



Impact of corporate governance index quality on correction speed of capital structure in firms enlisted in Tehran Stock Exchange

Mehrnaz Khalili¹, Mohsen Hamidian² and Ahmad Godarzi³

¹Department of Accounting, Electronic Branch, Islamic Azad University, Tehran, Iran

²Department of Accounting, South Tehran Branch, Islamic Azad University, Tehran, Iran

³Department of Accounting, Electronic Branch, Islamic Azad University, Tehran, Iran

ABSTRACT

Original Article:

Big corporate companies with lots of stockholders have a direct effect on countries' economy. Thus, studying such firms is an inevitable requirement to study on the national economy of countries and to remove the problems and to improve the performance and strategies utilized. Due to the effect of decisions related to capital structure and changes in it on the achievement of the firm's goals, several studies have been carried out regarding the effect of corporate governance mechanisms on decisions related to capital structure. But there has not been any experimental studies done regarding the effect of corporate governance index on the modification speed of capital structure towards optimal capital structure. Thus, the present research has been carried out to supply evidences regarding the role of corporate governance variables and their quality in the speed of modification of capital structure towards optimal capital structure. The dependent variable in this research is the dynamicity of capital structure and the independent variable is corporate governance that is comprised of three elements as: institutional shareholders, board members' independence, and the existence of internal audit and They have been used to measure corporate governance index. To test the research hypotheses we have used the historical data of the years between 2009 and 2013 related to 139 firms enlisted in Tehran Stock Exchange and by using Chang & et al (2014) model. To study about the normality of research data we have done tests related to skewness and pulling and normality and in order to observe lack of self-correlation of the data we have used Durbin-Watson tests. Also in order to test the linear correlation amount between the two variables we have used Pearson's correlation coefficient. Finally the data were adjusted by multiple regression method to approve or reject the research hypotheses within the models proposed. The research results showed that corporate governance quality affects the dynamicity of capital structure and based on findings we can accept that speed coefficient of the changes in financial leverage has been meaningful in both groups of strong and weak corporate governance firms and this variable has affected the dynamicity of capital structure.

Received 20 Mar. 2015

Accepted 28 July. 2015

Published 30 June. 2015

Keywords:

corporate governance index, capital structure dynamicity, the speed of capital structure modification

1. Introduction

The formation of big companies and following that the issues related to the isolation of ownership from management and its desirable and undesirable outcomes were posed at late 19th and early 20th centuries globally. But corporate governance, in its current form, was first posed in 1990s in England, America, and Canada in response to problems related to the board efficiency in big companies. After a while, financial crises in recent years resulted in more emphasis on establishing corporate governance mechanisms in these countries and in other countries as well. The need to corporate governance stems from controversy in benefits existing among the participants in a firm. This controversy is often related with agency problems that can have two reasons. The first reason is that different participants have different goals and preferences. The second reason lies in the fact that the participants have incomplete information about performance, knowledge, and preferences of others. The presence of independent board members in firms and their supervising roles as independent

individuals leads to the reduction of benefits' controversies among stockholders and firm managers in meetings held by board regarding agency theory. Institutional stockholders reveal another strong corporate governance structure that can control firm management. Also today capital structure has been introduced as the most important effective factor in validating firms and also ranking firms regarding their validity depends on their capital structure (Smith & et al, 2008). There are some presuppositions such as: the existence of a complete competition market, lack of taxation on income, lack of bankruptcy costs, firm value independent of capital structure. Modigliani & Miller revised their viewpoint in forthcoming years by considering income tax of the firms and reasoned that regarding the creation of tax shield for the firms, debts are used preferably from among different resources for financing because using debt will result in increasing firm value and since the goal of owners in firms is to maximize the wealth, they control their managers and representatives to use those methods in financing that bring them closer to the final goal of maximized wealth goal.

The statement of the problem

One of financial reporting goals is to present useful information for investors, creditors, and other current and potential users to make decisions related to investment and crediting or other decisions. There is no doubt about the importance of corporate governance in firms' success and social welfare. This issue has become more prominent due to some recent incidents. The dissolution of big companies such as Aneron, Worldcom, ... has led to more emphasis on the necessity of enhancing and modifying corporate governance internationally. Following these dissolutions, countries all over the world showed a halting reaction and in the United States the article called Sir Beans-Oxley was posed from 2004 (Grant & Viskonti, 2006). The effect of corporate governance index quality on modification speed (adjustment and change) of capital structure towards optimal capital structure has been another important issue that helps firms to achieve its goals in maximizing the wealth of stockholders within the shortest possible time. In this study we have tried to respond the question that how firms can identify the speed of capital structure adjustment towards optimal capital structure based on variables related to corporate governance.

Since the effect of corporate governance mechanisms on the selection of optimal capital structure has been investigated in previous studies, we can quote several research titles such as: studying the relationship between corporate governance and capital structure (Bodaghi, 2011), the effect of corporate governance on performance of firms enlisted in Tehran Stock Exchange (Vakilifard, 2011), and usefulness of capital structure and its' changes on financial strategies of firms enlisted in Tehran Stock Exchange (Setayesh, 2011). But no experimental study has been done regarding the effect of corporate governance index quality on modification speed (adjustment and change) towards optimal capital structure, the present study is going to investigate on the effect of corporate governance variables and their quality in adjustment speed of capital structure towards an optimal capital structure.

Review of related literature

In experimental studies, capital structure in firms and lack of observation of optimal debt ratio has been obstacles that could be interpreted by theoretical models. Our goal is to modify the shortcomings that have been typically emphasized on in previous studies. It is correct that capital structure theory has not proposed to explain debt rates, but most differences are due to optimal capital debt rates in firms. Accordingly, firms that have high levels of leverage costs should have lower debt levels compared to firms that have less costs.

There has not been any research done on dynamicity of capital in Iran yet. The only research related to this issue is the one carried out by Davoud Keshavarz Mehr in 2013 entitled: "the effect of factors changing adjustment costs in adjustment speed of capital structure". The results of that research showed that in the absence of adjustment costs, firms compensate for any deviation from target capital structure immediately. Also there have not been lots of researches carried out in this field out of Iran and only some of them are summarized below:

One of the important researches in 2014 by Chang & et al (2014) was carried out on a sample for the years between 1993 and 2009 through which firms with weak corporate governance and with different financial leverage moved forward with different incentives to achieve optimal capital structure with low speed. Firms with weak corporate governance and low financial leverage did so because of regularity costs and firms with weak corporate governance and high financial leverage did it due to avoidance of the possession of the firm by the lenders.

We can refer to researches by Titman & Viselener in 1988 and Rajan & Zingel in 1995 as experimental researches through which the observed leverage rates were a representative for optimal level. Also we can mention the presence of adjustment costs as the problems.

The research by Fama & French in 2002 showed the power of different financing hypotheses against optimal leverage level of capital structure theory with a framework within the dynamic adjusted model.

Heshmati carried out a research in 2001 on a dynamic adjustment model among small firms in Sweden and it can help us in understanding capital structure theory. The results of that research showed that managerial decisions affect the speed of capital structure adjustment towards optimal capital structure positively.

Rajbahandry carried out a research in 1997 on the relationship between firm characteristics and capital structure adjustment as a dynamic model of capital structure among firms in India.

Gilson stated in 1997 that these costs may be principal and firms may use them to reduce the amount of their liabilities even if they are aware of the presence of undesirable levels. By differentiating between observed debt rate and predictions that refer to optimal leverage, this research has tried to identify the factors that affected capital structure adjustments experimentally. In this research it has been investigated whether firms move towards optimal debt rate (or solutions like that) and recognize factors that identify movement rate or not. Also this research represented different financing theories against optimal leverage level of capital structure theory with a framework of dynamic adjusted model like the one in a research by Fama & French (2002).

Research method

In this research first firms were measured based on corporate governance index and were divided into two groups of strong and weak. Then the financial leverage for each firm present in the groups of strong and weak corporate governance was calculated and the hypotheses were tested based on the model.

The present study is correlation type regarding nature and content through which the secondary data extracted from financial statements of firms enlisted in Tehran Stock Exchange were analyzed to investigate about correlation relationship. This research was carried out in a framework of analogy-induction reasoning. On the other hand, the present study is a post-incident one. It means that it has been collected and analyzed based on analyzing past data (firms' financial statements) without the direct interference of the researcher. Regarding the goal, the present research is considered to be among applied researches.

Hypotheses and model features

In addition to regression models under investigations, some hypotheses were studied and based on them the relationship between corporate governance and its constituents with correction speed of capital structure that used replace capital structure dynamicity in this research. These hypotheses were as follows:

Major hypothesis: There is a meaningful relationship between corporate governance and capital structure dynamicity.

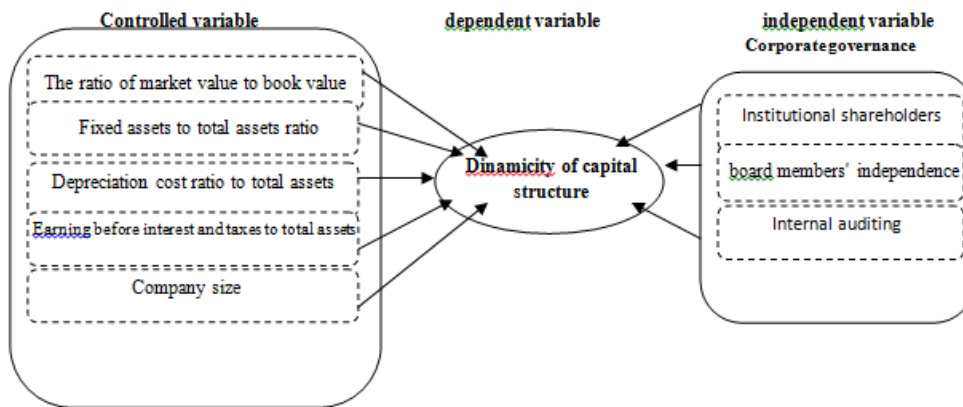
Minor hypothesis 1: There is a meaningful relationship between Institutional shareholders and capital structure dynamicity.

Minor hypothesis 2: There is a meaningful relationship between board members' independence and capital structure dynamicity.

Minor hypothesis 3: There is a meaningful relationship between internal auditing and capital structure dynamicity.

The conceptual model for this research was based on a research carried out by Chang & et al (2014) represented in diagram 1-1 where the effect of corporate governance on capital structure dynamicity is investigated. Also in this study some independent variables such as: institutional stockholders, board members' independence, and the presence of internal auditor were considered as corporate governance indexes. And the dependent variable was capital structure dynamicity. The control variables of the research were: the ratio of market value to book value of the firm, the ratio of fixed assets to total assets, the ratio of depreciation costs to total assets, and firm size.

Figure 1-1: The conceptual model of the research



The statistical models of this research included 3 models that would be utilized in the form of interconnected models. First the first model would be adjusted and the data gained would be placed into the first and second model and finally the data in both first and second models will result in third model.

First model: the target financial leverage is posed as the expected value resulting from the regression on a set of firm characteristics and governance quality that is posed by agency theory and is calculated using the following formula:

$$DR_{i,t+1}^* = \gamma Gov_{i,t} + \beta X_{i,t} + v_{i,t+1}$$

The constituents in the formula above are as follows:

$DR_{i,t+1}$: the estimated target capital structure considering the corporate governance variables including institutional shareholders, board members' independence, and the existence of internal auditor. Also the control variables of the research included the ratio of market value of the firm, fixed assets to total assets, earning before interest and tax compared to assets, depreciation costs to total assets, and firm size that would be calculated and represented.

$Gov_{i,t}$: it shows corporate governance index based on institutional shareholders and board members' independence and internal auditing in a way that the sum of firms' scores result in observing corporate governance mechanisms of corporate governance index.

$X_{i,t}$: it shows control features of the firm such as market value to book value ratio, fixed assets to total assets ratio, earning before interest and tax to total assets, depreciation costs to total assets, and firm size.

Then the amount of predicted $DR_{i,t+1}$ was placed in the model below and the second model is adjusted and by using the formula above we measure the modification speed of firm to achieve target leverage from the current leverage level.

$$(\forall) DR_{i,t+1} - DR_{i,t} = \delta (DR_{i,t+1}^* - DR_{i,t}) + v_{2i,t+1}$$

The elements in this formula are as follows:

$DR_{i,t+1}$: it shows the target capital structure in next year that is calculated by referring to predicted financial statements of firms and dividing total liabilities into firm's assets.

$DR_{i,t}$: it represents capital structure in current year that would be resulted from dividing total liabilities into firm's assets.

σ : it shows the speed of capital structure changes compared to target capital structure that is estimated through dividing the budgeted capital structure with real capital structure into capital structure differences and the real capital structure of the firm will be achieved through it. It should be noted that the amount of δ would vary within the range between 0 and 1. After adjusting the second model, if $\delta=1$, firm regulates any deviation immediately. The lower amount of δ than 1 and approaching 0 represents the toughness of capital structure and lack of its dynamicity.

In the final step and regarding that the research hypotheses represent having or lack of having corporate governance and dynamicity of capital structure and as Flannery & Rangan (2006) have estimated modification speed of a firm in a stage by placing the coefficient related to the speed of capital structure changes in the previous model formula related to capital structure dynamicity would be devised as

follows and it would be model number 3 in this research and it was calculated by using the effect of corporate governance variables on capital structure changes' speed (Chang & et al, 2014):

$$DR_{i,t+1} = \delta \gamma Gov_{i,t} + \delta \beta X_{i,t} + (1-\delta) DR_{i,t} + \varepsilon_{i,t+1}$$

Research population and data collection method

The population in fact entails all elements through which the subject of a certain research can be realized in and we should infer from (Homan, 1994). Thus, due to the fact that the variables under investigation are common features of firms enlisted in Tehran Stock Exchange, the statistical population for the present study was formed by firms enlisted in Tehran Stock Exchange that were active in bourse through the years 2009 and 2013. Also the limitations were as follows:

- 1) They should not be from among financial intermediaries, banks, leasing, and investment firms.
- 2) They should be members of industry through which the firms existing in the industry should be at least 20.
- 3) Due to increasing comparability the fiscal year should end at 29th Esfand (20th March).
- 4) All information for a period of 5 years should be accessible.

Due to the appropriateness of the number of statistical population after applying limitations, there was not any sampling and all data about 139 firms remaining were investigated.

The data required in this research included elements in audited financial statements such as different constituents of income statement, cash flow statement, balance sheet, audit reports, and descriptive notes that were collected through: 1- Rahaward-e-Novin software in order to extract ratios related to market value to book value of firm assets and the value of fixed assets to total assets of firm, 2- Tadbirpardaz database, 3- notes in audited financial statements of firms enlisted in Stock Exchange.

Data analysis

To analyze the data and test research hypotheses in the present study, two statistical methods were used. First in order to administer the items related to the descriptive statistics, central tendency indexes such as mean and median were measured and then the dispersion indexes including minimum, maximum, standard deviation, skewness, and pulled variables were calculated to define variables and the distribution type of the data. Then we calculated the amount of skewness, and pulled amounts to administer tests related to inferential statistics. Also to test the normality of the distribution of the statistical population we used Kolomogorov-Smirnov test and lack of self-correlation of the data (Durbin-Watson test). Finally, we used this test to administer testing the main research tests through multiple regression models. To analyze and study the relationship between variables we used Pearson's correlation coefficient.

Research variables

In the present study, the independent variables included institutional stockholders, board members' independence,

and the presence of internal audit and we will present a brief definition of each of them below.

Institutional stockholders: institutional shareholders are banks, insurance companies, investment companies, pension entities, and... (Bush, 1998).

Board members' independence: it is the ratio of in charge members to total members of board that represents the independence amount of board members.

The presence of internal audit: it is a fundamental part of effective internal control system that is known as the main part of good management in an organization. Internal auditing is an effective help in prevention of fraud or error or the discovery of them.

The dependent variable in this research is capital structure dynamicity that represents the speed of capital structure modification towards optimal capital structure.

The control variables of the research are ratios of: market value to book value of the firm (MB), fixed assets to total assets (FA), earning before interest and tax to total assets (FBIT), depreciation costs to total assets (DEP), and natural logarithm of firm assets that is called firm size (SIZE).

The operational definition of research variables

Corporate governance

The presence of problems among the internal staffs of a firm (managers and institutional stockholders) and external ones (minor stockholders) usually halts the policy selection of the firm and weaken the firm's performance. Because bonds constrain marginal flexibility (Jensen, 1986), managers who maintain their personal benefits do not make decisions that maximize the stockholders' wealth. Therefore, leverage in a firm not only should be affected by features of a certain firm, but also should be affected by managers-stockholders' involvement.

Corporate governance index

Corporate governance index is measured based on institutional stockholders, board members' independence, and internal auditing in a way that the sum of scores of firms is gained from observing corporate governance mechanisms of corporate governance index. The index in the range of 1 to 32 is located and a set of corporate governance variables in this research has been focused only on three variables. Firms that have institutional shareholders are attributed to 1 and the others are represented with number 0. Also the independence of board members can be calculated by the help of the ratio of members not in charge to total board members. First, the ratio of non-members are required to calculate the total board members and after obtaining the ratio between the studied companies, companies that their ratio is higher than the average number will be 1 awarded them, otherwise 0. there is internal audit, number 1 will be attributed and if not number 0 will be appropriated. Therefore, firms are divided into two groups of weak and strong categories regarding corporate governance. Strong group in this study, using an index of corporate governance, companies that total score between 2 and 3, and otherwise in companies with corporate governance are weak.

Firm characteristics

We selected a standard set of firm characteristics to calculate the leverage ratio affecting a firm based on sets of characteristics found in researches such as: Rajan & Zingals

(1995), Hovakimian (2003), Hovakimian & et al (2001), Fama & French (2002), and Flannery & Rangan (2006). Specifically we selected market to book value (MB); this ratio should have two opposite effects on leverage ratio. Fixed assets (such as properties, machinery, equipments) divided by total firm assets represent the fact that firms with more tangible assets should have higher validity compared to repayment of their debts and should enjoy lower levels of bankruptcy risk (Tightman & Veselz, 1988; Hovakimian & et al, 2004). The profitability ratio is the amount of earnings before interest and taxes to total assets (EBIT). There are different outlooks regarding the relationship between EBIT and leverage ratio. Firms with higher earnings tend to be active in lower leverage ratios per each dollar of assets because high maintained earnings reduce the need to issue more debt bonds. But higher leverage may also reflect the ability of a firm to encounter fairly high payments. The term DEP refers to the ratio of depreciation (price reduction) to total assets. Firms with higher depreciation costs have less need to interest subtractions presented by debt financing and therefore it would be less probable to issue bonds to do tax covering. Firm size (LnTA) will also result from normal algorithms of total assets. Big firms tend to entail more leverage because they are more transparent and have lower assets fluctuations and have a better access to public bonds markets (Rajan & Zingals, 1995; Hovakimian & et al, 2004).

Capital structure dynamicity

Regarding that the target capital structure plays an important role in capital structure theories, and also due to the balance theory that states the optimal (target) capital structure is determined by the balance between debt tax shield and bankruptcy costs, it can be said that in the absence of adjustment costs, firms compensate for any deviation from target capital structure immediately. Based on this theory, capital structure dynamicity represents the importance of adjustment costs in decisions related to firms' capital structure and in fact firms try to adjust their capital structure when adjustment advantages are more than its costs. In other words, capital structure dynamicity shows the speed of capital structure modification towards target capital structure.

Analysis method

1- Descriptive statistics

On the whole, methods through which we can process and summarize the collected data are called descriptive statistics. This type of statistics solely deals with describing the population or sample and its goal is to calculate population or sample parameters (Azar & Momeni, 2010). In descriptive statistics section, data analysis has been carried out by using central tendency indexes such as mean and median and dispersion indexes such as maximum, minimum, standard error, and distribution form indexes such as skewness and pulling. Table 1-2 shows the summary of descriptive statistics of variables under investigations.

Table 1-2: Summary of descriptive statistics information

| Index of Distribution | | Index of dispersion | | | Index of central tendency | | Variables | |
|-----------------------|----------|---------------------|---------|---------|---------------------------|-------|---------------------------------------------------------|-----------------------------|
| Strain | Skewness | standard deviation | maximum | Minimum | middle | mean | | |
| 0.21 | -0.29 | 2.33 | 16.90 | -22.88 | 1.62 | 1.91 | The ratio of market value to book value(MB) | Weak corporate governance |
| 0.27 | 0.25 | 0.18 | 0.86 | 0.00 | 0.20 | 0.24 | Fixed assets to total assets ratio(FA) | |
| 0.25 | 0.40 | 0.14 | 0.70 | -0.34 | 0.12 | 0.13 | Earning before interest and taxes to total assets(EBIT) | |
| 0.38 | 0.31 | 5.79 | 121.54 | 0.00 | 0.04 | 0.38 | Depreciation cost ratio to total assets(DEP) | |
| 0.30 | -0.37 | 0.39 | 6.81 | 4.39 | 5.74 | 5.71 | Company size(SIZE) | |
| 0.17 | -0.27 | 1.64 | 24 | 17 | 22 | 21.81 | Corporate governance | |
| -0.44 | -0.19 | 1.32 | 9 | 2 | 6 | 5.96 | institutional stockholders | |
| -0.14 | -0.21 | 0.97 | 9 | 4 | 7 | 6.78 | board members' independence | |
| -0.12 | 0.06 | 1.69 | 13 | 4 | 9 | 9.08 | Internal auditing | |
| 0.15 | -0.13 | 3.34 | 12.23 | -25.92 | 1.17 | 1.26 | The ratio of market value to book value(MB) | Strong corporate governance |
| -0.58 | 0.08 | 0.24 | 0.87 | 0.00 | 0.26 | 0.31 | Fixed assets to total assets ratio(FA) | |
| 0.27 | 0.11 | 0.14 | 0.48 | -0.28 | 0.09 | 0.10 | Earning before interest and taxes to total assets(EBIT) | |
| 0.16 | 0.25 | 0.73 | 7.25 | 0.00 | 0.05 | 0.23 | Depreciation cost ratio to total assets(DEP) | |
| 0.27 | 0.30 | 0.48 | 8.06 | 6.14 | 6.74 | 6.81 | Company size(SIZE) | |
| 0.30 | 0.29 | 1.78 | 32 | 25 | 26 | 26.54 | Corporate governance | |
| -0.47 | 0.20 | 1.29 | 10 | 5 | 7 | 7.18 | Institutional shareholders | |
| 0.11 | 0.18 | 0.91 | 11 | 6 | 8 | 8.19 | board members' independence | |
| 0.48 | 0.25 | 1.76 | 17 | 7 | 11 | 11.17 | Internal auditing | |

2- Deductive statistics

After the extraction of descriptive results of independent, dependent, and control variables of the research and getting a knowledge about the overall scheme of the information hidden within these variables, in deductive statistics section we tried to test the meaningfulness of independent and dependent variables and the relationship between

independent and dependent variables in this research was assessed by using Pearson's correlation coefficient. If there was an acceptable linear relationship we could pose a regression model.

Models adjustment and testing research hypotheses

First model adjustment

The results of adjusting number 1 regression models below,

$$DR_{i,t+1} = \gamma Gov_{i,t} + \beta X_{i,t} + v_{i,t+1}$$

were calculated as shown in table 1-3.

Table 1-3: Results of first model adjustment

| Durbin-watson | P-Value | F | Adjusted R ² | R ² | Corporate governance quality |
|---------------|---------|--------|-------------------------|----------------|------------------------------|
| 2.104 | 0.000 | 174.17 | 0.703 | 0.707 | weak |
| 1.951 | 0.000 | 49.67 | 0.719 | 0.734 | strong |

In table 1-4, the coefficients related to regression model number 1, have been represented.

Table 1-4: Coefficients of regression model number 1

| Strong corporate governance | | | Weak corporate governance | | | variables |
|-----------------------------|--------------------|--------------|---------------------------|--------------------|-------------|----------------------------------------------------------|
| result | Significance level | Coefficient | result | Significance level | Coefficient | |
| Effective | 0.00 | 8689179.34 | Effective | 0.00 | 138205.55 | Corporate governance |
| Effective | 0.02 | 685028.26 | Not effective | 0.11 | 7289.16 | The ratio of market value to book value (MB) |
| Not effective | 0.10 | 7063526.01 | Not effective | 0.69 | 21710.92 | Fixed assets to total assets ratio (FA) |
| Not effective | 0.20 | -14227576.75 | Effective | 0.00 | -253116.63 | Earning before interest and taxes to total assets (EBIT) |
| Not effective | 0.93 | -120720.16 | Effective | 0.04 | 3345.58 | Depreciation cost ratio to total assets (DEP) |
| Not effective | 0.80 | 2188561.94 | Effective | 0.00 | 236481.02 | Company size(SIZE) |

- Regarding the amount of meaningfulness of the fixed coefficient of the model in both groups we can accept that this variable affects the dependent variable.
- Corporate governance quality in both models has a meaningfulness level of less than 0.05. This means that in an assurance level of %95 we can accept that this variable affects capital structure dynamicity.
- The effect of market to book value of firm (MB) in firms having weak corporate governance is not meaningful on capital structure dynamicity but it is meaningful in firms having strong corporate governance.
- The effect of fixed assets to total assets ratio (FA) in both groups of weak and strong corporate governance is not meaningful.
- The effect of earning before interest and tax to total assets ratio (FBIT) in firms having weak corporate governance on capital structure dynamicity has

been meaningful and it has not been so in firms having strong corporate governance.

- The effect of depreciation costs to total assets (DEP) in firms having weak corporate governance on capital structure dynamicity has been meaningful and it has not been so in firms having strong corporate governance.
- The effect of firm size equal to natural logarithm of total assets (SIZE) in firms having weak corporate governance on capital structure dynamicity has been meaningful and it has not been so in firms having strong corporate governance.

Second model adjustment

To adjust the second model we used the amounts predicted for next year capital structure in model 1 ($DR_{i,t+1}^*$), in a way that the values adjusted by the use of independent variables in model 1, would be placed in major values of next year capital structure. The results of the second regression models adjustment,

$$DR_{i,t+1} - DR_{i,t} = \delta(DR_{i,t+1}^* - DR_{i,t}) + v_{2i,t+1}$$

were calculated as shown in table 1-5.

Table 1-5: Results of second model adjustment

| Durbin-watson | P-Value | F | Adjusted R ² | R ² | Corporate governance quality |
|---------------|---------|--------|-------------------------|----------------|------------------------------|
| 2.171 | 0.000 | 124.12 | 0.51 | 0.53 | weak |
| 2.051 | 0.000 | 74.18 | 0.58 | 0.61 | strong |

In table 1-6, the coefficients related to regression model number 2, have been represented.

Table 1-6: Coefficients of regression model number 2

| strong corporate governance | | | Weak corporate governance | | | variables |
|-----------------------------|--------------------|----------------|---------------------------|--------------------|----------------|---------------------------|
| result | Significance level | Coefficient | result | Significance level | Coefficient | |
| Reject zero Hypothesis | 0.017 | $\delta=0.613$ | Reject zero Hypothesis | 0.029 | $\delta=0.440$ | $DR_{i,t+1}^* - DR_{i,t}$ |

Based on results in table 1-6 we can accept that the coefficient of financial leverage changes speed in both groups has been meaningful and this variable has affected capital structure dynamicity. But, as it can be observed, the amount of financial leverage changes speed in strong corporate governance group (0.613) has been greater than that in weak corporate governance group (0.440) and this means that in this group and when there is a need to change capital structure, we can achieve optimal capital structure more rapidly.

Conclusion

After an overall summary of the total 483 firms, and as it was pointed, after applying the constraints considered, the data related to 139 firms for the time period between 2009 and 2013 were extracted completely and without any missed values.

In first model related to weak corporate governance quality, the adjusted model was appropriate, and the null hypothesis of this test claiming that the linear model is not appropriate was rejected. Thus, at least one of the regression coefficients of the regression model was opposite to null. Thus, the adjustment above has been an appropriate one.

In first model related to strong corporate governance quality, the adjusted model was appropriate, and the null hypothesis of this test claiming that the linear model is not appropriate was rejected. Thus, at least one of the regression coefficients of the regression model was opposite to null. Thus, the adjustment above has been an appropriate one.

Regarding the meaningfulness of the variable corporate governance in both groups we can accept that corporate governance has been one of effective variables on capital structure dynamicity.

In second model related to weak corporate governance quality, the adjusted model was appropriate, and the null hypothesis of this test claiming that the linear model is not appropriate was rejected. Thus, at least one of the regression coefficients of the regression model was opposite to null. Thus, the adjustment above has been an appropriate one.

In second model related to strong corporate governance quality, the adjusted model was appropriate, and the null hypothesis of this test claiming that the linear model is not appropriate was rejected. Thus, at least one of the regression coefficients of the regression model was opposite to null. Thus, the adjustment above has been an appropriate one.

Based on findings we can accept that the coefficient of financial leverage changes speed in both groups has been meaningful and this variable has affected capital structure dynamicity. But, as it can be observed, the amount of financial leverage changes speed in strong corporate governance group has been greater than that in the other group and this means that in this group and when there is a

need to change capital structure, we can achieve optimal capital structure more rapidly.

References

- 1- Ahmadpour, Ahmad; Golmohammadi, Hamzeh (2011). The effect of corporate governance variables on capital structure in firms enlisted in Tehran Stock Exchange (case study: automobile industry). MA Dissertation, Sciences and Skills University of Mazandaran.
- 2- Azar, Adel; Momeni, Mansour (2004). Statistics and its use in management. SAMT Publications, Volume 1 & 2.
- 3- Aflatouni, Abbas; Nikbakht, Leila (2010). The function of economic measurement in accounting, financial management, and economic sciences researches. First Edition, Termeh Publications.
- 4- Corporate governance guidelines (2007). Approved by board in Stock Exchange Organization (corporation).
- 5- Babajani, Jaafar; Abdi, Majid (2010). The relationship between corporate governance and earning subject to taxes in firms. Journal of financial accounting researches, No. 5, PP: 65-86.
- 6- Bagherzadeh, Saeed (2003). The identification of capital structure pattern in firms enlisted in Tehran Stock Exchange. Bi-quarterly Journal of Financial Researches, Period 5, No. 2.
- 7- Totenkhan, Behnam (2008). Studying the relationship between board composition as one of corporate governance criteria and performance of firms enlisted in Tehran Stock Exchange. Shahid Beheshti University, MA Dissertation in Accounting.
- 8- Jahankhani, Ali; Parsaeian, Ali (2011). Financial management. SAMT Publications, First and Second editions.
- 9- Hanifi, Farhad; Zaree, Azim; Rahbar, Ehsan (2011). Studying the relationship between corporate governance and financial content in firms enlisted in Tehran Stock Exchange. Islamic Azad University, Central Tehran Branch, MA Dissertation.
- 10- Delgoshae, Bahram; Tabibi, Seyyed Jamaloldin; Maleki, Mohammadreza (2014). The completion of dissertation, thesis, scientific projects, and scientific articles. Ferdows Publications.
- 11- The Official Website of Stock Exchange Organization and software package of financial data of firms enlisted in Stock Exchange (2001-2009).
- 12- Setayesh, Mohammad Hossein; Jamalianpour, Mozaffar (2011). The usefulness of capital

- structure and its changes in achieving financial strategies in firms enlisted in Tehran Stock Exchange. *Journal of accounting and auditing studies*, No. 64, PP: 73-90.
- 13- Sajjadi, Seyyed Hossein; Mohammadi, Kamran (2011). Studying the effect of firm features on capital structure in firms enlisted in Tehran Stock Exchange. *Journal of accounting researches*, No. 10.
 - 14- Kordestani, Gholamreza; Mazaher Najafi, Omran (2008). Studying determinant factors of capital structure: an experimental test of static balance theory against hierarchical theory. *Journal of Financial Researches*, No. 25, PP: 73-90.
 - 15- Momeni, Mansour (2012). *Statistical analyses by using SPSS. 7th edition*, Forouzes Publications.
 - 16- Namazi, Mohammad; Heshmati, Morteza (2007). Studying the effect of structures and delay variables on capital structure in firms enlisted in Tehran Stock Exchange. *Journal of accounting and auditing studies*, No. 49, PP: 139-160.
 - 17- Vakilifard, Hamidreza; Vakilifard, Masoud (1996). *Financial management by Hampton, Warn, ... Samareh Publications*.
 - 18- Bokpin, G.A and Arko, A.C. (2009). "Ownership Structure, Corporate Governance and Capital Structure Decisions of Firms". *studies in Economics and Finance*, Vol.26, No.4, pp 246-256.
 - 19- Frank, m.z. & Goyal, v.k. (2009). "Capital Structure Decisions: which factors are reliably important?", *financial management*, 38, 1-37.
 - 20- Hackbarth, d. (2008). "Managerial Traits and Capital structure decisions", *journal of financial and quantitative analysis*, 43, 843-882.
 - 21- Hackbarth, d. (2012). "Optimal priority structure, and investment", *review of financial studies*, 50, 747-796.
 - 22- Hayat M. Awan, Khuran Shahzad Bukahri, Rameez Mahmood Ansari (2008). "Corporate Governance Practices & Their Impact on Firm's Capital Structure & Performance; Case of Pakistani Textile Sector". SSRN.com database.
 - 23- Hovakimian, a., Opler, t., & Titman, s. (2001) the debt-equity choice: an analysis of issuing firms. *journal of financial and quantitative analysis*, 36, 1-24.
 - 24- Hovakimian, A., Hovakimian, G., & Tehranian, H. (2004). "Determinants of Target Capital Structure: The Case of Dual Debt and Equity Issues", *Journal of Financial Economics*, 71, 517-554.
 - 25- Howakimian, A. (2006). "Are Observed Capital Structure Determined by Equity Market timing?", *Journal of Financial and Quantitative Analysis*, 41(1): 231-243.
 - 26- Leary, M.T & Roberts, M.R. (2005). "Do firms rebalance their capital structure?", *Journal of Finance*, 60, 2575-2619.
 - 27- Modigliani, F. and Miller, M.H. (1958). "The Cost of Capital, Corporation Finance and the Theory of Investment". *American Economic Review*, Vol. 68, No. 3, pp. 261-297.
 - 28- Morellec, E. (2004). "Can managerial discretion explain observed leverage Ratio? Review of Financial studies", 17, 257-297.
 - 29- Morellec, e., Nikolov, b., & Schurhoff, n. (2012). "Corporate governance and Capital structure dynamics". *journal of finance*, 67, 803-848.
 - 30- Myers, s.c. (1984). "the capital structure puzzle". *journal of finance*, 39, 575-592.
 - 31- Myers, S. and Sussman, N. (2003). "Corporate Financing and Investment Decisions When Firms Have Information That Investors Do Not Have", *Journal of Financial Economics*, vol. 13, No. 2, pp. 187-221.
 - 32- Pawlina, G. (2010). "underinvestment, capital structure and strategic debt restructuring", *Journal of Corporate Finance*, 16, 679-702.