Arabian J Bus Manag Review (Kuwait Chapter)
DOI: 10.12816/0052839

An Open Access Journal
• ISSN: 2617-3018

Arabian Journal of Business and Management Review (Kuwait Chapter)

Research Article | Homepage: www.arabianjbmr.com | AGJ

EFFECTS OF OVERCONFIDENT MANAGERS ON THE CAPITAL USING GENERALIZED METHOD OF MOMENTS

Dr. Amirreza Keyghobadi
Department of Accounting, Central Tehran Branch, Islamic Azad University, Tehran, Iran.
Corresponding Author: a.keyghobadi@iauctb.ac.ir
Samira Seif
Faculty Member of Payam Noor University, Nahavand, Iran.
Email: samira.seif@yahoo.com
Somayeh Fathi
Islamic Azad University, Boroujerd Branch.
Email: somayeh.fathi@yahoo.com

ABSTRACT

The purpose of this research study is to investigate the effect of overconfident managers on capital structure. For this study, data from 221 companies listed on Tehran Stock Exchange during the years 2013 to 2017. And using GMM models, the data were analyzed. Also, we tested including influencing variables of tangible assets, profitability, return on assets and firm size as control variables. The results showed that over confidence managers and other control variables have a significant and positive impact on the capital structure of compagnies. These results indicate that as managers' confidence increased coupled with an increase in assets, profitability and firm size, ratio of corporate debt also increased implying that companies borrowed through issuing bonds to finance more of their equity in the capital structure. This paper is one of few studies on the field of behavioral finance on Effects of overconfident managers on the capital structure using generalized method of moments.

KEYWORDS: Tehran, Stock Exchange, overconfidence managers, capital structure, the GMM

1. INTRODUCTION

According to research in finance literature the main reason for the failure of the companies is absence or inadequacy of equity capital for investment and financing. For example, owners of these corporations may choose inappropriate mix of resources (debt versus equity capital), or obtain resources through obligations that have high liquidity restrictions for them or enter into borrowing agreements that impose high cost on them. Therefore, it is possible weaknesses lead to bad investments that threaten the company's survival and life. (Cassar, 2004). Consequently, it is important for the management to be effective in choosing the optimal capital structure. On the other hand, corporate managers as critical decision makers are exposed to cognitive biases and irrational behaviors. This causes to reduce the performance of the managers and consequently the performance of the organization. (Pompain, 2006).

One of the important cognitive biases is overconfidence or too much trust. Overconfidence is the most important findings of psychology in the field of judgment and decision making. It, generally, can be summarized as an unfounded confidence in the abilities of cognition, judgment and person intuitive reasoning. Research shows that managers in decision-making, are more prone to overconfidence. Overconfidence leads to more optimistic assessment in the estimate of the company's success and forecasts of future performance (e.g., earnings). So, how capital structure decisions are made by overconfident managers and rational executives is very important for shareholders. Also, knowing the disadvantages of overconfidence and its effects on financial decisions, managers may reconsider their decisions. While prior studies have investigated the effect of managers' overconfidence on stock return (Davoodi and Jananni, 2016), Internal Controls (Chen et al, 2014), Overconfident Investors, Predictable Returns, and Excessive Trading (Kent and David, 2015), CEO Overconfidence, REIT Investment Activity and Performance (Piet and Erkan, 2015), etc.

There is other study investigating the effect of managers' overconfidence on firms' capital structure, but our objective of this study is to concentrate in development of theoretical literature and determining the effect of

overconfident manager on firms' capital structure with using generalized method of moments which has not been investigated before. In other words, in this study, we try to determine whether overconfident managers have any effect on the capital structure of listed companies in Tehran Stock Exchange. More specifically, we try to test the effect of overconfident managers on the capital structure based on hierarchical theories and parallel static after controlling for the effects of tangible assets, growth, and profitability ratios. The remainder of the paper is organized as follows. In section two, we discuss the theoretical literature followed by research method including the results. In the last section, we summarize the results and conclude the paper.

2. THEORETICAL LITERATURE

2.1 Overconfidence managers

In the traditional model of financial economics, it assumes that decision-makers have rational behavior and always seek to maximize their utility (Hakbars, 2008). But empirical researchers believe that to find answers to these financial problems, one should consider the possibility that the decision-makers may not act rationally. In other words, managers' personality traits are considered as an important factor in decision making (Bertrand and Square, 2003). One of the important features of personality is overconfidence. Overconfidence or over-trust is one of the most important concepts of modern finance that has a special place both in financial theory and psychology. Overconfidence makes managers to overestimate their skills and underestimate the risk. Also, these managers feel that they have control over events, while it may not be so (Falah Shams Lyalstany et al, 2011).

The researchers found that people exaggerate on their capabilities, including the ability to predict, intelligence and knowledge. In other words, they are too trustful about their abilities and knowledge, but May not express this feeling, or even be unaware of it themselves. One of the consequences of overconfidence is that people take credit for their success and attribute the failure to the others (Mashayekh and behzadpour, 2015). Overconfidence concept has been considered in wide range of studies and psychological experiments of cognition. It shows overestimate of their abilities in prediction. In addition they overestimate the information precision. Also, they have poor performance in estimating the probability of events and are more certain about certain events while the probability of such events are often much lower than one hundred percent. In summary, it can be said that they consider themselves to be more intelligent than they actually are, and believe that they have better information. For example, in making decision to invest in a particular company, often ignore expected subsequent loses and, if the company is underperforming, they feel surprise or disappointed (Pompain, 2006)

2.2 Capital structure

Various definitions have been proposed for capital structure. Each of these definitions express an aspect of the method of financing of capital structure. Bolkuyi (1999) introduce capital structure as a general claim on the assets of the company. He defines capital structure as securities issued by public, private investments, bank debt, commercial debt and leases. These different elements of capital structure usually are measured by ratios such as the ratio of debt to total assets, the ratio of equity to total assets and the ratio of debt to equity (Sajjadi and Jamalianpour, 2010). Capital structure is one of the most important components of corporate financing decisions. Decisions related to the company's capital structure has two aspects: First, the amount of capital required and second, the composition of the funding sources. The assumption is that the firm is aware of the amount of investment needed. In such a case, the issue that arises is which financing resources should be used. In other words, how much bonds should be issued or how much of the equity capital should be raised (Vanauken, 2005).

In theoretical literature, different approaches to the capital structure are provided. Two of these theories are the hierarchical theory and the theory of parallel static in finance literature. According to the static balance model, capital structure maximizes the value of the company by balancing between the benefits of interests bearing debt (such as income generated by investing the money and controls by debtholders) and costs associated with debt (such as interest cost, bankruptcy costs, and agency costs of debt). This balancing leads to the optimal capital structure (Hong and Jason, 2006). In this model, capital structure moves to the point that it reflects a tax rate, asset mix, business risk and profitability and bankruptcy regulations.

On the other hand, the hierarchical model focuses on capital market imperfections and related transaction costs and information asymmetry and the company's ability to accept new investments with internal funds and resources (Booth et al, 2001). The model predicts that there is information asymmetry between investors outside the organization and management of a company about the quality of new projects. Therefore the stock market may assess the profitability of

the new projects by the company less than what it would be. In this case the capital increase through the issuance of new shares is the source of financing with the highest cost (Hong and Jason, 2006). According to this model, companies choose source financing based on total cost. Since retained earnings does not have any adverse selection problem, it is the best source of financing. Adverse selection problem in stock is highest level but in debt is between stock and retained earnings.

From the perspective of external investors, stock risk is greater than the debt, because it is more prone to adverse selection so the cost of capital is higher for stocks compared to debt. From the perspective of internal investors (managers), retained earnings compared with debt has lower cost than debt and debt is preferred over shares. Also about debt, at first the company must publish debts that have the lowest cost information. In other words short-term debt should be used before the long-term debt and among the long-term debt, capital leases and long-term guaranteed debt should be used before any long-term unsecured debt (Frank and Goyal, 2003).

Test these theories sometimes leads to conflicting results because of the factors affecting capital structure. But what has been considered in this theory is the adoption of the basic hypothesis that participants in financial markets, such as managers and investors, have rational behavior (Vassiliou and Daskalakys, 2009). Also, based on traditional financial economics, decision makers have rational behavior. Decision makers have rational behavior and always seek to maximize their utility, but according to behavioral finance issues, these rational decisions are limited because of cognitive feelings (Tomak, 2013). This means that according to psychological studies, executives and investors involved in a series of behavioral biases that affect their decisions. This behavior is included feelings like loss aversion, optimism, and overconfidence (Azouzi & Jarboui, 2012). Researchers with the development of psychological research in the field of behavioral finance of companies found that managers as particular group, compared to the ordinary people, demonstrate confidence more than optimal behavior. Professionals and businesses that need to make decisionsare more than others exposed to overconfidence (Landier etal, 2009). It is widely accepted that when managers' judgment is distorted by the overconfidence of managers, biased decisions are made in finance and investment politics.

Overconfident managers, for investment projects, prefer to use financing from within the company instead of outside and they are more likely compared to other managers to raise less debt. Generally for companies, especially for companies with financial constraints, the financing from outside the company leads to higher cost compared to financing from within the company. Overconfident managers are more reluctant to use financing from outside the company compared to rational managers. Consequently, they believe the estimated value of their company is lower than actual value, and external financing, especially stock look as an over-priced factor. This overconfident manager's less use of external financing and providing access to venture capital, will issue stock less than their peers. Also, managers who have experienced a recession shy away from excessive debt in financing.

2.3 Background

Hassani and Seyed Hamzeh zadeh (2014) showed that firm size has a significant and negative effect and growth opportunities have significant and positive effect on financial leverage (historical and current value). Dividend payout ratio have only significant and negative effect on the current value financial leverage, but does not affect historical financial leverage. Ratio of tangible assets has only a significant and positive effect on the current value financial leverage, but does not affect historical financial leverage. Degree of operating leverage, financial expenses coverage ratio, fluctuations in sales and profitability do not have a significant effect on financial leverage (historical and the current value). Etemadi and Montazeri (2014) showed that in the static model, the effect of profitability, collateral value of assets and the current ratio on the capital structure was a negative and significant effect and the impact of product market competition as well as non-debt tax shield on capital structure was significant and positive. In the dynamic model, the impact of profitability, collateral value of assets and the current ratio on the capital structure was significant and negative and the impact of product market competition, capital structure in prior period as well as firm size on the capital structure was positive and significant.

Wang et al (2013) found that there is a positive relationship between overconfidence and debt ratio in the capital structure. Tumak (2013) did not observe significant evidence about the relationship between overconfidence managers and capital structure of the company. Oscar (2012) showed that overconfident managers are more willing to use debt for financing structure and have higher debt ratio. As a result, they will face a higher risk of financial distress. Sajadi and colleagues (2012) found that factors such as the quick ratio (liquidity), interest coverage ratio and growth of the company have significant and negative relationship with capital structure.

However, there is no significant relationship between capital structure and firm size. In addition, the results reveal that firms with more debt ratio of 50 percent, compared with other companies are of different capital structure. Ishikawa and Takashy (2010) examined the relationship between overconfidence and the financing in selected Japanese companies. Their results showed that overconfident managers prefer debt to limited and public equity. Nadai and Ivanovo (2010) found a high level of optimism and overconfidence are associated with relatively high financial leverage. Yang et al (2010) found that stock returns, the structure of assets, sales growth, profitability and industry type are determinants of the capital structure of listed companies in Taiwan Stock Exchange.

3. METHODOLOGY

This research is an applied research in terms of methodology. On the one hand is positive research and based on real information, On the other hand, is of correlation and based on past events. Because it can be used in the process of using information. In this study, collected data on macroeconomic variables is the basis to test the hypotheses. To test the relationship between the dependent and independent variables, we use regression adjusting conditional heterogeneity. This study aims to investigate the effect of overconfidence managers on firms' capital structure. The population of this study consisted of 647 companies listed in Tehran Stock Exchange during 5-year period 2013 to 2017. Due to the nature of the research, there are some inconsistencies among companies listed on the Tehran Stock Exchange, was initially considered feature then a sample of 221 companies was randomly selected.

Desired features include:

- **A.** The companies are not included banks, financial intermediaries, leasing companies or insurance companies. (Due to differences in the balance sheet, the specific nature of the activity and the unusual financial leverage)
- **B.** Due to increased comparability, the end of the company's financial year will end in December.
- **C.** All data needed for them will be available during 2013-2017.

3.1 Generalized Method of Moments (GMM)

In the equations that is estimated, the specific invisible effects of any firm - and lag of the dependent variable in explanatory variables is a fundamental problem, generalized moment estimator (GMM), which is based on dynamic Panel models , is used (Barro and Lee, 1996). To estimate the model by this method, instrumental variables used in the model must first be determined. GMM estimator adaption depend on the validity of the assumption of no serial correlation of error terms and tools that can be tested by two tests stipulated by Arellano and Bond (1991), Arellano and Bover (1995) and Blundell and Bond (1998). The first is Sargan test, of pre-determined restrictions, which tests the validity of the instruments .The second is M test which tests second-order serial correlation in the error terms of first-order differential equation. Failure to reject the null hypothesis both tests provides evidence of no serial correlation and validity of tools. GMM estimator is consistent if there is no second-order serial correlation in the error terms of first-order differential equation. Since in the research model in the following relationship equation, the dependent variable is as an interrupted time series on the right side of the equation, we are facing with a dynamic panel data model. The general form of a dynamic panel data model (panels) is as follows:

$$Y_{it} = \alpha Y_{it-1} + \beta X_{it} + \mu_i + \varepsilon_{it}$$

Where Y_{it} is dependent variable and X_{it} is the vector of independent variables, μ_i error factor of sections and ε_{it} is errors relating to sections i at time t. When the dependent variable in the panel data model appears as an interruption on the right side, the OLS estimators are not compatible (Arellano and Bandrya, 1991), hence, two-step methods of 2SLS Anderson and Hsiao (1981) or GMM (GMM)) Arellano and bond (1991) should be used to estimate the model. According to Matyas and Sevestre referenced in Tayebi, Haji Karami and Sariri (2012), 2SLS may cause large variances for the coefficients estimate due to difficulty in choosing the tools, and estimates are not statistically significant (Tayebi, Haji Karami and Sariri, 2012). GMM two-step method by Arellano and Bond is suggested to solve the problem. Arellano and Bond have proposed the follow differential equation:

$$Y_{it} - Y_{it-1} = \alpha(Y_{it-1} - Y_{it-2}) + \beta(X_{it} - X_{it})_i + (\varepsilon_{it} - \varepsilon_{it-1})$$

That is, first differencing is done so that we can remove the effects of sections or μ_i from model and later use the remaining residue of the first stage to balance the matrix variance co variance. In other words, this method create variables as instrumental variables to have consistent and unbiased estimates (Baltagi, 2005)

GMM estimators Compatibility depends on the validity of the assumption of no serial correlation in the error terms and tools that can be tested by the two tests stipulated by Arellano and Bond (1991), Arellano and Bover (1995) and Blundell and Bond (1998). The first is Sargan test ,preset limitation, test of validity of the instruments. Sargan test (J-statistic) is of distribution with degrees of freedom equal to the number of excessive constraints. The latter is serial correlation test that test second-order serial correlation in the first order differential error terms. In this test, the GMM estimator is consistent when the second-order serial correlation in the error terms of the first order differential equation does not exist. Failure to reject the null hypothesis of both tests provides no evidence of serial correlation and reliable tools. In this study, the Sargan test is used for the compatibility of GMM estimator. To analyze statistical and econometric analyses, the Eviews8 software is used.

3.2 Stability test

In regression based on time series variables, researchers often see highR^2, although there is no significant relationship between variables. The problem stems from the fact that both variables in time series show a strong tendency to time; Therefore high R^2 observed, is caused by the time variable not by the true relationship between variables, so it is important to examine the relationship between real or fictitious economic variables. The first step in order to determine the reliability of a variable, is to view time series charts the variable. So, after analyzing the time series of the trend type, the necessary reliability tests were performed. Unit root tests is one of the most common test that is used to determine the reliability of the time -series process. For this purpose, the following tests are used.

1. (Levin, Lin and Chv, 2002); (LLC)

2. (Im, Pesaran and Shin, 2003); (IPS)

Table 01: Levin, Lin and Chu test to determine of reliability of the process time series

Method				Statistic		Prob.**	
Levin, Lin & Chu t*				-12.8229		0.0000	
Series	**2nd Stage Coefficient**	**Variance of Reg**	**HAC of Dep.**	**Lag**	**Max Lag**	**Band-width**	**Obs**
FLEV	-0.46012	1.0696	0.0050	10	21	582.0	1089
GR	-0.72048	3.3942	0.0315	4	14	232.0	1035
PROF	-0.36061	0.0180	0.0002	4	21	244.0	1095
SIZE	-0.45354	2.4509	0.2964	5	21	18.0	1094
TANG	-0.98802	0.0814	0.0595	5	21	184.0	1094
GS	-0.99775	4.1062	0.0390	0	21	211.0	1099
	Coefficient	t-Stat	SE Reg	mu*	sig*		Obs
Pooled	-0.01850	-10.438	1.584	-0.500	0.707		8704

Table 02: Im, Pesaran and Shin test to determine the reliability of the process time series

Method				Statistic			Prob.**
Im, Pesaran and Shin W-stat				-68.0454			0.0000
Series	**t-Stat**	**Prob.**	**E(t)**	**E(Var)**	**Lag**	**Max Lag**	**Obs**
FLEV	-5.5246	0.0000	-1.456	0.818	10	21	1089
GR	-10.683	0.0000	-1.495	0.771	4	14	1035
PROF	-8.9420	0.0000	-1.495	0.771	4	21	1095
SIZE	-9.3019	0.0000	-1.494	0.781	5	21	1094
TANG	-109.08	0.0001	-1.494	0.781	5	21	1094
GS	-33.047	0.0000	-1.532	0.735	0	21	1099
Average	-22.558		-1.504	0.766			

Tests LLC, Bertoung and Headry, assume that ρ is the same among all sectors with the exception that in the methods, LLC and Bertoung, the null hypothesis is that there is unit root but in Headry test, the null hypothesis is that

there is not a unit root. Alternatively, the IPS, ADF and PP Fisher is based on the principle that the unit root could vary between sectors, that is, the index ρ_i can be different for various i. Table 1 shows the values of each of the tests related to the variables of the model. According to Table 2, we conclude that research data as you can see, in all the independent and dependent variables are in significant levels and test results indicate that the variables are stable. This means that the mean and variance of variables over time and covariance variables between different years were constant. As a result, the examined data did not have structural changes and use of these variables in the regression model does not create false regression. That is, the null hypothesis of non-co-integration could not be accepted, then the variables are not faced with the unit root problem and this represents the stability of the variables. So there is convergence between variables.

3.3 Integration test

The estimation of the model in the unstable variables creates a false regression in the model. There are differencing techniques and co-integration test to avoid relying on false regression, but when you use the difference variable in the estimation model coefficients, valuable information in relation to the variable level is lost. Thus, this method is not suitable to avoid relying on false regression. To solve this problem, co-integration test can be used. The concept of integration is associated with the existence of a long term relationship that the economic system move to in that direction over time (Noferesti, 1389).While the variables of the model are unstable, if their integration is established, the results of the model would be reliable . In this study, to examine co-integration in the used models, Cao (1991) was used. This test is done by unit root tests .In these tests, the opposite hypothesis that there is integration between variables is investigated. The results of integration using the ADF statistic for the estimated model is shown in Table 3.

Table 03: Results Cao co-integration test

			t-Statistic	Prob.
ADF			-5.264514	0.0000
Residual variance			3.172617	
HAC variance			0.856253	
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
RESID(-1)	-1.310882	0.032237	-40.66399	0.0000
R-squared	0.653812	Mean dependent var		0.036039
Adjusted R-squared	0.653812	S.D. dependent var		1.784571
S.E. of regression	1.050002	Akaike info criterion		2.936601
Sum squared resid	964.6904	Schwarz criterion		2.942053
Log likelihood	-1285.231	Hannan-Quinn criter.		
Durbin-Watson stat	1.119925			2.938686

The results of table above indicates that the null hypothesis is rejected at 95% confidence level for the model, therefore, based on the ADF test statistic Cao, integration is established in all models, so there will be no problem regarding false regression in predictive models.

3.4 Estimated research

Because overall goal of the research is to test the relationship between overconfident managers and capital structure. In the meantime the role of other possibilities are considered. This model is expressed in the following equation. In the following model variables and how the variables are measured are provided:

$$FLEV\ i, t = \alpha + \beta 1OC\ i, t + \beta 2PROFi, t + \beta 3SIZE\ i, t + \beta 4TANGi, t + \varepsilon i, t$$

FLEV i, t capital structure is as dependent variable, which is measured by using the ratio of debt to asset value. OC i, t overconfident managers is the main independent variable which is measured using index-based investment by the Scherand and Zechman (2011) method. The index, which indicates the amount of investment in assets, is obtained from residuals regressions of growth in the ratio of total assets divided by sales growth.

$$GS\ i,t = \alpha + \beta 1GRi,t + \varepsilon i,t$$

GRi, t growth; is the ratio of market value to book value of equity.

Control variables include:

PROFi, t profitability, return on assets, the ratio of operating profit (after tax) to net book value of assets.

SIZE i, t size, measured by the natural logarithm of the book value of assets.

TANGi, t, tangible assets, the book value of tangible fixed assets divided by the book value of assets.

3.5 Analysis of experimental data

According to the research model, in this study. We analyze the effect of overconfidence managers as an independent variable and the ratio of tangible assets, profitability, return on assets, and size as a control variable on the capital structure. The results are presented in Table 4.

Table 04: The results of the model

	Coefficient	Std. Error	t-Statistic	Prob.
α	0.561091	0.052151	10.75890	0.0000
β1	0.893222	0.408946	2.184205	0.0290
β2	4.320725	0.307745	14.03996	0.0000
β3	0.039643	0.002252	17.60135	0.0000
β4	1.319770	0.081232	16.24690	0.0000
Determinant residual covariance		10.53081		
J-statistic		0.086194		
R-squared	0.851763	Mean dependent var		0.667007
Adjusted R-squared	0.853905	S.D. dependent var		1.186295
S.E. of regression	1.820066	Sum squared resid		363.7279
Durbin-Watson stat	1.909051			
Equation: FLEV=C(3)*PROF Instruments: C SIZE Observations: 1100				
R-squared	0.512331	Mean dependent var		0.667007
Adjusted R-squared	0.512331	S.D. dependent var		1.186295
S.E. of regression	1.458868	Sum squared resid		23.38998
Durbin-Watson stat	1.889721			
Equation: FLEV=C(4)*SIZE Instruments: C SIZE Observations: 1100				
R-squared	0.716459	Mean dependent var		0.667007
Adjusted R-squared	0.016459	S.D. dependent var		1.186295
S.E. of regression	1.196606	Sum squared resid		15.73620
Durbin-Watson stat	1.813431			
Equation: FLEV=C(5)*TANG Instruments: C SIZE Observations: 1100				
R-squared	0.836612	Mean dependent var		0.667007
Adjusted R-squared	0.836612	S.D. dependent var		1.186295
S.E. of regression	3.320908	Sum squared resid		12.12024
Durbin-Watson stat	1.948672			

Source: The authors using EVIEWS

According to the results in Table 4, the coefficient of overconfident manager (CO) is 0.89 with t-value of 2.18, which is significant at 5% level. In other words, according to a critical level of assumption, (H0) is rejected and (H1) for variable overconfidence managers (OC) will be accepted. Thus, according to equation coefficient for overconfident manager, it overconfident manager uses more debt in capital structure. The control variables ROA for profitability (PROF) has a confident of 4.32 with t-value of 14.03 is significant at 0.01 level, for variable firm size (SIZE) the coefficient is 0.04 with t-value of 17.60 which is significant at 0.01 level and for variable tangible assets (TANG) the coefficient is 1.32 with t-value of 16.25 which is significant at 0.01 level. So all three control variables are affecting capital structure in a positive way

3.6 Sargan test (J- Statistic)

GMM is a generic method for estimating panel data models, this model assumes the effects of dynamic adjustment of dependent variables. On the other hand, if there is an endogeneity problem between variables or explanatory variables, this method can alleviate this problem by using instrumental variables. In this method, two-stage procedure must be used to maintain the consistency of the estimated coefficients. This test is based on chi-square distribution to determine the validity of the instrumental variables defined in the model used. Based on this test statistic, if the null hypotheses is rejected, defined instrumental variables to remove correlation between fixed effects and delayed dependent variable is not valid. It is necessary to use suitable instrumental variables to remove this correlation. Next autocorrelation of disturbance terms are tested. Because if the order of autocorrelation in the error terms are of the second order, the first order differencing method to remove fixed effects of individual companies would not be appropriate method. The Sargan test statistic with 0.08 probability does not reject the null hypothesis value and indicates reliability of instrumental variables defined in the model. The value of this test show that instrumental variables defined are not correlated with the error terms and therefore the instrumental variable defined is valid.

3.7 Serial correlation test

In analyzing GMM especially when the variables are in a studied time interval, data changes follow a specific pattern. Durbin -Watson test is used to identify this pattern. The concept of being independent means that the result of observation has no effect on the other results of observations. Durbin-Watson statistic is between 0 and 4. If there is no serial correlation between the residuals, the value of this statistic should be close to 2. If it is close to zero indicates a positive correlation and if it is close to 4 indicates a negative correlation. In general, if the value is between 1.5 to 2.5, it is nothing to worry about. According to the results in Table 4, the value of the test statistic is 1.94 indicating no serial correlation in the model.

3.8 The coefficient of determination

The coefficient of determination show the explanatory power of the model. That is, it shows that several percent of dependent variable have been explained by the explanatory variables. The results of the table 4 show that R^2 is 0.83 indicating correlation coefficient between dependent variable and its estimation or on the other words indicating the correlation between the actual value of the dependent variable and its fitted value.

4. DISCUSSION AND CONCLUSION

The results of this study based on GMM showed that managers 'overconfidence have a positive and significant impact on the capital structure of listed companies in Tehran Stock Exchange during 2013 to 2017. Also a positive impact of the control variables on the capital structure show that tangible property ratio, return on investment and firm size are determinant factors of firm's capital structure. This means that with an increase in managers' overconfidence, as well as an increase in tangible asset ratio, profitability and firm size, corporate debt also increase and companies use more borrowing and/or the issuance of bond to finance their capital structure than equity. A possible reason is that funding overconfident managers in Iran is more based on bank loans so that companies can secure their financial needs more by using loans and debt rather than insurance of shares. Secondly, financing in Iran is more bank-oriented than market-oriented, and corporations provide more than debt and debt finance to securitization and thus can use debt in the direction of the tax shield. Thirdly, because of the efficiency in the capital market of Iran is weak and liquidity is low. Ultimately, companies are forced to use more financing by loans. The results are consistent with the findings of Yu et al. (2006), Ben Daivid et al. (2007), Mefteh and Oliver (2007), Malmendier et al (2007), Park and Kim (2009), Oliver (2009), Firchild (2009), Nadai andIvanov (2010), Ishikawa and Takashi (2010), Oscar (2012), and Wang and et al (2013).

It is suggested to investors and shareholders that they emphasis on effective factors on leverage finance of companies when they make investment decisions about studied companies. It is suggested to creditors, banks, credit institutions and lenders to consider the results of this research in decisions about attestation to studied companies. It is offered to analysts and financial consultants to pay attention to these concepts to provide consulting on financial strategies when they make decisions. It is suggested to managers to abstain from more overconfidence in investments so that they can try to implement investment projects by making appropriate decision and they can get appropriate financing through more efficient ways. This is important since if overconfident managers do not make suitable returns, it will move investments away from optimized level and lead to capital investment inefficiency. It is suggested to corporate leadership to control managers' behaviors bias with better and more suitable supervision.

REFERENCES

Arellano, M. and Bond, S. (1991); "Some Test of Specification for Panel Data: Monte Carlo Evidence and Application to Employment Equations ", Review of Economic Studies, 58: 277-297.

Arellano, M. and Bover, O. (1995); "Another Look at the Instrumental Variable Estimation of Error Component Models ", Journal of Econometrics, 68: 29-51.

Azouzi, MA, and Jarboui, A., (2012), "The Evidence of Management Motivation to Revalue Property Plant and Equipment in Tunisia ", African Journal of Hospitality, Tourism and Leisure, Vol 2 (1).

Baltagi, B. (2005); Econometric analysis of panel data, Third Edition, McGraw-Hill.

Basu, S. (1997), the conservatism principle and the asymmetric Timeliness earnings, Journal of Accounting & Economics 24: 3-37.

COOPER, Arnold C. et al. Entrepreneurs' perceived chances for success. Journal of Business Venturing, v. 3, n. 2, p. 97-108, Spring 1988.

Etemadi, Hossein and Montazeri, Javad.(1392);" factors affecting capital structure in listed

Companies in Tehran Stock Exchange with emphasis on production market competition", Accounting and Auditing, p 20, No 3, Pp. 26-1.

Fallah Shams Lyalstani, Mirfeiz, Galibafasl, Hassan and Samira Nobakhtsorayi. (1389);"The impact of experience on risk-taking, overconfidence and herding behavior", Quarterly Stock Exchange, 3 (12): 25-42.

FRANK, Murray Z.; GOYAL, Vidhan K. Testing the pecking order theory of capital structure. Journal of Financial Economics, v. 67, n. 2, p. 217-48, Feb. 2003.

G. Cassar, "The Financing of Business Start-Up," Journal of Business Venturing, Vol. 19, No. 2, 2004, pp. 261-283. http://dx.doi.org/10.1016/S0883-9026(03)00029-6.

Hasani, Mohammad and Seyed hamzeh zadeh, Sepideh Sadat. (1392), "Explanation of Capital structure basedon bankruptcy and hierarchy theories (Evidence from Tehran Stock Exchange "(Thesis of Accounting Senior Masters in Tehran Islamic Azad university ,Branch North.

Hosseini, Mohammad and Shokrayifard, Paniz. (1394), "Experimental analysis of relationship between managers 'overconfidence and profit payment policy", Thesis of accounting senior masters, Islamic Azad university of North Tehran.

Hung, G. & song. F. M, (2006), "The Determinants of Capital structure: Evidence from China", China Economic Review, 17, 14- 36.

HACKBARTH, Dirk. Managerial traits and capital structure decisions. Working

Paper. Sep. 2004. Available at: <http://ssrn.com/abstract=362740>. Access in: 09/15/2004.

Ishikawa, M., & Takahashi, H. (2010), "Overconfident Managers and External Financing Choice", Review of Behavioral Finance, 2, 37 – 58

Khalifeh Soltani,Seyed Ahmad;Akhlagi, Hasanali And Saedi, Rahman (1393), " factors affecting capital structure by using Tobit model : Empirical test of hierarchy theories , Static parallel and agency " , Quarterly Academic review of property management and finance , Second Year , No .4, No row 4, Pp. 54-37.

LANDIER, Augustin; THESMAR, David. Financial contracting with optimistic entrepreneurs. Working Paper. May 2004. Available at:

<https://wpweb2k.gsia.cmu.edu/wfa/wfasecure/upload/631588_optimism2.pdf> Access in: 0 8/07/2004.

Mashayekh, Shahnaz, Behzad Pour, Samira;" The impact of overconfidence on division policy in listed companies in Tehran Stock Exchange, accounting and auditing 21 (4), 1393, p. 458- 504.

Pompeian, MM (2006). Behavioral Finance and Wealth Management, translated by: Ahmad Badri, Kayhan Publishers.

Riahi, Belkaui Ahmad. (1999), "capital structure", first edition.

Sajadi, Seyed Hossain; Mohammadi, Kamran and Solgi, Mohammad. (2012), "Review of company features impact on capital structure of listed companies in Tehran Stock Exchange ", Accounting and Auditing researches, Third Year, No. 10.

Tayebi, Seyed Komeil; Hajikarami, Marzieh and Sariri, Homa. (2012);" Analysis of Financial and Commercial degree on financial development, Iran and business partners ",

Economic researches Journal of Rahandisheh, p60-39

Tavakolnia, Ismail; Fazlullah Pour Naqarchi, Mehran And Hatam, Javid(1393), " Financial leverage and its relationship with financial ability, growth and investment at fixed assets in listed companies in Tehran Stock Exchange (Linear and curve relations) " Financial management strategy, Social and Economic Sciences college , Al–Zahra university , Second Year , No. 5, Pp. 101-79.

Tomak, Serpil. (2013), "The Impact of Overconfidence on Capital Structure in Turkey", International Journal of Economics and Financial Issues, Vol. 3, No. 2, 2013, pp.512-518.

Uckar, D. (2012). Behavioral Elements in Capital Structure Management, Conference Proceedings: International Conference of the Faculty; 2012, p. 168, EBSCOHOST

Van Auken, H. (2005). "A Model of Small Firm Capital Acquisition Decisions," International Entrepreneurship and Management Journal, 1 (3), 335-352.

Yang, C., Lee, C. GU, Y. and Lee, Y. (2010), "Co-determination of capital structure and stock returns A LISREL approach: An empirical test of Taiwan stock markets", Quarterly Review of Economics & Finance, Vol. 50, Issue 2, p222-233.