Surveying the effect of ownership structure on stock liquidity of firms in Tehran Stock Exchange (2007 to 2012)

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ABSTRACT: This study examines the effect of ownership structure on the liquidity of companies in the Tehran Stock Exchange. To this end, 86 companies were selected during the period 2007-2012. The effect of ownership structure variables (ownership concentration and composition) on stock liquidity in Tehran Stock Exchange was studied. Firm size and the ratio of market value to book value of equity are used as control variables for the multivariate linear regression analysis was used. Our results show that the goodness of fit of the model is larger than 5% Alpha error. Thus, the regression model was significant research. And the parameters Durbin-Watson, is 2.14 which the value of this statistic is that it can be resolved autocorrelation, reflecting the disturbing element is the basic model. The coefficient of determination, the model suggests that the model variables, the explanatory power (23%), are used to explain the dependent variable. According to independent research can be said to have achieved a significant, negative relationship between ownership concentration and stock liquidity are significant. The property can also be said about the combination ownership between institutional ownership and corporate ownership, and there is a significant positive correlation between stock liquidity. But there is no relationship between ownership and individual stock liquidity.

INTRODUCTION

Some of the major developments in the shadow of the big companies and the separation of ownership from management accounting, big corporations have happened. As business owners, corporate executives were dead and there was no conflict of interest between management and ownership of all company operations as its owners and management companies were increase the value of.

For many years it was assumed that all parties to a corporation to work for a common goal. However, the agency theory of Jensen and Meckling (1976), it was hypothesized that each of the owners and managers looking to maximize their own interests (Namazi and Kermani, 1387).

In terms of first party owner (Broker) and the second party's representative (agent) call (Namazi, 1384). Agency relationship, the owners of wealth maximization. Therefore, in order to achieve this goal, the agency's work and monitor their performance evaluated.

Financial markets in order to have the optimal allocation of resources and thus to increase the welfare of society. The main characteristics of the financial markets in order to achieve this goal include: 1) the presence of institutions that have the power to prevent fraud and abuse. 2) There are many and varied financial instruments that complement the distribution of risk and 3) allow the property market in less time and with minimal transaction costs may be included.

One of the main functions of financial markets is to provide liquidity (Agarwal, 2008).

"Liquidity is the ability to quickly deal with a high volume of low-priced securities with lower cost and impact (Liu, 2006). The role of liquidity risk arising from the lack of liquidity in the buyer's mind that can be caused by investor withdrawals. So one of the risks when buying property investors is liquidity risk is not the optimal time investment in a financial asset into cash without incurring losses to be.
So investors who seek to invest in assets that have the highest Return, lowest risk and most power in liquidity. Among the factors that may affect any of the foregoing may affect the ownership structure of the company.

**Research hypotheses**

One of the main groups of users of financial information, shareholders are shareholders of a company can be divided into natural and legal persons in the finance literature as “institutional investors” are known, can be divided into (Ebrahimikordlor, 1386). The institutional investors, including institutions, investment companies and other businesses are, with regard to the ownership of the bulk of the shares in the companies’ substantially different information about benefits of having blonde Eyes company size futures and futures firms and even have access to. However, these types of investors, shareholders and professional attitude in their decisions about stock companies cite considered. (Ebrahimikordlor, 1386)

On the other hand, facilitate and speed up the process and reduce the costs of financial assets into cash and vice versa, the conversion of cash into financial assets, financial markets, and especially one of the major benefits is the Stock Exchange. It features a “liquidity” is known.

In addition, shareholders are usually several companies to make capital investments to reduce risk through diversification. They are the hope of future profits in stocks investment portfolio cannot hope for a better future in a particular company. Furthermore, the ability of management to effectively control the spread of shareholders who do not have enough information and they do not have the necessary expertise to make the right decision. In contrast, concentrated ownership as major shareholder incentives are significant and increasing share firm, their incentives to improve operations and control management more and more. There are obvious benefits of concentrated ownership, but the opposite is true of discussions. Major shareholders are typically risk-averse. Dispersed ownership, the ability to improve stock liquidity and diversification leads to less risk for investors is provided.

The main topic of discussion ownership structure, "the agency" because it is a conflict of interest between managers and shareholders leads to the representation theory of agency costs is to maximize their own interests, but these interests may not be aligned. According to the contracts between the owner and manager were important investors are always looking for ways to align these interests. In many ways, such as research related to the management of this company with the rights and benefits provided. Thus improving business performance, increase firm value and, consequently, the interests of both the owner and the manager will be maximum. (Agarwal et al, 1998).

Property distributed (decentralized) because they represent a company that is causing the problem and incentives ability of shareholders to control management will be weak because they share, is limited. Ownership concentration in the hands of institutional investors, the controlling agency problems and improve the protection of investors’ interests.

Stock) on the stock exchange, they taught. After and stock liquidity, the dependent variable.

It seems that the proposal conflicts of interest between managers and owners, and other mechanisms to explain differences in economic performance of firms with different ownership patterns exist.

Differences in managerial incentives and regulatory and political and social commitments often causes the expected performance of companies with different ownership structures are different. One of the important factors for decision making and one of the important criteria for investors to consider when choosing a stock that is the subject of share liquidity.

In fact, one of the most important factors in the selection of investment options is liquidity in the investment account. Overall Liquidity The ease of buying and selling securities without a significant change in the price of a sheet.

According to studies by several factors have on the liquidity of the stock, including the dividend policy of these factors, capital structure, corporate governance, maintenance of stocks and ... Noted.

The majority of research done including QanRahi and Wang (2008) found that ownership structure as part of corporate governance can affect the liquidity criteria. One way to increase liquidity, information asymmetry is reduced by identifying the ownership structure of property relations and lack of symmetry information can reduce information asymmetry and thereby increase liquidity utilize.

In general, little research on the effects of ownership structure on stock liquidity has taken place in Iran. Some recent studies examined the relationship between ownership concentration and dispersion of the price impact of institutional owners buy and sell shares and stock liquidity have.

Ginglinger and Hamon (2010) showed that French secondary market liquidity for firms with concentrated ownership decreases significantly and this is due to information asymmetry and increases the cost of making the wrong choice is made.
Most research Gosper and Massa (2007) stated that to improve market liquidity, have supported the distribution of ownership is essential. However, the small number of such Kiney (1995) relationship between ownership and stock liquidity did not scatter.

But what is common to all studies have pointed out that the increase in information asymmetry is to increase ownership dispersion, the difference between the price of buying and selling are reduced, and increases, resulting in stock liquidity. In a recent research Izadinia and Rasaeean (1389) was conducted to investigate the relationships between distribution of ownership and stock liquidity, the percent block of shares in the hands of shareholders as a measure of the dispersion of the sales price difference as the dependent variable used, they are the relationship between these two variables were not significant.

METHODOLOGY

Population and statistical sample
The statistical society investigated in the present research is Tehran Stock Exchange. In this research we have used systematic deletion method (sifting technique) to choose our statistical sample. To select our statistical sample, the companies with following characteristics were chosen and others were deleted:

Due to their different nature in activities, investing companies, insurance companies, leasing companies and banks were deleted and manufacturing companies were chosen.

To choose a convergent sample, those chosen were among the companies accepted in Tehran Stock Exchange since the year 2007 and their stocks have been transacted from the beginning of the year 2007.

To choose active companies, their transactions should not have been stopped during the years between 2007 and 2012. In other words, the stocks of these companies should have been active during the years mentioned and their stop should not last more than 6 months.

To be able to compare the data and avoid divergence, the companies' fiscal year should end on 29th of Esfand and they should not have had fiscal year changing during the years between 2007 and 2012.

The companies should not have negative owners' equity. Financial statements and the descriptive notes about them should be available.

By applying the conditions above, the number of the sample selected from among statistical sample was 86 companies and 516 (years-firm).

Data collection and data categorization
The transaction system in bourse and informing software
In first step the data needed to calculate the variables related to stock market were extracted by using bourse software (mainly Rahaward-e-Novin and Tadbirpardaz). Then the final amounts of these data were compared with the information in stock transaction system.

Statistical software and economical measuring
Excel software was used in collecting, categorizing, and primary processing of the data. In this phase, the data related to stock market extracted from informing and transaction software of bourse were directly entered into Excel. After proper categorization of the data and carrying out the calculations and primary processing, the output data were used to administer the model and test the research hypotheses by using Eviews7 software.

Introducing the multi-variable regression pattern to test research hypotheses
Hypothesis. There is a significant relationship between ownership structure and liquidity of in Tehran Stock Exchange.

\[ LIQ_{it} = \beta_1 + \beta_2 OCO_{it} + \beta_3 COMB_{it} + \beta_4 IND_{it} + \beta_5 INST_{it} + \beta_6 MTB_{it} + \beta_7 SIZE_{it} + \epsilon_{it} \]

The issues considered in estimating the models
The fundamental criticism towards the estimation of the regression models we encounter is related to classic presupposition rejection (variance Heteroskedasticity, Auto-correlation, co-linearity, and proper Torque.

Normality
To study the normality of the data we have used normality tests. These tests are generally divided into two groups of graphical methods and numerical methods. Graphical methods present only a sketch of the random distribution of the variable but numerical methods are able to prepare an objective and quantitative criterion to
judge about the normality of random distribution of the variables. In numerical methods we can use both descriptive
statistics and different techniques and tests of inferential statistics.

**Variance Heteroskedasticity**

One of the classic presuppositions of the regression analysis is regarding the convergence or similarity of
the error variance distribution and if it is rejected there would be heteroskedasticity elements of variance. In fact
variance heteroskedasticity is caused due to lack of equality of the dependent variable's variance in different
periods. When the dependent variable's variance is not equal, the variance of heteroskedasticity elements will not
be the same during different periods and thus the estimation of the model will be damaged and inefficiency will be
resulted.

If the regression model is considered as the following equation:

\[ y_t = b_1 + b_2 x_t + b_3 z_t + e_t \]

White’s test model will be as follows:

\[ e_t^2 = a_0 + a_1 x_t + a_2 z_t + a_3 x_t^2 + a_4 z_t^2 + a_5 x_t z_t + e_t \]

F statistics and Kai2 statistics test will be calculated for the result of multiplying the observations and identification
coefficient for this model.

**Variables’ Consistency**

Because it is possible that the economic variables having integrative data be inconsistent before utilizing it
in the model the needed studies should be carried out to recognize their consistency and consistency or
inconsistency of these variables should be well documented. In fact, some operations such as using the ordinary
least square (OLS) is done in experimental researches regarding the consistency of the variables. Consistency can
be studied in the two forms of absolute consistency and weak consistency. To avoid using inconsistent data in the
models, we can test the present variables in the model using three methods below:

a) Graphical method
b) Correlation (which presents correlation type against a specified software)
c) Unit root testing method

Also there are 3 tests to study and test the unit root test in statistical software which are usually used in the
following forms:

A) Dicky-Fuller Test (DF)
B) Added Dicky-Fuller Test (ADF)
C) Phillips-Perron test (PP)

In testing another Dicky-Fuller method, the variable having time series will regress with a delay.

\[ y_t = \mu + \rho y_{t-1} + \zeta \]

Then we can conclude that the series Y is a consistent series if the delay for it in the regression above is \(-1<\rho<1\). If
\(\rho=1\), we can say that the series is not consistent. If we have a random walk with drift during the process started in
some points of the dependent variable variance we continuously will encounter increases and it will move forwards
to the infinity. In Dicky-Fuller’s test the additive of the regression equation will be devised as follows:

\[ \Delta y_t = \delta y_{t-1} + \sum \delta \Delta y_{t-1} + \epsilon \]

In this regression the consistency requirement of the regression is the lower than zero amount of sigma (\(\rho\)).

Also by observing the existence of a less delay, we should delay the model until self-correlation is removed. In
economic measurement software usually the critical area testing of the unit is done in three assurance points
including %99, %95, and %90.

Zero hypothesis and \(H_1\) in testing consistency are as follows:

\[
\begin{align*}
{h_0}: \rho &= 1 \\
{h_1}: \rho &\neq 1
\end{align*}
\]

**DATA ANALYSIS METHODS**

In regression statistics there is a type of mathematical function which is applied between the dependent
variable from one hand and the independent variable on the other hand.

To test the hypothesis, the effect of the independent variable on the dependent variable is tested.

\[ y = a + bx \Rightarrow b = \frac{\Sigma(x-\bar{x})(y-\bar{y})}{\Sigma(x-\bar{x})^2}, \quad a = \bar{y} - bx \]

Regarding total regression and linear relationship in meaningfulness test we have:
Zero hypotheses shows that the total coefficients of the regression equals zero.
Research hypothesis shows that at least one of the independent variable's coefficients is meaningful.
If the statistics calculated for the test is bigger than the critical statistics or the meaningfulness level calculated is less than 0.05, at least one of the independent variables has a meaningful regression coefficient or there is a linear relationship between the two variables.
The recognition coefficient is analyzed as follows:
- Independent variable does not create any changes in dependent variable. \( (r^2 = 0) \)
- All changes of the dependent variable can be expressed by the independent variable. \( (r^2 = 1) \)
The bigger amount of the absolute amount of the identification coefficient than zero and close to 1, shows that the relationship between independent and dependent variables is stronger.

**Descriptive study of the research data**
To enter data analysis step, the descriptive statistics of the data including the indexes of centralization, dispersion indexes, and deviation from the symmetry and also Jarque-Bera's test which approves the normal distribution of the wastes is calculated and the results are shown in table 1.

| Table 1. The descriptive statistics of the dependent variables |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| LIQ | OCO | COMB | INDL | INST | MTB | SIZE |
| Mean | 0.000184 | 0.001498 | 0.690001 | 0.718879 | 0.676425 | 8.83E-06 | 5.628265 |
| Median | 1.44E-06 | 0.000439 | 0.680218 | 0.727458 | 0.645709 | 4.53E-06 | 5.52287 |
| Maximum | 9.14E-06 | 1.057336 | 1.354202 | 1.243536 | 1.417113 | 9.79E-05 | 7.646176 |
| Minimum | 9.14E-10 | 1.051286 | 0.193847 | 0.10735 | -3.10E-05 | -4.298504 |
| Std. Dev. | 0.0001513 | 0.004627 | 0.231742 | 0.208267 | 0.229147 | 1.37E-05 | 0.541577 |
| Skewness | 12.02756 | 8.484344 | -0.180562 | -0.100007 | 0.388840 | 3.308461 | 0.976634 |
| Kurtosis | 155.3016 | 91.94699 | 2.698881 | 2.434188 | 3.042832 | 17.44763 | 4.549675 |
| Jarque-Bera | 511149.9 | 176.2893 | 4.753272 | 7.743204 | 13.04237 | 5429.130 | 133.6600 |
| Probability | 0.00000 | 0.00000 | 0.092862 | 0.020825 | 0.001472 | 0.000000 | 0.000000 |
| Sum | 0.094966 | 0.773178 | 356.0403 | 370.9415 | 349.0352 | 0.004557 | 2080.187 |
| Sum Sq. Dev. | 0.001179 | 0.011024 | 27.65784 | 22.33813 | 27.04191 | 9.67E-08 | 151.0523 |
| Observations | 516 | 516 | 516 | 516 | 516 | 516 | 516 |
| Cross sections | 86 | 86 | 86 | 86 | 86 | 86 | 86 |

**THE RESULTS OF TESTS AND ESTIMATIONS**
In the present research we have used static integrative data to test the hypothesis. In this method we can use a test entitled Chow to select from among the two integrated models and it is called structural changes test. To test the research hypotheses, first fixed time effects outcomes are estimated and then structural changes test will be used to study the existence of fixed effects as follows:
- \( H_0 \): lack of existence of fixed effects >> pool model
- \( H_1 \): existence of fixed effects >> fixed effects model

Regarding P-Value gained for the zero hypotheses considering the width equal from the focal points is rejected. Therefore, in this phase the fixed effects model is chosen as a priority for the first and second main hypotheses and their related minor hypotheses (due to the lack of space in the present paper we have not brought the tables related to Chow's tests here).

| Table 2. The results of Chow's test of hypotheses |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Hypothesis | Effects Test | Statistic | Freedom degree | P-Value | Test result |
| \( H \) | Chi-Square Statistics | 0.969650 | (85,424) | 0.5577 | Fixed effects |
| | Cross-section Chi-square | 91.658821 | 85 | 0.2916 | model |

**Hausman's Test**
The results of Chow's test for first and second main hypotheses and their related minor hypotheses show that the model selected is fixed effects. Now we should test fixed effects model compared to random effects model. To do so, we used Hausman's test. To do Hausman's test first we should estimate random effects-time model. Hausman's test was arranged to study the existence of random effects in the following form:
- \( H_0 \): There is not any correlation between individual effects and the descriptive variables >> Random Effects model
- \( H_1 \): There is a correlation between individual effects and the descriptive variables >> Fixed Effects model
Hypotheses' test based on model

To test the research hypothesis after doing Hausman's test and selecting the fixed effects model we have tried to estimate the model coefficients by using the least generalized squares (EGLS).

H1. There is a significant relationship between Earnings sustainability and value relevance of accounting information Tehran Stock Exchange.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>7.39E-05</td>
<td>4.17E-05</td>
<td>1.769943</td>
<td>0.0775</td>
</tr>
<tr>
<td>OCO</td>
<td>-0.001064</td>
<td>0.001106</td>
<td>-0.962140</td>
<td>0.0065</td>
</tr>
<tr>
<td>COMB</td>
<td>3.70E-05</td>
<td>1.57E-05</td>
<td>2.355355</td>
<td>0.0190</td>
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<tr>
<td>INDL</td>
<td>2.14E-05</td>
<td>1.35E-05</td>
<td>1.581337</td>
<td>0.1145</td>
</tr>
<tr>
<td>INST</td>
<td>4.43E-05</td>
<td>1.49E-05</td>
<td>2.973681</td>
<td>0.0031</td>
</tr>
<tr>
<td>MTB</td>
<td>-0.387157</td>
<td>0.309944</td>
<td>-1.249118</td>
<td>0.2123</td>
</tr>
<tr>
<td>SIZE</td>
<td>7.88E-06</td>
<td>6.30E-06</td>
<td>1.249398</td>
<td>0.2122</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.239310</td>
<td>Mean dependent var</td>
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</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.076049</td>
<td>S.D. dependent var</td>
<td>0.000964</td>
<td></td>
</tr>
<tr>
<td>S.E. of regression</td>
<td>0.000965</td>
<td>Sum squared resid</td>
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<tr>
<td>F-statistic</td>
<td>1.465809</td>
<td>Durbin-Watson stat</td>
<td>2.142042</td>
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<tr>
<td>Prob(F-statistic)</td>
<td>0.006787</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CONCLUSION

Izadinia and Raeesian surveyed 156 companies in Tehran Stock Exchange for the period 1381 to 1386 were selected .shares were studied as a control variable. They found no significant relationship between these two variables.

Black M. Tobin Q as a variable in the study of evaluation was used. The results of the test, with an emphasis on outcomes using generalized moments (GMM) showed no significant relationship between ownership concentration and firm value.

This study examines the effect of ownership structure on firm value and liquidity of listed companies in Tehran Stock Exchange has been paid. In this research , stock liquidity ( measured by the turnover ratio ) and firm value ( measured by Tobin Q index ) as the dependent variables and ownership concentration ( measured by Herfindahl-Hirschman index) as the independent variable and the variables Current cumulative total market value of firm size as control variables that were examined . Due to the nature of institutional owners, are certain functions that set it apart from other investors.

Unlike the positive relation between institutional ownership and liquidity, institutional ownership concentration is inversely related to the liquidity of shares. Company Info concentrated in a small number of investors impose on other shareholders are risk and this reduces the liquidity of the stock. Agarwal is shown in ownership of more than 35 to 40 percent, as an indicator of information asymmetry gap increased between institutional ownership and liquidity will be negative. Robin The results also indicate an inverse relation between institutional ownership concentration and liquidity criteria of financial and stock information. So in short it can be said with a degree of institutional ownership are significantly positively related to stock liquidity and direct and concentrated institutional ownership has a negative relationship . In the present research examined value relevance of accounting information is influenced by the ability to capitalize investments in valuable resources. To test the hypotheses we have taken into consideration three models in which there were variables related to the hypotheses, controlling variables and dependent variables.

Research Suggestions

Regarding the results gained from the present research, the following items are suggested:

Due to the implementation of Article 44 in relation to privatization, it is suggested that the transfer of shares to institutional investors, the concentration of ownership in the company to prevent it, and the competition between them to create variation between the owner of the facilities this is done by management to monitor the performance of the information is transferred Secondly it to market, market information, improved efficiency and increased stock liquidity. Investors and capital market participants can obtain the optimum levels of institutional ownership; minimize risk, liquidity of their shares.
Small investors in order to avoid liquidity risk can make use of research findings, as well as in business, managers must be given to Shareholders and capital structure to reduce the liquidity risk of the capital costs than contribute.

**Research limitations**

One of the leading factors of research projects in all countries is the existence of abundant information resources in time and accessible. But in developing countries and due to the lack of having organized information centers and the lack of ability to used the power of computer broadly and the fear of revealing the information prevent the researchers and research centers to have access to the information on the part of the information resources.

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