

## Explain the Relationship between Ownership Concentration and Information Asymmetry Firms Accepted in Tehran Stock Exchange

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### ABSTRACT

Information asymmetry of market brings undesired outcomes such as little participation of investors, high trade costs, weak markets, and low trade profits. Regarding to the importance of information asymmetry concept, the goal of this research is study of relationship between ownership concentration and information asymmetry in companies accepted in Tehran Stock Exchange. A sample of 74 companies, members of Tehran Stock Exchange, was selected for a 5 year period (2005-2009). Linear regression model with confidence level of 95% and software Excel and SPSS were used to test the research assumption. The results show that there a direct (positive) relationship between ownership concentration level with information asymmetry. In companies with concentrated ownership structure, great stockholders access hidden and private information of companies. The cause the parties of stock trading, increase difference of buy and sell proposed price in order to decrease risk of incorrect selection.

**Keywords:** Information asymmetry, ownership concentration, ownership structure.

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### 1. INTRODUCTION

Regarding to information disclosure process, investors encounter information asymmetry. This problem is created when one of the parties have more information than the other [10]. Similar to the previous researches, we use liquidity (difference between buy and sell proposed price of stocks) as an information asymmetry criterion. Role of information disclosure custodians is imprinted in corporative sovereignty, which includes control and procedures to ensure a company manager will not move toward his personal benefits and will move toward maximize benefits of stockholders and company value [13].

Timely and correctly non-disclosure of information causes increment of undesired selection cost that stems from information asymmetry, and finally, increment of trading cost, decrement of stocks price, market stop, and exit of some investors from market [1]. The more the information asymmetry in market, the less the volume of trades for liquidity of securities. Recent studies show that decrement of information asymmetry follows decrement of undesired selection cost, ethical danger, and increment of market liquidity. According to the findings for these two thinking trends, it can be suggested that market liquidity has a positive relationship with corporative leadership quality [8].

Corporative sovereignty mechanisms affect disclosed information by stockholders and decreases complete information non-disclosure and disclosure of weak information [13]. Studies show that if there is a more effective control for manager by board of directors, quality and quantity of published information by manager will increase [14]. Improvement of disclosure quality cause information asymmetry and decrement of information asymmetry brings less profit [17].

Financial statements provide information that causes information asymmetry and shows that investors must apply this information in their decisions [1]. Reaction of market to profit bill is the first criterion for existence of confidential information. Existence of confidential information suggests information asymmetry in market environment. Canagartnam et al (2007) showed that market liquidity increases with decrement of information asymmetry [13]. Liquidity means ability to convert assets to cash without any loss or cost. Difference of buy and sell proposed price for stocks and market depth are liquidity criteria, which they are examined as information asymmetry representatives in the recent studies [6]. Difference of highest buy proposed price and lowest sell proposed price is called "difference of buy and sell proposed price". A transaction occurs when highest buy proposed sell and lowest sell proposed price are equal. A continuous trend of buy and sell orders with higher and lower prices than the equilibrium price is called "market depth", in which, supply and demand curve skews and is continuous around market value. Part of a company's ownership belongs to minor stockholders. This

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group generally satisfies with information at public access (published financial statement). The other part belongs to major stockholders that access to internal valuable information about future perspectives and commercial strategies of company through direct relation with the company [16].

Researches show that better corporative sovereignty mechanisms increases quality and quantity of disclosed information and decreases asymmetric information. According to infrastructure studies, market liquidity increases by decrement of asymmetric information. Also, more asymmetric information about quarterly profits is less for those companies with stronger corporative sovereignty. Canagartnam et al (2007) showed that companies with strong corporative sovereignty have less information asymmetry around profit bills [13].

## 2. Research history

Chung et al (2008) studied effects of corporative leadership on liquidity of stocks using 24 indices related to financial and operational glassiness and ownership structure. They assumed that weak leadership creates information asymmetry between internal and external stockholders, and this affects liquidity. When leadership is weak, investors sense a deeper price gap. They found that better corporative leadership causes more liquidity and less price effect [5].

Aslan et al (2007) also suggested strong evidences indicating companies with higher institutional ownership have more information asymmetry [2].

Jennings et al (2002) fulfilled a study titled "Institutional ownership, information, and liquidity". They studied reverse relation between institutional ownership and incorrect selection part of information asymmetry. In this study, they examined 35 seasons from 1983 to 1991. Using 50,000 observations, they indicated that there is reverse relationship between institutional ownership and buy and sell proposed prices gap, and institutions improve liquidity of stocks in market. In addition, they found that incorrect selection of price gap decreases by increment of institutional ownership. The main index for liquidity in this research is relative difference of proposed prices [12].

Easley & O'Hara (2004) offered a framework for study of aware investors and their information advantage about liquidity and price efficiency. They found that existence of aware investors creates information asymmetry and compelling incorrect selection costs on unaware investors creates more gap between buy and sell prices (trading costs), and so decreases liquidity of stocks [7].

Kini & Mian (1995) studied relationship between ownership concentration (dispersion) and proposed price difference of buy and sell of stocks by selection of a sample of 1063 companies in USA Securities Bourse. They didn't found any significant relationship between these two variables [15].

Rubin (2007), in a paper titled "Ownership level, ownership concentration, and liquidity", studied relationship of institutional ownership and other intra-company groups with liquidity. The results showed that he couldn't observe relation between ownership of intra-company groups and liquidity, but he found that only these institutions affect liquidity of stocks. According to the assumptions, liquidity of stocks has a direct relationship with institutional ownership and a reverse relationship with concentration of institutional ownership. Therefore, both theories were confirmed [20].

Chordia et al (2008), in a paper titled "Liquidity and market efficiency", suggested that short-term anticipation capability of stocks has a reverse relation with market efficiency. They found that when distance of buy and sell prices are limited, return anticipation is less. In their opinion, in an efficient market, return anticipation by past information has less efficiency. The criterion they used to measure liquidity was difference of buy and sell proposed price, which is different from trading prices (prices that goods are traded) [4].

Ben-ali (2009) showed that American institutional investors decreased representative costs and disclosure demand in France, so they decreased information asymmetry [3].

Rezapour (2010), in a paper titled "Relationship of institutional ownership and liquidity of stocks in Iran", studied relationship of institutional ownership and liquidity of stocks. According to the assumptions, they found that there is a direct relationship between institutional ownership level and liquidity of stocks. But, there is a reverse relationship between institutional ownership concentration and liquidity of stocks. Therefore, in this research, both theories of information or transactional efficiency and incorrect selection were confirmed [18].

Izadinia & Rasaeian (2010), in a paper titled "Ownership dispersion and liquidity of stocks", studied relationship between ownership concentration level and liquidity of stocks of companies accepted in Tehran Stock Exchange. The results show that there is no significant relationship between ownership dispersion and liquidity of stocks in Tehran Stock Exchange [11].

Ghaemi & Vatanparast in Iran (2005), by calculation of difference of buy and sell proposed price, concluded that information asymmetry is more before profit bill [9].

Rezazadeh & Azad (2008) showed that conservative actions in financial reporting increases by increment of information asymmetry between investors, and so usefulness of conservation was confirmed as one of the qualitative features of financial statements [19].

### 3. Research assumption

The research assumption is:

**Assumption:** There is a relationship between ownership concentration level and information asymmetry.

## 4. RESEARCH METHODOLOGY

This is an application research by goal, and a descriptive-correlation one by method and nature. The goal of this research is study of relationship between ownership concentration (independent variable) and information asymmetry (dependent variable). Linear regression was used to study the relation between these variables. t student test was used for partial regression coefficients and F statistic was used to test significance of regression model in confidence level of 95% (5% error).

### 4.1. Data gathering

In this research, libraries and archives were used to gather data. The research tools were financial statements, notes, and financial reports of the companies, gathered by Rahavard Novin Software and site of Tehran Stock Exchange. After classification and calculations in Excel, data was finally analyzed by SPSS.

### 4.2. Research model and measurement of variables

To test the assumptions, Rubin Model (2007) was used. The general model used in this research is:

$$\text{Information measures}_{i,t} = \alpha + \beta_1 \text{Block}_{i,t} + \beta_2 \text{Size}_{i,t} + \beta_3 \text{Price}_{i,t} + \beta_4 \text{BM}_{i,t} + \beta_5 \text{VOLAT}_{i,t} + \varepsilon_{i,t} \quad (1)$$

in which,

Information measures<sub>i,t</sub> : Information criteria for company i in period t

Block<sub>i,t</sub> : Ownership concentration of company i in period t

Size<sub>i,t</sub> : Size of company i in period t

Price<sub>i,t</sub> : Price of stock of company i in period t

BM<sub>i,t</sub> : Ratio of book value to market value of company i in period t

VOLAT<sub>i,t</sub> : Return vibration of company i in period t

ε<sub>i,t</sub> : Error term for company i in period t

#### 4.2.1. Independent variables

**Ownership concentration (BLOCK):** Percentage of published stocks of a company held by five great stockholders of company.

#### 4.2.2. Dependent variable

1. **Absolute gap between buy and sell proposed prices:** This value is obtained from difference if buy and sell proposed prices.

$$\text{ABS} = \text{AP}_{it} - \text{BP}_{it} \quad (2)$$

where,

ABS : Absolute gap of proposed prices

AP<sub>it</sub> : Sell proposed price

BP<sub>it</sub> : Buy proposed price

2. **Relative gap between buy and sell proposed prices:** This ratio is obtained from division of difference of buy and sell proposed price by average of proposed prices.

$$\text{RS} = \frac{\text{AP}_{it} - \text{BP}_{it}}{(\text{AP}_{it} + \text{BP}_{it}) / 2} \times 100 \quad (3)$$

where,

RS : Relative gap of proposed prices

AP<sub>it</sub> : Sell proposed price

BP<sub>it</sub> : Buy proposed price

#### 4.2.3. Control variables

1. **Stocks price:** Average of stocks price of a company in an annual or seasonal interval.
2. **Size:** Natural logarithm of company's value at the end of period.
3. **Book value to market value:** This measure is obtained from division of book value by market value at the end of period.
4. **Return vibration:** This variable is used as risk control index. To calculate this measure, standard deviation was calculated.

#### 5. Statistical society and sample

The society of this research includes all companies accepted in Tehran Stock Exchange from 2005 to 2009, with the following conditions:

1. Company was accepted in Tehran Stock Exchange before 2005.
2. End of financial year of each company is March 20.
3. Number of trading days of the company in each year is not less than 70 days.
4. Company is not a member of investment and financial companies.
5. Financial data of company is accessible.

Regarding to the above limitations, 74 companies were selected as statistical sample by systematic deletion method.

#### 6. Findings and data analysis

In order to examine assumption, 2 models were defined and estimated upon dependent variables absolute gap between buy and sell proposed prices (ABS), and relative gap between buy and sell proposed prices (RS). Then, each assumption was separately examined using the results. Finally, general results were suggested.

##### 6.1. Results of assumption

Findings from statistical tests and analyses in table 1 show that coefficient of independent variable of ownership concentration in regression pattern of first and second models for information asymmetry measures is positive and significant. Since sig (significance level) of T and F for all models are less than 5%,  $H_0$  is rejected and  $H_1$  is accepted. Thus, assumption is accepted. Therefore, there is a direct relationship between ownership concentration level and information asymmetry. Then, it can be said that the more the ownership concentration level, the more the information asymmetry. Thus, assumption is confirmed.

Table 1: Results of test assumption

Dependent variable	Independent variable		Variance analysis	Demonstration power			Watson camera statistic	Result
Information measures	ownership concentration level		F statistic (sig.)	R	R <sup>2</sup>	Adjusted R <sup>2</sup>		
	Coeff.	t statistic (sig.)						
ABS	0.547	8.972 (0.000)	54.464 (0.000)	0.654	0.428	0.420	1.971	Confirmed
RS	0.546	9.103 (0.000)	56.319 (0.000)	0.660	0.436	0.428	1.963	Confirmed

#### 7. CONCLUSION AND DISCUSSION

The results of research assumption show that there is direct (positive) relationship between ownership concentration level and information asymmetry. In companies with concentrated ownership structure, great stockholders access hidden and private information of companies. The cause the parties of stock trading, increase difference of buy and sell proposed price in order to decrease risk of incorrect selection [11]. Results of this research conflict with findings of Ben-Ali (2009), Rubin (2007), Jennings et al (2002), Rahmani & Rezapur (2010), and Izadinia & Rasaeian (2010), but coincides with findings of Izli & Ahar (1987), Aslan et al (2007), and Denis (1994). One of the limitations of this Research was to investigate the time between 2005 and 2009 was considered that the period was heterogeneous. The Tehran Stock Exchange in 2004, 2005 and 2006, has collapsed. But in this time period is assumed homogeneous. Other limitation of this study was the lack of an efficient capital market in Iran. These restrictions as a confounding factor that can affect the results of its control by the researcher is not possible. It is one of the bottlenecks in the implementation of the present study is based on the capital market.

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