[17]. Muradoglu et.al reviewed the debt maturity in European Union companies. They came to this conclusion that the European Union companies are moving toward financing through the shareholders' rights, and such companies take the highest advantage from the short-term debts. Ortiz, M. H., and Penas believe that the credit-grantors use shorter maturities to supervise over the venturesome credit-receivers[18]. Such ventures are, particularly, more evident in bank financial systems that is an environment where more loan-receivers are exposed to the bank regulations and rarely use issuing bonds for financing. Stephan et.al indicated that the companies that are more exposed to financial pressures and limitations, have more sensitivity to debt determinant factors[19]. Furthermore, the companies with less financial limitations stand against the decrease in debt maturity through the agency costs; while, the companies under serious pecuniary pressures, are more exposed to the liquidity risk.

Like Malmendir et.al, other studies considered the management's overconfidence as a significant factor in describing the company's financial decisions. Considering that the overconfident managers believe that their companies are valued less than what they really value, they consider the interorganizational financing as costly and they excessively rely on intraorganizational financing. This attitude of the managers disrupts their investment decisions as well; because, when they have a large amount of internal funds, they get through fearless investments; however, when they are required to have interorganizational financing, they invest cautiously; in other words, the overconfidence results in a decrease in investment efficiency. Hackbarth, came to this conclusion that the managers' overconfidence has influences on the decisions made for the company capital structure and the overconfident managers prefer financing through issuing bonds rather than issuing shares; because they believe that their enterprise is more profitable or low risk.

Thereupon, we can compile the research's hypotheses as follows:

- The manager's profit estimation error is influential on the company's debt structure.
- An increase in manager's interment costs, is influential on the company's debt structure.
- The managers' overinvestment, is influential on the company's debt structure.

## Research Methodology

### 4.1. Statistical Society and Sample Size Determination

Our statistical society in this research includes all the companies admitted in Tehran Stock Exchange as of 2015 through 2018. The sampling method is exclusion screening. The companies chosen for sample size determination shall have the following particulars:

*Table 1: Sample Determination*

Description	Number
The companies admitted into Tehran Stock Exchange up to end of Iranian year 1398 [corresponding to Mar 19, 2020]	714
The companies which left the stock exchange during the course of time of the research	13
The companies which entered into the stock exchange during the course of time of the research	29
The companies whose fiscal year do not end on March 19 <sup>th</sup> during the course of time of the research	131
The companies whose fiscal year are changed during the course of time of the research	47
The companies occupied with investment and financial intermediation during the course of time of the research	31
The companies which have a transactional interruption for more than three months during the course of time of the research	47
The companies lacking the information required by the research	291
<b>Total</b>	125

As it can be seen from the above table, a total of 125 companies were selected as the size of the statistical society.

### Data-gathering Method

In this research, in order to study the theoretical foundations and for literature review, the library research method was used, benefiting from the Persian and Latin specialized books and articles and the theses. As the information related to the variables of this research includes most of accounting items written in audited financial statements of the banks, the required data are extracted manually from the financial statements existing at the websites of the management of research, development and Islamic studies affiliated with the Security and Exchange Organization of Iran at [www.rdis.i](http://www.rdis.i); the Codal network, the publishers comprehensive informatics systems at [www.codal.ir](http://www.codal.ir); The Financial Information Processing of Iran at [www.fipiran.com](http://www.fipiran.com) and the DVDs of the Security and Exchange Organization of Iran, which seem to have more authenticity comparison to other existing resources. Also, the other information related to the financial statements of the companies were gathered up from the databank of the Security and Exchange Organization of Iran as well as the RahavardNovin software which are in PDF and Excel formats.

### Information Analysis

To analyze the information, the data are initially analyzed through the descriptive statistic such as the mean and standard deviation and the correctional coefficient; and then for the statistical tests, the linear regression model was used through the ordinary least squares. It is noteworthy that in order to test the research hypotheses, a multiple linear regression was used. To make sure about the interpretation of regression equations, the infrastructural hypotheses used in this research were reviewed. Before execution of the multiple linear regression test, a number of presuppositions (classic suppositions) must be examined first. The research data were analyzed through the EViews software.

### Regression Model of the Research

In this research, in order to review the research hypotheses, the following regression model was used.

Model 1: The influence of the managers' behavioral features on the financing pattern through the debt.

$$DT_{i,t} = \alpha_0 + \beta_1 BFM_{i,t} + \beta_2 Size_{i,t} + \beta_3 G_{i,t} + \beta_4 B / M_{i,t} + \beta_5 ROA_{i,t} + \beta_6 LIQ_{i,t} + \varepsilon_{i,t}$$

In the above model:

- 1) DT represents financing through debt
- 2) BFM represents the behavioral features of the managers
- 3) Size represents the size of the company.
- 4) B/M represents the proportion of the book value as compared to the market value of the shares
- 5) ROA represents the revenue of assets

### Research Variables Measurements

- **The Dependent Variable**

#### **The Financing Pattern of the Company**

In this research, in order to assess the financing pattern of the company, the required information was gathered through dividing total debts of the company in total assets of the company.

- **Independent Variable**

#### **Behavioral Features of the Managers**

In order to test the research's hypotheses, and to calculate and measure the overconfidence of the managers, the three standards were used. Such standards are based on the managers' investment decisions. Some researchers indicated that the companies' investment decisions are related to the managers' overconfidence. This subject makes it clear that such decisions may include the future information amount the level of overconfidence.

- 1) Profit Estimation Error

The profit of each share, is one of very important factors taken into consideration by the investors and financial analysts. EPS is calculated by division of the dividends after deduction of the company's tax which represents the dividend of a company attained during a specific course of time in exchange for an ordinary share. In this research, if the real ESP is more than an ESP anticipated by a company, it receives the number of zero and represents lack of overconfidence of that company's managers; otherwise, if the dividend of each real share is less than the dividend of each anticipated share, it receives the number 1 in addition to the fact that it represents the managers' overconfidence. This variable was driven from the studies conducted by Pilg, Morse and Renders.

- 2) Increase in Investment Costs

To calculate the companies' investment costs, the Ahmad and Dolman's model was used. This model divides the fixed tangible assets into total assets of the company and then it obtains the median of the results achieved from all the companies and on this basis, among all the companies it compares the investment costs proportion to the obtained median and if the obtained value is greater than the median, it represents the overconfidence of the managers in that company and it receives the number 1, and if it is less than the median, it receives the number zero and represents the managers' overconfidence in that company. This standard is based on the findings of Ben David et.al, Malmendir, and Tate, who made it clear that the investment costs are greater in the companies with overconfident managers.

- 3) Overinvestment

The regression analysis is a technique for reviewing and modeling the intervariable relation and it is used as a recession to an average value or a mean; i.e. some phenomena gradually tend to an average amount, quantitatively. Following the Sherund and Zechman, the overinvestment was chosen. The factor indicating the extent of investment in the assets is obtained from the remainder of regression of overall growth of the assets to overall sales. If the regression remaining error obtained from a company is greater or equal to zero, the managers' overconfidence in that company is confirmed and receives the number 1, and if a company's regression remaining error is negative, it indicates lack of managers' overconfidence in that company. Using this factor is on this basis that in companies where the assets grow up with a rate higher than the sale, the managers invest more in the company in comparison to their counterparts. To calculate this factor, the Richardson's model has been used:

$$\text{Model 2: } \text{Inv} = \alpha_0 + \beta_1 \text{ Grow} + \beta_2 \text{ Control} + \sum_{i,t}$$

The proportion of change in total net fixed assets, long-term investment and intangible assets over to the overall average of the assets of company *i* in the year *t*.

Grow: Growth rate of income of company *i* in the year *t*.

: includes the control variables. These variables include:

Lev: Total debt divided by total assets in the fiscal year.

Cash: the cash and short-term investment divided by the mean assets in year *t*-1.

Age: The ratio of the company’s investment years logarithm to the mean assets in year *t*-1.

Size: the natural logarithm of the assets of the beginning of the year.

Return: annual revenue of the shares purchased in each year.

Lag (*l*): the investment time interval

- **Control Variables**

**The Size of the Company:** through the natural logarithm, all the company’s assets are obtained

**The Proportion of the Book Value as Compared to the Market Value of the Shares (B/M):** The proportion of the book value as compared to the market value of the shares is obtained through the book value as compared to the market value of the shares as follows:

$$BM(it) = \frac{[TA(t) - TD(t)]}{[MP(t) \times NS(t)]}$$

In the above equation:

BM: the proportion of the book value as compared to the market value by the end of the year *t*

TA: The total company’s assets by the end of the year *t*

TD: The total company’s debt by the end of the year *t*

MP: The share’s price at the latest transaction of the year *t*

NS: The number of ordinary shares available for the shareholders by the end of the year *t*

**Revenue of Assets (ROA):** the revenue of assets is obtained by dividing the net profit by the total properties at the beginning of the year.

**Findings’ Analysis**

The table 2 shows a summary of the descriptive statistic features related to the variables used in this research for the companies studied upon in this research. The reported statistic includes the central indices and standards namely the mean, the median; the dispersion indices namely the standard deviation, skewness, the minimality and maximality of the variables used in this research:

*Table 2: Descriptive Statistic*

Row	Variable	Number Observations	Mean	Median	Minimality	Maximality
1	Financing Structure	625	0.435	0.587	0.033	0.93
2	Managers’ Behavioral Features	625	0.256	0.0114	-0.014	0.684
3	Size of the Company	625	9.687	5.663	3.553	9.873
4	The proportion of the book value as compared to the market value	625	0.243	0.201	-1.224	0.654
5	Assets’ Revenue	625	0.254	0.176	0.005	0.982

In this research, the Breusch-Pagan LM test is used to test the inequality variance in regression models. This correlational test, reviews the variance of residual terms obtained from the linear regression into the model explanatory variables values. With respect to our concerning level of confidence, we obtain the critical values corresponding to these statistics from the concerning distribution tables; if these statistics' values exceed the critical values, the null hypothesis which implies the homogeneity variance is overruled. Thereupon, it can be said that the residual terms have a meaningful relation with the X explanatory variables; therefore, we have the homogeneity variance.

**Table 3: Homogeneity Test Results**

Description	Statistic Value	Degree of Freedom	Probability
Breusch-Pagan LM Test	788,3390	5893	0.000

Considering that these tests' statistic is at a meaningful level of 5%; the variance homogeneity hypothesis is overruled and the error terms variance inequality is approved. It is resulted from the break of the following hypothesis:

$$Var(U_i) = \delta^2 I$$

Such a problem in the regression makes the OLS results not to be the most efficient. To solve the abovementioned problem, the generalized least squares (GLS) method is used.

The F-Limer test is used to examine the equality of different cross-sectional y-intercepts coefficients, the results of the two tests are shown in the following tables.

**Table 4: The F-Limer Test Results**

Description	Statistic Value	Degree of Freedom	Probability
F-Limer	<b>5.398</b>	<b>(106,412)</b>	<b>0.001</b>
Cross-section Chi-square	<b>512.88'</b>	<b>126</b>	<b>0.001</b>

Considering that the p-value obtained from the F-Limer test is equal to zero, the zero hypothesis is overruled (p-value  $\leq$  0.05) and the panel data method is admitted.

To examine the research hypothesis, the regression model No. 1 with combined data together with the fix effects model were used, the summary of the obtained results is presented in table No. 5 through the EViews software:



**Table5:** Regression Model Analysis Results

Independent Variable	Coefficient	Standard Error	T Statistic	P-Value	Type of Relatio	Meaningfulness Level
y-intercept	1.347	0.252	5.778	0.0000	Meaningful	99%
Managers' behavioral features	0.237	0.053	5.656	0.0004	Meaningful	95%
Size of Company	0.153	0.360	6.566	0.001	Meaningful	95%
The proportion of book value as compared to the market value of the shares	0.076	0.042	5.663	0.0000	Meaningful	99%
Revenue of Assets (ROA)	0.276	0.363	2.213	0.0441	Not Meaningful	--
	<b>Determination Coefficient</b>	<b>Adjusted Determination Coefficient</b>	<b>Deviation from the Regression Mean</b>	<b>F-Statistic</b>	<b>F-Statistic Probability</b>	<b>Durbin-Watson</b>
Statistic	0.765	0.657	0.199	8.767	0.0001	2.035

With respect to the results obtained from the regression model exam, according to table 5, it can be observed that the P-value related to the F-statistic which indicates the meaningfulness of the whole regression, is equal to 0.001, and it means that the model is at the meaningfulness confidence level of 95%. The adjusted  $R^2$  is equal to 0.657, and it indicates that almost 66% of the changes of dependent variable with independent variable of the model can be explained and it implies the explanatory power of this regression.

As it can be seen in the above table, the independent variable coefficient (the managers' behavioral features) is equal to 0.237 and its meaningfulness level (Prob) is equal to 0.0004. concerning the t statistic and the P-value of this variable, the results indicate the meaningfulness of this coefficient at an error level of 1. Such findings indicate that the manager's behavioral features have a meaningful influence over the financing pattern through the debt in the companies which are active in Tehran Stock Exchange. As a result, the hypothesis of the research is approved.

## Discussion and Conclusion

The main purpose of this research is to assess the relation between the managers' behavioral features and the financing patterns of the companies that are active in Tehran Stock Exchange. As it became clear through the analysis results, the managers' behavioral features have a meaningful influence over the financing patterns through the debts in the companies active in Tehran Stock Exchange. As a result, the hypothesis of the result was approved. The findings of this research indicate that the managers with optimistic behavioral features are more eager to use the patterns of financing through the debt; that is, the more the managers have optimistic behavior, the more they use the debt lever for financing the company. The findings arising from the results of this hypothesis are in line with part of results of the researches conducted by Huang et.al (2016); Deshmukh et.al. (2013); Malmendir et.al (2011); Wei et.al (2011) Ishikawa & Takashi (2010).

In explaining the result of this research, it must be said that existence of the feature of overconfidence in the managers, influences the manner of identifying the profit and loss and the book amount of the assets and the debts. The overconfident managers overestimate the future revenues arising from the company's investment projects; therefore, they might postpone identification of the loss, and have optimistic estimations in determining the current or long-term assets of the company; and as a result of choosing an inappropriate and inefficient project, they may use the available resources on a wrong domain and waste them, and in this case, the company is led toward overinvestment (investing in the projects with a negative current net value), or underinvestment (as a result of missing the resources due to investing in inappropriate and inefficient project and missing the opportunity of investing in appropriate projects with positive current net value).

According to the results obtained through the hypotheses of this project, some suggestions are provided hereunder:

- 1) With considering the results arising from the first hypothesis of this research, the financial statements users, including the investors are suggested to analyze the behavioral features of the managers of the companies through the equations presented in this research, prior to making any decision on which company to invest in, and then they can choose the companies with different levers on the basis of their own analysis and evaluations.
- 2) With respect to the results obtained from the second hypothesis of this research, the Tehran Stock Exchange is suggested to issue the information and the results of this and the similar researches concerning the factors influential over the financing patterns of the companies admitted in Tehran Stock Exchange, for the shareholders, so that those shareholders can use these results in making their decisions for their investments.

Furthermore, with respect to the experiences achieved by the researcher in the process of execution of this research, the following suggestions are presented to conduct the subsequent studies in domain of the subject of this research.

- 1) Other researchers are recommended to follow up this subject through conducting similar researches in other countries in different time intervals, for a better understanding and clarification.
- 2) It is suggested to review the managers' behavioral features in managing the benefits and risk-taking of the companies admitted in Tehran Stock Exchange.

It is noteworthy that in conducting every kind of research, the research encounters a series of limitations and in this research, the research limitations were as follows:

- 1) The timespan of the present research was from 2014 through 2019; therefore, we must act cautiously in generalization of the results to other courses of time.
- 2) The influences arising from the difference in accounting methods, in measuring and reporting the financial events may have some influences over the results for which no adjustment has been done.
- 3) No adjustment was performed with respect to inflation in financial statements.

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