Study the effect of firm size on the relationship between ownership concentration and information asymmetry

1Sajad Varasteh and 2Ebrahim Abbasi

1Department of Management, Science and Research Kermanshah Branch, Islamic Azad University, Kermanshah, Iran
2Associate Professor, Department of Management, Alzahra University, Tehran, Iran

A B S T R A C T

One of the important points about the capital markets especially stock exchange markets is the efficiency of market according to which all the existing information influences the stock price. One of the most significant elements of authentic decision making is appropriate information concerned with the subject matter; if not provided and processed truly, it will have negative effects for the decision maker. Furthermore, the information type and the way of achieving it are of great importance. The main goal of this study is to survey the effect of firm size on the relation of ownership concentration level with information asymmetry in Tehran stock exchange market. Statistical sample includes 198 firms during the years 2008 to 2012. Statistical procedures used for data analysis are multiple regression and correlation coefficients carried out using Excel and SPSS soft wares. The results show a positive significant relationship between the firm's level of ownership concentration and its information asymmetry regardless of firm size. But considering the firm size in model of study made considerable changes in results so that the relationship between ownership concentration level and information asymmetry in small or medium sized firms is positive and significant while it is inverse in large firms.

INTRODUCTION

One of the most important elements of authentic decision making is appropriate information concerned with the subject matter; if not provided and processed truly, it will have negative effects for the decision maker. Furthermore, the information type and the way of achieving it are of great importance. If the necessary information is asymmetrically distributed to people (information is transferred unequally), it can lead to diverse results out of a single topic. Therefore, prior to the importance of the very information for the decision maker, this is the quality of distribution that should be exactly evaluated. When Information asymmetry in relation to the shares of a firm increases, the intrinsic value of its shares will be different from the value which investors expect for. As a result, the real value of firm's shares will differ from the investor's expected value [6].

Presence of sufficient information in the market and its timely reflect on the share prices, is narrowly connected with the market efficiency. In an efficient market, the information within the market will influence the price quickly. In a market like this the share price is near its intrinsic value; in other words, the main characteristic of an efficient market is that the price specified is a good index of the real value of shares. So a market is called efficient in which share prices including ordinary shares reflect all the existing information in the market. Efficient market should be sensitive to new information. If people are informed of new information, prices will change proper to that information. If market is indifferent to the new information and doesn't show the necessary reaction; it means there are no analyzers to evaluate the new information, inevitably that market will have no efficiency. Accounting is for responding to human's necessities. Social, economic and political conditions of accounting environment have been different proper to the time. Thus, accounting purposes and procedures has also changed appropriate to changes in environmental conditions. During the time and along with the development of economic activities and increase in their complexity, accounting purposes and procedures has developed in order to respond to informational needs. Currently, accounting plays an important role in economic system. Precise deciding by people, firms, government and so on in order to properly distribute financial sources and to make them efficient is inevitable. For such decision makings, the person must have
convenient information. In fact, the purpose of accounting is to help these decision makers. On the other hand, investment is one of essential and basic elements in the process of economic development of a country. In recent years, the ownership structure and its effect on different aspects of firms including dividend quality is considered as one of important cases in corporate governance literature. This is because of its prevalence in most countries and especially among developing economies and new markets of Europe and Asia. However, influence of corporate governance system on the rate of information asymmetry has not expanded well yet. Investors as the main suppliers for the firm's sources are willing to have complete and true information about firms. In efficient stock markets, it is supposed that all of existing information is quickly absorbed by people and its effects on share prices will be reflected. This means that people's judgments and their decisions appear in the share prices. Accounting information is made manifest in financial statements, investors always permanently use accounting information without modifying this information regarding the changes occurred in accounting procedures or without considering the way of calculating this information[10].

**History of Research:**

Lafond and Watts [2] in a study, the relation of information asymmetry between conscious and unconscious investors in the firm was studied and it was concluded that information asymmetry between informed and not well informed investors in the firm leads to conservatism in financial statements. Conservatism causes lack of tendency and ability of managers to manipulate the digits in accounting and therefore the information asymmetry and its major losses in the firm will decrease. This will lead to increase in firm's value.

Nekounam et al. in a study entitled “The relationship between ownership structure and information asymmetry” state that the differences in ownership structure justifies the information asymmetry. In this study, they concluded that increase in the level of institutional ownership, management ownership and ownership concentration will increase information asymmetry, but increase in the level of corporate ownership will decrease information asymmetry.

Aslan et al. [4] have also provided strong evidence stating that firms which have higher institutional ownership more information asymmetry are found in their deals.

Kini & Mian, [7] surveyed the relation of ownership concentration (dispersion) and price variance in stock exchange without achieving any significant relationship between these two variables. It was done by choosing samples of 1063 firm from NYSE MKT.

Rubin, A. [10] “Ownership level, ownership concentration and liquidity” is the title of a research which Rubin has carried out to study the relation of institutions ownership as well as other groups inside the firms and stock liquidity. The results show that he hasn't been able to observe any relationship between ownership of groups inside the firms and liquidity. But he has achieved the result that only the institutions have clear and considerable effect on stock liquidity. According to the developed hypotheses, stock liquidity has a direct relationship with level of institutional ownership and an inverse relationship with institutional ownership concentration. Therefore, in this research, both theories of transaction or informational efficiency and adverse selection are confirmed.

Reza zadeh & Azad [2], in another research, surveyed the relationship between accounting conservatism and information asymmetry during the years 1381 to 1385. The results showed the existence of a positive and significant relation between information asymmetry among investors and accounting conservatism. Also according to their conclusion, changes in information asymmetry among investors lead to changes in the level of conservatism.

Noravesh & Ebrahimi [3] studied and clarified the relationship between combination of stockholders and information asymmetry and efficacy of performance standards. Their goal was giving evidence for the role of institutional investors in reducing information asymmetry in Tehran stock market. The study showed that firms in which institutional investors take more ownership report more information on future dividends.

Izadi nia & Resaeyan [1] in their research entitled “ownership dispersion and share liquidity” surveyed the relationship between the rate of ownership concentration and share liquidity of firms approved in Tehran stock market. The results of this survey state that there is no significant relation between ownership dispersion (concentration) and share liquidity in Tehran stock market.

**Hypotheses of the research:**

In order to achieve the goals of study, the following hypotheses which will be examined are given:

**The main Hypothesis of the research:**

There is a significant relationship between level of ownership concentration and information asymmetry.
The first sub Hypothesis:
There is significant relationship between level of ownership concentration and information asymmetry in small firms.

The second sub Hypothesis:
There is significant relationship between level of ownership concentration and information asymmetry in medium sized firms.

The third sub Hypothesis:
There is significant relationship between level of ownership concentration and information asymmetry in large firms.

Research procedure:
This research from the goal point of view is an applied research, from the nature view is a descriptive-correlational one, from the viewpoint of data type is a documentary research, and from the time point of view is an Ex post facto research. The goal of this research is to survey the effect of firm size on the relationship between ownership concentration and the firm's information asymmetry. To survey the relation between these variables, linear regression has been used. The research hypotheses have been checked out at the level of 95% certainty. It is necessary to say that the test of nonlinear relation between research variables has also been carried out and it became clear that linear regression determines best fitness of the variables regarding the F-statistics value and significance level.

Procedures of collecting the data:
With respect to subjects stated in the section of variables in this research, we referred to the financial statements existing in electronic archives of Tehran's stock market organization to gain the necessary variables. Also, some of necessary information was collected from Tadbir Pardaz and Rah Avard e Novin database. To estimate the research model, SPSS software was used.

Research model and the method of variable measurement:
To test the hypotheses of this research, the following recommended model was employed. The general model used in this research is as follows:

\[ \text{ABS}_{i,t} = \alpha + \beta_1 \text{CONC}_{i,t} + \beta_2 \text{PRICE}_{i,t} + \beta_3 \text{BM}_{i,t} + \beta_4 \text{VOLAT}_{i,t} + \epsilon_{i,t} \]

\( \text{ABS}_{i,t} \): a criterion for information asymmetry for the firm named "i" in "t" period
\( \text{CONC}_{i,t} \): the ownership concentration of firm "i" in "t" period
\( \text{PRICE}_{i,t} \): share price of firm "i" in "t" period
\( \text{BM}_{i,t} \): the ratio of book value to the market of firm "i" in "t" period
\( \text{VOLAT}_{i,t} \): Yield Variance of the firm "i" in "t" period
\( \epsilon_{i,t} \): error sentence for the firm "i" in "t" period

Independent variables:
Ownership concentration (CONC):
to calculate the ownership concentration, Herfindahl-Hirschman index was used. Herfindahl-Hirschman index is an economic index to calculate the amount of market concentration. To do so, share percentage of each supplier in the market raises to the power of 2 and then they are added together. As much as the result which is between 0 and 1 is near 1, it shows concentration and as much as it is near 0, it shows asymmetry. In this research in order to measure ownership concentration, the following relation is used:

\[ \text{CONC}_{i,t} = \sum_{i=1}^{n} (\text{BLOCK}_{i,t})^2 \]  \hspace{1cm} (1)

\( \text{CONC}_{i,t} \): Ownership concentration of the firm "i" in "t" period
\( \text{BLOCK}_{i,t} \): share percentage of share block owners of the firm "i" in "t" period

Dependent variables:
Absolute spread of Bid and Ask:
this value is obtained from the difference between proposed prices for Ask and Bid.

\[ \text{ABS} = \text{AP}_{i,t} - \text{BP}_{i,t} \]  \hspace{1cm} (2)
in which,
ABS : Absolute gap of proposed prices
AP : Proposed sale price
BP : Proposed purchase price

Moderator variable:
1- Stock price (PRICE): The average of stocks price of a company in an annual or seasonal period.
2- Book value to market value (BM): This is obtained by division of book value to market value at the end of period.
3- Return tolerance (VOLAT): This is used as a risk control index. Return deviation is calculated to determine this value.

Control variable:
Firm size:
Firm capital or firm size is the capital owners' shares of the firm's properties after subtracting firm debts and claims; it is obvious that firm size determines the amount of a firm activity, the larger a firm size is, the higher it has opportunity to grow. Firm capital, as an index of firm size, is divided to three levels of small sized (up to 20 billion rials), medium sized (from 20 billion to 50 billion rials) and large sized (upper than 50 billion rials).

Statistical sample and population of the research:
The studied population of the research includes all firms approved in Tehran stock market during the years 2008 to 2012 if they have all following conditions:
1. The firm must be approved before 1387 in Tehran stock market.
2. The financial end year of company is March 20.
3. They must not be of finance and investment firms.
4. The least transaction days must be 100 days.

After the above limitations being placed on, the initial statistical sample of this research decreased to 198 firms; number of firms in statistical sample of this research by size class is as follows:
1. 61 firms in Statistical sample of small sized firms
2. 106 firms in Statistical sample of medium sized firms
3. 31 firms in Statistical sample of large sized firms

Research findings and data analysis:
The results of Research hypotheses test:
The results of the statistical tests and analyses, in table 1, show that regression coefficient of independent variable of concentration level is positive and significant. Due to the fact that sig (significance level) for F and T statistics in regression analysis is smaller than 5%, this information expresses the denial of the Hypothesis H_0 and affirmation of Hypothesis H_1, and therefore approves the main Hypothesis of the research. So in general, there is a positive (direct) relationship between level of ownership concentration and information asymmetry. This is to say that as much as ownership concentration level increases, information asymmetry will significantly increase. So the main Hypothesis of the research is confirmed. As the firm size was regarded in the research model, considerable changes was made in the research results so that the relationship between ownership concentration level and information asymmetry in small and medium sized firms is significant and positive but in large firms, the relationship is inverse and significant.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>T</th>
<th>Sig</th>
<th>F</th>
<th>Sig model</th>
<th>Determin. Coeff.</th>
<th>Durbin-Watson statistic</th>
<th>Result</th>
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<tbody>
<tr>
<td>Hypothesis</td>
<td>28.051</td>
<td>0.000</td>
<td>199.348</td>
<td>0.000</td>
<td>0.445</td>
<td>1.671</td>
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<tr>
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<td>9.362</td>
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<td>0.373</td>
<td>1.873</td>
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<tr>
<td>Second sub Hypothesis</td>
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<td>0.000</td>
<td>52.175</td>
<td>0.000</td>
<td>0.297</td>
<td>1.583</td>
<td>Confirmed</td>
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<tr>
<td>Third sub Hypothesis</td>
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<td>0.000</td>
<td>37.407</td>
<td>0.000</td>
<td>0.486</td>
<td>1.681</td>
<td>Confirmed</td>
</tr>
</tbody>
</table>

Discussion and Conclusion:
After testing every Hypothesis and coming to conclusion for each one, it's time for a complete conclusion. Regarding the main goal of this research entitled "Study of the effect of firm size on the relation of ownership concentration with information asymmetry in Tehran stock market", the summary of the results show that the relationships between ownership concentration level and information asymmetry in the group of small, medium and large sized firms are different. This research shows that regardless of firm size, there is a direct (positive)
significant relationship between ownership concentration level and information asymmetry. But, regarding the firm size, a considerable change is made in the research results so that, in small and medium sized firms, the relationship between ownership concentration level and information asymmetry is direct and significant but, in large firms, an inverse and significant relationship exists. The results of this research corresponds with those of Nekounam et al [9], Aslan et al [4], and Rubin [10] but differs from those of Izadi nia & Resaeyan [1], Noravesh & Ebrahimi [3], Bin Ali [5] and Kini & Mian [7].

REFERENCES