The Effect of Ownership Structure on Share Price Volatility of Listed Companies in Tehran Stock Exchange: An Empirical Evidence of Iran

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Abstract

The subject of corporate governance has played an important role in determining the fate of the company, and its observing or non-observing has a direct effect on the operation of the company. The purpose of this research is the analysis of the effects of different aspects of ownership structure (shareholders structure) like individual or institutional, internal or external, being focused or disseminated of the shareholders on the share price volatility of listed companies in TSE. In this research "Shareholders structure" is considered as the independent variable and "Share Price Volatility" as the dependant variable. The results of this research indicate the price of shares of the companies whose more percentage of shares are held by their greatest shareholders may have more volatility and the share price volatility of the companies that the more percentage of their shares is hold by individual shareholders is lower. It should be noted that the measure of ownership of five greater shareholders and institutional shareholders and members of the board of directors might not show any solution for investors interested in share price volatility.

Key words: Corporation governance – Ownership structure – Price volatility

Introduction

A subject which has been considered in financial markets during the current decades is "corporate governance" that a number of researchers and experts in the different fields such as accounting, business, economics, law, … studied the same from different aspects. Indeed "corporate governance" has considered with the purpose of increasing efficiency and utility of the process of allocating savings to high yielding investments during the past century. A system is formed from interaction of ownership structure with the controlling power of the company that rules the organization, which is called corporate governance. Making a change in the components and elements of jurisdiction system in organization may lead to change the way of their strategic movement. For achieving the purposes, the companies need leading which is planned and executed through management by the manager and the staff of economic unit and require the partnership of all economic section staff. The owners may influence the operation of the company through their capability in management control. The importance of corporate governance in the development of financial markets cause to compile some acts such as Sarbanes Oxley Act in America or the principles of corporate governance passed by Organization and Economic Cooperation Development[1] in 1999-2004. The existence of a proper and effective corporate governance throughout the country and the economy may cause to increase the liability and enrichment of the market, therefore decrease the cost of capital.

[1] . The first set of the principles of acceptable corporate governance was drawn up by this Organization which is located in Paris with 29 members throughout the world.

Therefore, the companies may encourage to use the resources properly and develop their activities. The principles of corporate governance may include the issues such as the measure of management, the level of control in companies and the manner of interaction between the great and little shareholders. It should be noted that the price of shares is an influencing variable and the share price volatility is an evident factor in stock exchanges, and for any change in influencing factors in share price, the volatility may be made. In case of non-reasonable and persistent volatilities in market, the role of stock exchange is a matter of question and there is no center for absorbing floating liquidities and non-efficient little savings and leading them towards production. Therefore, the positive effects may be caused by the stock exchange on economy and the role which may have on absorbing savings and forming capital and optimum distributing them may be decreased. Since, the availability of an appropriate corporate governance system may help the companies to be reliable for the investors and to encourage them to invest, and according to the experimental research and studies conducted executing these principles in companies may cause the improvement of financial operations and increase of the validity of the company, therefore, study of the advantages of observing these principles and analyzing them, by taking into consideration its importance in increasing the efficiency of capital market, is necessary.

According to capital structure theory, the capital structure that includes of the stock and debt, has effect on firm's value. And the effect of shareholders structure on firm's performance is approved in previous researches. For the analysis of the said relation, different aspects of ownership structure have been considered up to now such as the shareholders are or are not director, being focused or disseminated of the shareholders, the shareholders are great or little, they are domestic or foreign, they are individual or institutional, are a factor of evaluation of the operations of companies member of stock exchange is the yield of shares of these companies. The yield of shares of the companies will be accounted as follows in regular status;

$$\mathrm{TR} = \frac{\mathrm{CF_t} + (P_E - P_B)}{\mathrm{P_B}} = \frac{\mathrm{CF_t} + \mathrm{PC}}{\mathrm{P_B}}$$

As it is observed a factor of yield is changes in prices. The subject of this Article is the analysis of the relation between the ownership structure and the share price volatility of the companies. The purpose of this research, is studying the effect of different aspects of ownership structure (shareholders structure), whether individual or institutional, internal or external, being focused or disseminated of the shareholders on the share price volatility of companies accepted in TSE. In this research "Shareholders structure" is considered as the independent variable and "Share Price Volatility" as the dependant variable. According to the foregoing, the variable of shareholders structure is divided into five indexes. The present research is intended to analyze this question: What is the role of ownership structure of accepted firms in TSE on the volatility of the price of their shares?

At first the background of the research including the opinions and theories related to the experimental background and subject of the research and the conclusions of different researchers is analyzed. Then in the section of research methodology the type of research, research variables, statistical society, sample and its selection stages, the method used for analyzing data are assessed and in continuance after expressing the research hypothesis and the manner of testing hypotheses, the model under the test will be analyzed and presented. Then, in the section of findings and conclusion of the research, the test of hypotheses, statistical analysis of the findings gained from raw data processing are considered and in the end, the conclusion of the research and proposals achieving from the same will be presented.

Research background

The domain of discuss the mechanism of corporate governance which was opened in efficient markets, now included more new markets. Mintz believes that the mechanisms of corporate governance include approaches and methods that may cause supporting the interests of shareholders and optimum use of resources owned by them in the process of operating activities of the company.(Mintz,2005). By this definition he makes a two-way relation between the mechanisms of corporate governance and operation criteria and emphasizes on the relation between supervising and executing structures in the companies. Any taxonomy on corporate governance is based on the following eight variants:

1. Type of the company, 2. Structure of the board of directors, 3-The power of beneficiaries for influencing on resolutions of directors, 4- The importance of capital market in national economy of each country, 5- The existence or non-existence of a market for applying the controls required for the companies, 6- integration of shareholders, 7- The dependence of directors remuneration to the operating yield of companies, and 8- the existence of a time line for clarification of economic relations between the companies. (Weimer& Pape, 1999)

As it is observed, a variable of corporate governance is shareholders structure, the relation between the shareholders structure (ownership structure) and the performance of the company is an important and continued subject in the field of financial management of the companies and the texts of financial management. Today, some governance structures are prior to the other structures and some enterprises have this optimum structure. Anyway, Morck et al (1988) believe that, there is only one optimum governance structure and the enterprises with the different structures have an performance weaker than their optimum state. (Morck et al, 1988) To move from individual ownership to collective ownership caused to raising new problems in the field of financial resources management, so that Burl and Mintz (1932) considered the same as agency problem (Morey et al, 2008). The agency theory considered the clarification of how agency problems may raise between the employer (shareholder) and agent (manager) due to information asymmetry. Meanwhile, the effective corporate governance structures helped to prevent from creation of interests conflict between the directors and shareholders by making information conformity and balance.

On other words, these structures motivate the management to take the necessary measures for increasing the validity of the company. Therefore, the more yield of the company requires the improvement of corporate governance mechanisms, since it may cause to decrease agency costs, higher evaluation of shares, therefore the better performance during long term. Brown and Caylor (2004) analyzed the corporate governance and the operation of the company. The criteria for performance in their study has been tubin's Q. They placed 51 contributing factors in corporate governance in 8 categories including accounting, the board of directors, legislating, teaching directors, directors' remuneration, shareholders, developing operations, and tendency for partnership. The results indicate that a proper corporate governance has more influence on the yield of the company in respect of the director's remuneration. Nevertheless, other aspects also have direct influence on the yield of the company.(Brown& Caylor, 2004). Brown and Caylor (2006) by making the index of corporate governance based on domestic and foreign mechanisms of corporate governance and clarification of its relation with the validity of the company gained a meaningful relation between them.

Like the former research conducted by these researchers, 51 contributing factors in corporate governance were placed in 8 categories including accounting, the board of directors, legislating, teaching directors, directors' remuneration, shareholders, developing operations, and tendency for partnership. The final result of the research emphasized the more influence of domestic mechanisms of corporate governance. Also the criteria of the validity of the company in this research has been the average price of shares during a specific period (Brown& Caylor, 2006). Chen and Ho (2000) understood that the level of variety has a positive relation with the size of the company and a negative relation with the shares owned by the foreign shareholders. They found no special evidences as regards whether the internal ownership has an important influence on the level of variety. They found a considerable loss in companies with low management ownership took measures for variety. Also they found that the block external owners of the shares of the company have no considerable influence on the level of the variety of the company.

Therefore, when the block external owners may have a preventing role in the variety of the company, but there is no valid evidence for this fact that the owners are able to effectively decrease agency problems in companies with low management ownership.(Chen& Ho, 2000) Demsetz and Villanonga (2001), with the hypothesis that the ownership is considered as multidimensional and as an endogenous variable, found no meaningful statistical relation between the ownership structure and performance of the company. As it is said by these researchers, the results of this research conform to this point of view that, while the unfocused ownership may lead to aggravate the agency problem but it has benefits which may solve too much problems. Some who considered the ownership structure as an endogenous factor or gained similar results are Hermalin and Weisbach (1988), Loderer and Martin (1997), Cho (1998).(Demsetz& Villanonga, 2001).

Miguel et al (2004) gained these results that, firstly, the focused ownership level (institutional shareholders) and internal ownership (ownership by the members of the board of directors) together with features like protecting the investors, development of capital markets, market activities for controlling the company and efficiency of the members of the board of directors may lead to improvement of the performance of the company. Secondly, a meaningful and positive relation between focused ownership and performance of the company is not explicable only through institutional shareholders. Finally, in addition to the cases mentioned above, the ownership of the members of the board of directors may also influence the performance of the company.(Miguel et al,2004). Shin-Ping and Tsung-Hsien (2009) tested the mutual relationship of ownership structure and performance of the company. The results of their research indicated a reversed and U-shape relation between internal ownership and performance of the company.

A meaningful negative relation was observed between state natural ownership and ownership of the registered companies with the operation of the company also it is determined that there is a positive relation between the ownership of trust investment securities and the operation of the company.(Shin-Ping& Tsung-Hsien,2009)

Domestic research:

In the research conducted by Namazi and Kermani (2008), the ownership structure is divided into two institutional and private ownership categories that the private ownership also is divided into three categories including corporate, management and external shareholders. The findings of the research indicate that there is a negative and meaningful relation between institutional ownership and the performance of the company and a positive meaningful relation between the corporate ownership and performance of the company. Management ownership has a negative meaningful influence on the performance and no information indicating the ownership of external shareholders was observed in sample statistical companies as regards private ownership. In the private ownership it is also better that the main part of ownership is hold by corporate investors. In general, there is a meaningful relation between the ownership structure and performance of the companies.(Namazi& Kermani, 2008).

Sadeghi Sharif and Panjehshahi (2008) indicated that the companies that a fewer percent of their shares is hold by their greatest shareholder (their shareholders structure is more unfocused) are more proper cases for investment. The companies whose more percent of their shares is hold by the legal shareholders are more proper cases for investment. The influence of the amount of the ownership of individual shareholders and the amount of ownership of the members of the board of directors of a company on its yield was not confirmed. (Sadeghi Sharif& Panjeh Shahi, 2008). The results of the research conducted by sadeghi Sharif and Bahadori (2009) indicated that the amount of the ownership of the greatest shareholder also the amount of ownership of five greatest shareholders has a positive influence on the Dividend Pay-out Ratio of the company, i.e. the companies whose more ownership of them is hold by a shareholder or by its five greater shareholders, have a more DPR, proportional to the companies whose ownership is more unfocused and focusing in ownership leads to increase the company's DPR. The influence of being institutional of shareholders on company's DPR was confirmed, i.e. the more institutional shareholders ownership in a company may cause to increase the DPR during passing time. On the other hand, the more individual shareholders ownership in a company may cause to decrease the DPR.(Sadeghi Sharif& Bahadori,2009)

Research Methodology

Notwithstanding, this research in respect of purpose is an applied basis research, since in this research the relations of variables in the market of securities has been analyzed, and it is for clarification of relations and presentation of proposals towards promotion of the efficiency of the market. This research is also of a correlative descriptive research type. It is of regression analyses type in respect of purpose among all types of correlation research. Meanwhile its approach is inductive, i.e. reaching the generalities from analyzing details. The territory of the research is companies accepted in Tehran Stock Exchange Organization of Islamic Republic of Iran. The time domain of this research is from the beginning of 1380 (April 2001) until the end of 1388 (March 20, 2010). In this research all companies accepted in Tehran Stock Exchange Organization excluding investment and holding companies during the beginning of 1380 (April 2001) until the end of 1388 (March 20, 2010) are considered as the statistical society. The method of sampling in this research is of a screening type and was considered for screening the society and sampling of the following conditions:

- The first screening conducted as specified is omitting investment and holding companies for the reason specified above.
- The companies whose symbols are closed more than three months (long-term cease) were omitted from the sampling. The reason of the screening is that our purpose is to analyze the influence of independent variable on the price volatility, that in case of closing the symbols no transaction is made and we will not have a volatility in practice.
- The end of fiscal year of the companies is March 20th, the companies which have changed their fiscal year were omitted from sampling. This screening was done due to non-similarity of the fiscal year of all companies.

After screening conducted as mentioned above 49 companies were selected as samples for analyzing and examining the subject matter of research by use of the information of these companies. Shareholders structure or the ownership structure of the company is considered as an independent variable in this research that is considered as an exogenous factor. Different definitions and specifications have been specified for shareholders structure in different researches, in this research we observe the specifications such as being focused, institutional, individual and internal.

Taking into consideration the foregoing, the variable of shareholders structure is divided into five indexes: the amount of ownership of the greatest shareholder (indicates focusing ownership structure), the amount of ownership of five greater shareholders (indicates focusing ownership structure), the amount of ownership of institutional shareholders (indicates being institutional of ownership structure), the amount of ownership of individual shareholders (indicates being real of ownership structure), the amount of ownership of the members of the board of directors (indicates being internal of ownership structure). These five indexes causes we have five main hypotheses in this research as follows:

First hypotheses: The amount of ownership of the greatest shareholder is related to the share price volatility of the company.

Second hypotheses: The amount of ownership of five greater shareholders is related to the share price volatility of the company.

Third hypotheses: The amount of ownership of the institutional shareholders is related to the share price volatility of the company.

Forth hypotheses: The amount of ownership of the individual shareholders is related to the share price volatility of the company.

Fifth hypotheses: The amount of ownership of the board of directors is related to the share price volatility of the company.

In this research, in order to recognize the relation between independent and dependent variables the regression is used and an equation is formed through it the influence of the independent variable on the dependent variable is evaluated. So that for each hypothesis an equation is formed and the influence of each separate independent variable on the dependant variable is determined. The variables of volume of trade and the firm size are interred into the model as controlling variables. The equation formed is as follows:

$$VOLATILITY_{it} = a_0 + (b_1 * OWNS_{it}) + (b_2 * SIZE_{it}) + (b_3 * VOT_{it}) + Residual$$

The next step is testing meaningfulness and coefficients accounted in the equation mentioned above for each hypothesis. We used test F for meaningfulness test and test T for testing equations coefficients. For estimating two-variable and multivariable linear regression patterns, ordinary least square is usually used that we also used the same. The estimators of ordinary least square of regression coefficient are the best linear unbiased estimator and are distributed normally by supposing that they are normal. Therefore, the gap estimators may be reached and test the hypothesis that the society regression coefficient is correct. For some problems such as auto-correlation and heteroscedasticity the method of generalized least square is used in which the variables of regression pattern are balanced. But it should be noted that the weighted method is not used for equations which have AR or MA. In other words, if there are AR and MA elements in an equation and we want to use weighted methods for estimating their coefficients, the Eviews software ignore weighted series. But in Eviews, the heteroscedasticity will be removed by consistent standard errors and covariance.

Variables of research and operating definitions are as follows:

Independent variable: In this research the ownership structure is considered as independent variable for which five indexes was stated that will lead to have five hypotheses:

- The amount of ownership of the greatest shareholder: is equal to the percentage of ownership of the greatest shareholder of each company for which the symbol of BIGEST is considered.
- The amount of ownership of five greater shareholders: is equal to the sum of the percentage of ownership of five greater shareholders of each company for which the symbol of 5BIG is considered.
- The amount of ownership of institutional shareholders: is equal to the sum of the percentage of ownership of the legal shareholders of each company for which the symbol of INST is considered.
- The amount of ownership of individual shareholders: is equal to the sum of the percentage of ownership of the individual shareholders of each company for which the symbol of INDV is considered.
- The amount of ownership of the members of the board of directors: is equal to the sum of the percentage of ownership of the members of the board of directors of each company for which the symbol of MANG is considered.

Dependent variable: in this research, is used for share price volatility.(VOLATILITY),the volatility can be evaluated in 3 statistically ways such as range, standard deviation and kurtosis that the last is calculated by the following formula:

$$kurtosis = \frac{\sum_{i=1}^{N}(y_i - \bar{y})^4}{(N-1).S^4} - 3$$

Where: N= trading days in the stock exchange; Y_i= monthly data on stock closing price; $\bar{Y}$= the average of changing monthly price; S= the standard deviation of monthly stock price.

Of course, the more common volatility's estimator is standard deviation that shows the deviation of every observation from arithmetic statistics' observations. And because it used all of the information of the sample, that is a good estimator for volatility. In this research, we use standard deviation for estimating of price volatility. That is calculated with following formula:

$$\delta_P = \sqrt{\frac{1}{N-1}\sum_{i=1}^{n}(p_i - \bar{p})^2}$$

Where: P_i= daily data on stock closing price; $\bar{P}$= average of P_is; N= trading day in the stock exchange

Controlling variables: in this research, they are such as: firm's size (SIZE) and volume of trade (VOLUME). There are different indexes for estimation of firm's size, like: the firms' assets, the selling, the number of staffs and firm's market value. We used the last factor in this research. Trading volume is estimated in different ways such as, number of trades, number of traded shares and the value of trade. We choose the value of trade for estimating of the trading volume the same as sabri (2008).

Results

Before the test of research's hypotheses, we use jarque-bera test for testing the normality of variables of research. After normalizing the BIGGEST – with usage of appropriate convertor that is LN – we examine the hypotheses. It's important to say that the model for all of the hypotheses had heteroscedasticity and auto-correlation problems. The first problem is solved by heteroscedasticity- consistent standard errors & covariance and the second one is solved by moving average (MA(1)). You can see the results of research in table 1 and table 2.

Table 1

Variable	coefficient	t-statistic	Prob	f-statistic	Prob.(f-statistic)	Durbin-watson stat
BIGGEST	314.650	2.021	0.043	17.214	0.000	1.919
5BIG	5.326	1.052	0.293	16.862	0.000	1.917
INST	5.669	1.529	0.126	17.167	0.000	1.918
INDV	-8.616	-2.060	0.039	17.363	0.000	1.917
MANG	3.455	0.979	0.327	16.81	0.000	1.918

Table 2

Hypotheses	Description	Kind of Relation	Result
1	The amount of ownership of the greatest shareholder is related to the share price volatility of the company	Positive	Accepted
2	The amount of ownership of five greater shareholders is related to the share price volatility of the company	-	Rejected
3	The amount of ownership of the institutional shareholders is related to the share price volatility of the company	-	Rejected
4	The amount of ownership of the individual shareholders is related to the share price volatility of the company	Negative	Accepted
5	The amount of ownership of the board of directors is related to the share price volatility of the company	-	Rejected

Summary and Conclusion

Morck et al (1988) asserted that the big shareholders have their advantages that sometimes are not consistence with other shareholders' advantages. Perhaps, we can describe the cause of positive relation between focused ownership structure with share price volatility by this claim. focused ownership (the biggest shareholder's ownership) has positive effect on stock price volatility. Thomsen and Pedersen (2000) also found a positive and meaningful relation between focused ownership and economical performance as dependent variable. Also sadeqisharif and panjehshahi (2008) found that the percent of the biggest shareholder's ownership has a negative effect on yeild. Sadeqisharif and bahadori (2009) worked on the effect of ownership structure on DPR that they found the percent of the biggest shareholder's ownership has a positive effect on DPR. The result of testing second hypotheses in table2 shows that there isn't any relation between the percent of 5 bigger shareholder's ownership and share price volatility that is in opposite of the results of first hypotheses. Sadeghisharif and panjehshahi (2008) didn't find any relation between the 5 bigger shareholders and yield. But sadeghisharif and bahadori (2009) found positive relation between ownership of 5 bigger shareholders and DPR. The third hypotheses was about the relation between institutional ownership and share price volatility, as you see in 1-5 table, it is rejected. But in sadeghisharif and panjehshahi (2008) research, the effect of institutional ownership on yield, is approved, also in the research of sadeghisharif and bahadori (2009) the hypotheses of relation between institutional ownership and DPR, is accepted.

Cornett et al (2007) also found the positive and meaningful relation between operational cash flow to selling as performance index and the institutional ownership. The findings of Namazi and Kermani (2008) showed that, there is a negative and meaningful relation between institutional ownership and the performance of company. As you see in 1-5 table, in fourth hypotheses, there is a negative relation between individual shareholders ownership and price volatility. Thomsen and Pedersen (2000) asserted about the distributed ownership that, the shareholders can't participate in governing of the companies that leads to the reduction of optimal performance. Sadeghisharif and Panjehshahi (2008) didn't find any relation between individual ownership and yield in their research. The research of Sadeghisharif and Bahadori (2009) has approved the negative effect of the amount of individual shareholders on DPR. After the testing of fifth hypotheses, we find that, there is no relation between managerial shareholder ownership and price volatility. Sadeghisharif and Panjehshahi (2008) rejected the hypotheses of existence relation between the managerial ownership and yield. Of course Namazi and Kermani (2008) found that the managerial ownership has effect on the performance of company in a negative and meaningful form.

Research suggestion for investors

The most important part of corporation governance is being sure about the performing of the correct governing of the shareholders. The existence of specified modes cause that performing of this ownership system – specially for retail shareholders – faces some barriers. So, one of the important subject in corporate governance, is awareness of ownership structure and calibration of its upon standardize scales, so the usage of that can make some necessary strategies in corporation governance. So, for definition and make the results of this research more practical, we should consider being risk bearing and risk averse in the investment of stocks. Risk averse investors satisfy with lower profit and they don't expect miracle in their investment. So, they are more interested in the investment in companies that their price volatility is being more controlled and lower. So we suggest them to avoid from investing in firms which the most amount of ownership belongs to the biggest shareholder and prefers the companies with more individual shareholders. Of course, it is clear that the loss of this companies is more tolerable for risk avers investors. But the risk bearing investors expect more profits from their investments and the probability of their loss is more. They can increase their chance for achieving to higher profit and return by investment in companies with the biggest shareholder which has the most of their stocks.

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