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Original Research

Investigation of the Effect of Internal Factors on the Tobin's Q Ratio and Value of the Companies Accepted in Tehran Stock Exchange

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Abstract

The aim of this study was to investigate the effect of internal factors of the company on the Tobin's Q ration and the value of companies admitted in Tehran Securities Exchange Stock Exchange with the approach of structural equation modeling. In this study the effect of corporate governance, capital structure and profit sharing policy as internal variables on corporate value was investigated. This research is practical in terms of goal. Statistical population of the present study is the companies accepted in the Tehran Stock Exchange between 2012 to 2016. Among them, 161 companies were selected as sample through systematic elimination. After finding to fit the acceptable model of measurement and structure of the research, the results showed that internal variables have a positive effect on the Tobin's Q ratio. Among the internal variables, the return-sharing policy has the most impact on the Tobin's Q ratio. The Tobin's Q ratio can mediate the relationship between local variables and the corporate value.

Keywords: Tobin's Q ratio, company value, corporate governance, capital structure, profit sharing policy

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Introduction

Nowadays, performance assessment in decision-making process is one of the most important issues in the financial and economic fields with respect to the development and importance of the role of capital market. Therefore, the function of financial and economic criteria is necessary to evaluate the performance of firms. The main objective of commercial units is to increase the company's value. This goal is not only beneficial to shareholders but also will lead to the best public benefits. The value of companies is usually reflected in stock prices. In the most important trade decisions, there are two important financial considerations: risk and return. Any financial decision provides safe risk and return properties and a combination of them can increase or decrease the company's value and performance. One of the most important goals of economic firms is to gain in the short term and increase the wealth of owners in the long term. This is possible by making logical decisions in the investment process. These decisions also have a direct relationship with the evaluation of the performance of businesses (Mirzaie and Khataie, 2013).

The public stock companies accepted in the Tehran Stock Exchange are considered among the most effective and economic institutions in the economy and one of the most important economic foundations in each country. For this reason, one of the most fundamental issues is how to measure the proportion of the Tobin's Q of the companies. Measuring the Tobin's Q ratio is a basis for many decisions such as a bonus for managers, stock prices, stock risk, investment decisions (Javadi and Fattahi, 2017).

Among the internal factors that have affected the companies' status in recent years with the expansion of corporate activity in the capital market, and in the financial and behavioral sectors after Enron financial scandal have attracted the attention of many analysts, researchers and investors. The discussion is about corporate governance, the structure of the investment, and the policy of dividing the profits. After the rise of representative problems in order to protect the public interest, information should be immunized and the interests of managers and owners were parallel. Many different mechanisms have been used in this regard such as the application of ethics theory in accounting, creating the theoretical framework and standards of accounting, internal controls, internal and independent audit, having non-executive managers in the board, applying long-term rewards even by the government. However, the problems were not reduced, but more complications were caused by the lack of mechanisms of corporate pilot that could lead to the ultimate goal of the company, which is to increase the company's value. Corporate governance (separation of ownership from management) is a factor that can improve company performance and some of its different mechanisms are institutional investors, non-commissioned managers, corporate independent audits, internal controls, audit committee, legal prominence and so on. Corporate governance plays a major role in improving the company's performance and a direct relationship between corporate governance and performance in developing financial markets. According to studies, the fall of shares of companies such as Annon, Verldcom, Politico and Aldafa has been largely due to the poor governance of the above companies. The establishment of an effective corporate governance system leads to the interests of managers and owners in the same way (Fama and Jensen, 1983). Operations performance of the company is improved and expanded. The results of many experimental studies in

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other countries show that good corporate governance leads to better performance (Balatbat, 2004).

Companies will play an important role in the performance and credibility of companies with the investment companies for decision-making. But the importance of companies in terms of their size of performance, profitability, growth facilities, size, and activity will determine their variety of financial needs. Meanwhile, debt resources will increase the cost of constant, increase the advantage and result in their systematic risk. Since the most important objective of capital structure policy is to determine the composition of financial resources to maximize the wealth of shareholders, capital structure policies help financial managers to determine the amount of profit before interest and tax to prevent any return. Also, it is possible to choose a method that leads to the most favorable combination of risk and return by calculating the financial risk that each of the financing programs have. Therefore, understanding the theory of capital structure helps managers determine the structure of the company's desired capital. Capital structure impact value, which means how the company is funded. Capital structure is one of the company's most important features. Several theories have stated that change in the structure of capital, change, or revision of the company's value, so it should affect the company's stock value. In other words, the relationship between the components of the capital structure, which is a combination of bonds, and shares for financing has a significant effect on the results of corporate performance.

The reasoning of capital structure and performance of company is largely under the radius of the arguments related to the creation of debt value. But the whole relationship can be summarized as follows: The net effect of financial leverage on company performance is a result of various effects. If financial distress (often the ratio of debt indicates) is more expensive and more important than the disciplinary role of the debt, companies with more debt will have more performance problems. In contrast, if the financial failure of the company is forced to expand the efficiency and productivity of its operations to a level higher than the cost of financial distress, then companies that have more debt will have better performance (Gonzalez, 2013).

Research has shown that almost all successful companies pay the stake profits, and financial managers pay special attention to the profit-sharing policy. The profit sharing policy also affects the company's value. Three schools of thought have appeared in the past century: In the first group, the dividing profits are an effective and positive factor in the stock price. The second group believes that the price of shares is negatively related to the disbursement level, and the third group claims that the company's split profit policy is irrelevant. Moreover, profits from company activities can be used as the best source of financing. Therefore, the managers must maintain balance between the interests of different shareholders to not lose profitable investment opportunities and to pay the benefit of some shareholders. Therefore, the decision to divide the profits made by corporate managers is very sensitive and important. In fact, one of the most important financial decisions is the allocation of profit for each share to the two sectors of dividends and profit stacked. The company performance can influence the corporate dividends profit and policies adopted in this regard. Managers do not make a decision that best benefits for investors, and because investors are well aware of the problem, they use mechanisms to control it. One of these mechanisms is payment of a large portion of profits. Therefore, one way to reduce the cost of conflict is through increasing dividends; Therefore, managers inform owners that they are moving in line with the company's goals, and shareholders have more confidence in managers' performance. Therefore, dividends are a means to reduce the costs of the conflict, and it relates profits or increase those shareholders. Researchers found that there was a conflict between the desire of shareholders to benefit from division as well as managers to invest in stacked profits. Managers pay attention to current and expected profits, profit payment record, dividends stability, cash flow, investment opportunities, and shareholders' demands in determining the level of interest payment. Accordingly, companies must adopt a policy of dividing their profits that will bring balance between current dividing profits and future growth, and increase stock prices, create the maximum value for the company and improve the company's performance. Based on the above and the development of theoretical basis for internal variables on the performance and value of the company in this paper, new studies are conducted on the effect of some key internal variables such as corporate governance, capital structure and profit sharing policy on the ratio of IV in Iranian capital market and also the impact of QO as a interference variable on the relationship between internal variables and value of companies in stock market. to be examined.

Research Hypotheses

In view of the theoretical basis of the research subject and the assumptions that were obtained in relation to the present research subject, the hypotheses were as follows:

Corporate governance has a positive and significant effect on the Tobin's Q ratio.

The structure of capital has a positive and significant effect on the Tobin's Q ratio.

The policy of dividing profit on the Tobin's Q ratio has a positive and significant effect.

The Tobin's Q ratio has a positive and significant effect on the company's value.

The Tobin's Q ratio mediates the relationship between corporate governance and corporate evaluation.

The ratio of the Tobin's Q mediates the relationship between the capital structure and the company's assessment.

The ratio of Tobin's Q mediates the relationship between the policy of dividing profit and evaluation of the company.

Measuring research variables

In this research, corporate governance, capital structure, and profit sharing policy are considered as independent variables. And the company value variable was considered as the dependent variable and the ratio of Tobin's Q companies as a mediator variable. The following variables were measured in Table 1:

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Table1: Measuring research variables

No	variable	Measurement
1	corporate governance	Number of shares in the hands of institutional shareholders over total shares in the hands of shareholders $\frac{\text{the number of institutional share}}{\text{the total number of outstanding share}}$
	capital structure	The sum of debts over the sum of assets $\frac{\text{total debt}}{\text{total asset}}$
	Profit sharing policy	Dividends per share over earnings per share $\frac{\text{dividend per share}}{\text{earning per share}}$
2	corporate value	Stock price on stock book value $\frac{\text{stock price}}{\text{book value}}$
3	Tobin's Q ratio	The market value of the company is divided by the book value of the company $Q = \frac{MVS + BVD}{BVA}$ MVS : Represents the value of the ordinary stock market BVD : Book value of debts BVA : Book value of assets

Research methodology

This research is an applied research in terms of its purpose and is a descriptive survey in terms of data collection methods¬ In order to study the relationship between variables; the Qaissi-Inductive approach is used. In the Qaissi method, the theory of the variables of the research in order to calculate the value of the variables according to proper methods, and then in the inductive method, the meaning of the relations between independent and dependent variables is investigated. The overall research method is applied in order to study the research and so on. Because based on past data, financial statements from companies accepted in the Tehran Stock Exchange were used. Information about theoretical and literature of research was extracted from the books and articles available in this field and information on accounting variables from the modern Rah software and the financial forms of accessed companies in Tehran Stock Exchange were collected.

Sorting and classification of data was done by Excel software and statistical analysis by AMOS software. In modeling structural equations, structural equation model and structural model (path analysis) are used. The distinction between measurement model and structural model plays an important role in modeling the structural equation in the next steps. In fact, if the anodization model shows good fit of hidden variable measurement, then the structural model will be more reliable. For this purpose, structural model test has been done using the pre-test model. Therefore, a two-stage process is applied to test the hypothesis. At first, it should be considered that the measurement model is fit and then fit the structural model. To reject or accept the research hypotheses, a significant test of each of the standard regression coefficients of the structural model (T test) was used. If the T test is less than 5%, the research hypothesis is accepted.

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Statistical population

The statistical population of this study includes all companies accepted in the Tehran Stock Exchange. For this purpose, statistical sample required data were used by systematic elimination method. In this method, companies are selected as research examples with the following conditions:

From 2012 to 2016, they were accepted on the Tehran Stock Exchange.

The end of their fiscal year will end in Esfand every year.

These years have not changed their activities or changes in the financial year.

The financial information they need is available.

The stoppage of transactions has not occurred for more than six months on the company's shares during the expected years.

According to the above limitations, 161 companies were selected as the research sample. that the summary of the results of the Systematic Hadaf method is presented in Table 2:

Table 2: systematic elimination of sampling methods

No	Number of companies	Removed	Remaining	Sampling steps
1	642	135	507	They were active in the stock market from 2012 to 2019
2	507	112	395	The end of their fiscal year should be March 19
3	395	83	312	The years 2012 to 2019 have not changed the fiscal year.
4	312	116	196	The financial information they need is available.
5	196	35	161	2012 to 2019 have no operational interruption.

Research findings

Using the data obtained for corporate governance, capital structure, profit sharing policy, Tobin’s Q ratio and company value were used as obvious variables. We also considered error variables that are included in the following table.

Table 3: Error description of variables

Variable name in the model	Variable	Error variable
CG	Corporate governance	-
CS	Capital structure	-
DP	Profit sharing policy	-
TOBIN’S Q	Tobin’s Q ratio	e1
VF	Company value	e2

To estimate the model, we must first specify the fixed and free parameters to determine the model. Fixed parameters in a structural equation model often include the regression weights of the error variables.

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We used three categories of indicators to explain the acceptable model. Absolute fit indices (indicators based on the difference of variance and covariance observed on one side and the expected variance and covariance), the comparative fit indices (indices calculated based on the comparison of the model with a based model), and the opposition index (the indices whose emphasis is on the degree of freedom). Now, the model is considered acceptable.

Table 4: Summary of model goodness of fit results

Abbreviation	Index	Acceptable range	Existence of model value	Results
$ℵ^2$	Chi-Square	Small amounts	152.528	-
TLI	Tucker-Lewis Index	Values higher than 0.8	0.840	Accept
NFI	Normed Fit Index	Values higher than 0.8	0.819	Accept
CFI	Comparative Fit Index	Values higher than 0.8	0.870	Accept
RFI	Relative Fit Index	Values higher than 0.8	0.776	acceptable with a little forgiveness
IFI	Incremental Fit Index	Values higher than 0.8	0.872	Accept
PRATIO	Parsimony Ratio	Above 0.5	0.810	Accept
PNFI	Parsimonious Normed Fit Index	Above 0.5	0.663	Accept
RMSEA	Root Mean Square Error of Approximation	Less than 0.09	0.072	Accept
CMIN/DF	Normed Chi-Square	Values between 1 and 5 Values between 1 to 2 (Ullman, 2001)	1.865	Accept

According to the results obtained from the table above, such as absolute fit indices, adaptive fit indices and economical fit indices, all three values of their indices were acceptable in comparison with the standard values, so the acceptability of the whole model is confirmed.

Table 5: Summary of statistical results of research hypotheses

Variables			Impact factor	standard error	T Statistics	Significance level
Tobin's Q ratio	<---	Corporate governance	.39	.028	13.565	0.000
Tobin's Q ratio	<---	Capital Structure	.08	.028	2.616	.009
Tobin's Q ratio	<---	Profit sharing policy	.42	.028	14.417	0.000
Corporate value	<---	Tobin's Q ratio	.32	.034	9.459	0.000

Hypotheses test

Corporate governance has a positive and significant effect on Tobin's Q ratio.

The corporate governance path coefficient on Tobin's Q ratio (0.39) is a significant 0.000 since the significant level is 0.000, 0.000, and this value is less than 0.05. We can say t is more than 1.96 (13.56). Therefore, with 99 percent confidence, it can be said that corporate governance has a positive and meaningful effect on Tobin's Q ratio.

The structure of capital has a positive and significant effect on Tobin's Q ratio.

The path coefficient of capital structure to Tobin's Q ratio (0.08) is significant 0.009, since the significant level is less than 0.05, it can be said that t is more than 1.96 (2.61). Therefore, with 99 percent confidence, it can be said that the structure of capital has a positive and significant effect on Tobin's Q ratio.

The policy of dividing profit has a positive and significant effect on Tobin's Q ratio.

Tobin's Q ratio (0.42) is significantly 0.000 since the level is 0.000, 0.000 and this value is less than 0.05. We can say t is higher than 1.96 (14.41). Therefore, with 99 percent confidence, it can be said that the policy of dividing profit has a positive and meaningful effect on the Tobin's Q ratio.

Tobin's Q ratio has a positive and significant effect on company value.

Tobin's Q ratio path coefficient on company value (0.32) is significantly 0.000 since the significant level is 0.000, 0.000, and this value is less than 0.05. We can say t is higher than 1.96 (9.45). Therefore, with 99 percent confidence, it can be said that Tobin's Q ratio has a positive and significant effect on the company's value.

Tobin's Q ratio mediates the relationship between corporate governance and company value.

Since corporate governance has no direct effect on corporate value. Also, the indirect effect of corporate governance on the company value, which was done through Tobin's Q

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ratio, and the result of multiplication of corporate governance paths with performance and performance that is equivalent to the company's value (0.32×0.39=0.12). To measure the significance of this value, we use Sobel's test. Normal estimation can be used to evaluate the relationship between normal values and subbel test. By estimating the standard error, the indirect effect of the indirect effect can be tested against the opposite hypothesis. The Z statistics is equal to the ab ratio to its standard error. In other words, we get the Z-Value value from the following relationship:

$$\text{Z} - \text{Value} = \frac{a * b}{\sqrt{(b^2 * s_a^2) + (a^2 * s_b^2) + (s_a^2 * s_b^2)}}$$

In this regard:

a: non-standard path coefficient between the independent variable and mediator

b: nonstandard path coefficient between mediator and dependent variable

Sa: Independent Variable Path Standard Error and Mediator

Sb: Mediator and Dependent Variable Path Standard Error

Sobol test results show that the level of this theory is zero and t is equal to 7.73. Tobin's Q ratio mediates the relationship between corporate governance and company's value.

Tobin's Q ratio mediates the relationship between capital structure and company value.

Since the structure of capital has no direct effect on the company value. Also the indirect effect of capital structure on the company value, which was done through Tobin's Q ratio, and the result of multiplication of capital structure paths with performance and performance, which is equivalent to the company's value (0.32*00.08). To measure the significance of this value, we use Sobel's test. Normal estimation can be used to evaluate the relationship between normal values and subbel test. By estimating the standard error, the indirect effect of the indirect effect can be tested against the opposite hypothesis.

Sobol test results showed that the level of this theory was 0.009 and t was 2.57 and it was shown that Tobin's Q ratio mediates the relationship between capital structure and company value.

Tobin's Q ratio mediates the relationship between profit-sharing policy and company's value.

Considering that the profit sharing policy does not have a direct effect on the company's value. and indirect effect of profit sharing policy on the company value, which was done through Tobin's Q ratio, and the result of multiplication of the coefficient of profit sharing policies with performance, as well as performance of company value (0.32*0.42=0.13). To measure the significance of this value, we use Sobel's test. Normal estimation can be used to evaluate the relationship between normal values and subbel test. By estimating the standard error, the indirect effect of the indirect effect can be tested against the opposite hypothesis.

Sobol test results show that the level of this theory is zero and t is equal to 7.92 and this shows. Tobin's Q ratio mediates the relationship between profit-sharing policy and company's value.

Conclusion

One of the aspects of research in the financial-economic field is the relative accuracy of the results obtained under different time conditions. The growth and development of capital market in Iran over the past few years have led to significant changes in the financing of companies, but the internal mechanisms of the company, which have been proved because of research studies, are of special importance. In this study, the effect of internal mechanisms of company such as corporate governance, capital structure, and profit sharing policy on company value was investigated. The results of this study indicated the positive effect of internal factors of company on Tobin's Q ratio. This result is completely consistent with the logic of the financial issues, because considering the corporate governance issue and implementing the mechanisms related to it due to the separation of ownership from management can have a desirable effect on the company performance. companies with more non-aligned members on the board will attract investors and increase their confidence because of their independent character. The existence of institutional shareholders increases the company's credibility due to their considerable influence.

The positive effect of capital structure on Tobin's Q ratio shows that the corporate financing decisions are good and optimal combination of capital structure, and also good use of financial resources and debt payment capability. It can be concluded that the Iranian capital market is an emerging market and commercial units are considered to be a good market because of attracting non-evasion investors to become good company capital structure to benefit from credit and loans and increase corporate liquidity. The company will pay a lower price for the company. This will increase the company's chances of growth in the end.

The positive effect of dividing profit policy on Tobin's Q ratio can be interpreted as that the failed profit policy has had an impact on investment companies. In Iran, as mentioned above, managers usually try to incorporate investors' liquidity and encourage them to buy shares by adopting such policies correctly. This is because dividing profits will reduce local resources and increase the need for foreign funding by commercial units. Investors have also called for dividing cash profits in order to secure the company's financial resources. Therefore, with the goal of maximizing wealth, directors must balance between their various interests and investment opportunities, thus increasing the company's performance from investors.

As for Tobin's Q ratio mediation in the relationship between corporate governance and corporate value, it can be said that the higher the value of net profit after taxes is in the financial structure of companies, the higher the Tobin's Q ratio of the company, and the more Institutional Shareholders in the company's board structure will lead to the desirable corporate governance, and therefore the stock price will increase and increase the company's value. The high Tobin's Q ratio of companies can also lead to the adoption of a policy of proper profit sharing and good management of corporate capital structure by managers. Therefore, it will have a positive impact on increasing corporate stock prices as a result of the increase in company value.

Despite the positive effect of dividing profit policy, capital structure and separation of ownership from management and consideration of corporate governance over Tobin's Q ratio and the value of companies, it should be noted that companies have failed to make inaccurate adjustments to the structure of companies' capital and policies in order to pay interest to investors through the wrong ways such as managing profit to avoid the wrong layout of the company's capital structure and policies. The short term could raise the price of their shares, but in the long run, the risk of falling. This will make the company untrusted by adopting profitability management policies and manipulating profit due to a series of short-term goals in the market and will create a risk for their shares.

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