

# The Relationship between Corporate Governance and Information Asymmetry within Listed Companies in Tehran Stock Exchange

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## ABSTRACT

The current study reviewed and analyzed the relationship between internal auditing, major institutional shareholders and non-executive directors as components of corporate governance by changes in market liquidity (changes in bid-ask spread and market depth) as representatives of information asymmetry among listed companies in Tehran Stock Exchange during 2007-2010. The current study was objectively functional and it was descriptively based on correlation. Required information was extracted using a library and field method. In this case, evaluated sample included 89 companies. Inter regression was used to test hypotheses using the software package SPSS 18. The results show that there is a significant relationship between institutional ownership and bid-ask spread and also between non-executive board and market depth. Although, a significant relationship could not be found between institutional ownership and market depth and also between non-executive board and bid-ask spread. As well, there is no significant relationship between available internal auditing and measures of information asymmetry.

**KEYWORDS:** corporate governance, information asymmetry, market liquidity, institutional ownership, non-executive board.

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## 1. INTRODUCTION

According to information disclosure process, investors are encountering information asymmetry. This happens when a party possesses more information than the other (Graham et al. 2003). Proper corporate governance can enhance the efficiency and value of companies positively influencing on investment decisions. The role of information disclosure custodians is reflected on corporate governance including controls and procedures to ensure that company is not moving to self-interest instead it is moving to maximize shareholder interests and company value (Kanagaretnam et al. 2007). This study was conducted on better performance of corporate governance system in Iran, according to privatization trend of companies following Article 44 of the Constitution; it follows a main problem: 'Is there a significant relationship between corporate governance and reduction of information asymmetry?'; therefore, it is necessary to conduct a study which can independently evaluate the effects of corporate governance principles on reduction of information asymmetry.

The current study aims to explain the relationship between corporate governance principles on reducing information asymmetry to fair information disclosure in decision making for all users of information from companies listed in Tehran Stock Exchange.

### Theoretical Principles

Corporate governance is originally a Greek term (Kyberman) meaning to direct; it was transferred to Latin (Gubernare) and old French (Governer). But the word has been defined by organizations or committees according to their ideological preferences in different ways (Abu-Tapajeh, 2009). To better understand the concept of corporate governance, it can be described in both macro and micro views: in micro view, corporate governance involves a set of relationships between a company management, its board, shareholders and other parties. These relationships covering different rules and incentives form the structure through targets set, the means to achieve those targets and monitoring performance.

From a macro view, good corporate governance means the extent to which companies are managed in an open and honest atmosphere. It is important to achieve market trust, capital efficiency, and revised structure of industrial countries and finally general wealth of the society (Ghods, 2008).

From a point of view, corporate governance is limited to the relationships between company and shareholders expressed in terms of agency theory. Also, corporate governance can be seen as a network of relationships existing not only between company and its owners (shareholders), but between company and a number of parties, including employees, customers, vendors and bondholders. This is considered in terms of beneficiary theory (Hasas Yeganeh, 2005).

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The ultimate goal of corporate governance is to achieve the following four in companies:

1. Accountability
2. Transparency
3. Justice (fairness)
4. Stakeholder equity (Hasas Yeganeh, 2006).

Data from financial statements provides information which reduces information asymmetry in the market and show that investors need to fully employ this information in making investment decisions (Rasaiian, 1385). Market response to profit announcement can be the first criterion of confidential information. Confidential information represents information asymmetry in the market (Kanagaretnam *et al.*, 2007).

### **Reasons for Corporate Governance Rules**

An obvious question is why regulations require a certain government (including the requirements of the Stock Exchange, Parliament, courts or other regulatory agencies)? If company interest lies on adequately support of shareholders, then why companies require laws that may be against production? Even by selection of best goals, it is unlikely that all existing information is available to set functional laws by legislators. It is likely that legislators be hired by a certain group of beneficiaries to set rules to favor that certain group. There are at least two reasons for establishing rules. The first and most important argument in support of establishing rules is that if founders or shareholders can design and implement any desired organizational charter, they will progress toward setting ineffective rules; therefore they cannot completely cover interests of all groups in a transaction. The second argument is that even if companies are primarily motivated to set the right effective rules, they may later want to change or abolish laws. This problem is exacerbated when companies are not required to change rules. When shareholders are scattered and the interests of a particular group is not followed in the company, it is likely that directors change the rules in their favor (Ahmadpoor & Rasaiean, 2006).

### **Information Asymmetry**

If the information needed to decide is asymmetrically distributed among individuals (Data transfer unequally occurs among people). When information asymmetry rises in relation to stock of a company, the intrinsic value will be different from the value claimed by investors in the capital market for concerned shares (Diamonc, D., & Verrecchia R., 1991).

From the perspective of efficient market hypothesis, accounting information asymmetry occurs because one party possesses more information than the other. This occurs due to internal transactions and information.

Even if stock prices fully reflect information, it is likely that people within organization possess more information about the quality of company than people outside it and they can take action through this informational advantage for more interests. Here, it appears a branch of discussion about information asymmetry called 'adverse selection'. Adverse selection refers to a situation when vendors possess information of which buyers are not aware (vice versa); this exactly happens before transaction. In this situation, increase in level of information asymmetry is shown via bid-ask spread and speculators take advantage of this difference to compensate adverse selection risk. In the other word, the presence of unaware people in capital market allows professional investors to acquire higher returns (Ghaemi & Vatan Parast, 2005).

### **How to Measure Information Asymmetry**

To measure information asymmetry between investors, the model developed by Vankatsh and Chiang (1986) is used to determine bid-ask spread range. This model has been used in different studies. In Iran, Ghasemi and Vatan Parast (2005) and Ahmad Poor and Rasaiian (2006) have used the model to measure information asymmetry. The model is as follows:

$$SPREAD_{it} = \frac{(AP - BP) \times 100}{\frac{AP + BP}{2}}$$

Where, SPREAD is the range of ask-bid spread, *t* is the studied year, *i* is the studied company, AP is the average bid price for the company *i* during period *t*; and BP is the average ask price for the company *i* during period *t*.

According to the model, the higher range of ask-bid spread the more information asymmetry (Rezazadeh & Azad, 2008).

### **Information Asymmetry and Corporate Governance**

Data from financial statements provides information which reduces information asymmetry in the market and indicates investors need to fully use this information making investment decisions (Ahmadpoor & Rasaiian, 2006). Market response to earnings announcement could be the first criterion of confidential information. Confidential information indicates asymmetric information in marketplace. Kanagaretnam *et al.* (2007) showed that market liquidity increases by reducing information asymmetry. Liquidity means that assets can be converted

to cash without losses and expenses. Ask-bid spread and market depth are liquidity measures included in recent research as representatives of information asymmetry (Denis and Connell, 2003). The difference between highest ask price and lowest bid price is called ask-bid spread. The transaction occurs when the highest ask price is equal to lowest bid price.

A continuous flow of bid and ask orders at a higher and lower price than balanced prices is called market depth in which supply and demand curves are absolutely tensile and continuous around the market value of assets.

Internationally, corporate governance is considered as mechanisms which result in a personal interest of managers making decisions to maximize firm value for owners (Denis and Connell, 2003). According to board approved internal audit procedure of Tehran Stock Exchange, June 2008, internal audit functions under the supervision of the board in terms of organizational status. Due to rapid global changes, it seems that the role of internal audit increasingly will be added as a key component of corporate governance mechanism. According to agency theory, independent outside (non-executive) directors in the board of companies and their supervisory performance as independent individuals contributes to reduce conflict of interests between shareholders and managers. A part of corporate ownership is held by minority shareholders. This group is generally satisfied by information available to the public (published financial statements). The other part of ownership is held by major shareholders receiving value internal information about future prospects and business strategies through direct contact with the company (Moradzadeh, Nazemi, Gholami, & Farzani, 2009). Lack of timely and accurate disclosure leads to increase in cost of adverse selection and moral hazard as a result of information asymmetry and, ultimately, increase in transaction cost (Ahmadpoor & Rasaiian, 2006). Increase in transaction cost will lead to reduced stock price, market slump, and eventually, leaving some investors of the market cycles. Higher information asymmetry in the market declines trading volume reflecting the liquidity of securities in the market. Recent studies show that reducing information asymmetry will lead to reducing costs of adverse selection and moral hazard and increasing market liquidity. Based on the findings of these two intellectual streams, we can say that market liquidity is positively related to corporate governance quality (Gerald and Dennis, 2006).

## LITERATURE REVIEW

Rahimian and Saleh Nejad (2009) in a study, 'the Relationship between Some Mechanisms of Corporate Governance and Information Asymmetry within Companies Listed in Tehran Stock Exchange' evaluated the relationship between market liquidity changes (ask-bid spread changes and market depth) around profit announcements as a representative of information asymmetry and the number of non-executive directors, ownership of institutional investors and internal auditing unit as mechanisms of corporate governance within companies listed in Tehran Stock Exchange; they concluded that there is no significant relationship between internal auditing units and number of non-executive directors and information asymmetry criteria. But they found a negative relationship between ownership of institutional investors and information asymmetry. By comparing ask-bid spread pre and post profit announcement using average test of comparing two score, it was determined that information asymmetry level post profit announcement is higher than pre profit announcement and this is consistent with previous studies.

Behzad Roohi et al (2010) in a study, 'Evaluating the Influence of Seasonal Profit Announcement on Information Asymmetry of Market', found that information asymmetry is not significantly changed post seasonal profit announcement compared to pre seasonal profit announcement. This is observed in relation to announcement containing good news as well as bad news.

Kashanipoor et al (2010) in a study, 'Investigating Some Mechanisms of Corporate Governance System by Market Liquidity' showed that companies with more independent board structure and more effective board approach have more market liquidity compared to other companies. In fact, companies with higher score in terms of corporate governance quality experience lower ask-bid spread and higher different share supplied and demanded.

Karimi and Ashrafi (2010) in a study, 'Investigating the Relationship between Mechanisms of Corporate Governance and Capital Structure in Tehran Stock Exchange' showed that there is a significantly positive relationship between institutional ownership as an external mechanism of corporate governance system and capital structure. But, no significant relationship was found between non-executive board directors as well as separation of CEO from board members and capital structure.

Acker (2002) reported low difference in ask-bid spread range and increase in transactions during profit announcement.

Dey (2005) claimed that validity of profits increases by board quality. The findings indicate that corporate governance quality need to be related to less information asymmetry about reported profits.

Almutairi et al (2006) evaluated the relationship between auditing quality and information asymmetry. Using data from 38187 companies during 1992-2001, they showed that information asymmetry is inversely related to using expert audits in a certain industry.

Cai *et al* (2008) studied the influence of asymmetric information on three main mechanisms of corporate governance, that is, supervision severity of the board, market discipline (based on the use of anti-academic actions) and sensitivity of pay for top management performance. They found out companies with more information asymmetry tend to use less board supervision, more market discipline, and higher performance of top management.

Bharath *et al* (2009) found out a significantly positive relationship between information asymmetry and using liability in capital structure.

### Hypotheses

Main hypothesis: there is a significant relationship between corporate governance and decrease in information asymmetry. As a result, according to components of corporate governance and information asymmetry, there would be 6 sub-hypotheses.

1. There is a significant relationship between internal auditing within company and ask-bid spread;
2. There is a significant relationship between internal auditing within company and market depth.
3. There is a significant relationship between ownership of major institutional investors and ask-bid spread;
4. There is a significant relationship between ownership of institutional investors and market depth;
5. There is a significant relationship between the number of non-executive board directors and ask-bid spread;
6. There is a significant relationship between the number of non-executive board directors and market depth.

### METHODOLOGY

According to the problem and objectives, this study is functional in terms of objective and uses a descriptive correlation method. A correlation study aims to determine the relationship between two or more variables, its size and magnitude.

The population included all companies listed in Tehran Stock Exchange including 448 companies. The common features of these companies considered by the researcher to determine its population are as follows:

1. Sample companies are listed in stock exchange before the study period (2006) and they remain active until the end of study period;
2. Their fiscal interruptions do not alternatively occur more than 150 days;
3. Financial year remains unchanged during study period;
4. Financial year of sample companies ends in March 19 per year;
5. The sample companies are not among investment companies, banks and financial institutions.

Those companies listed in stock exchange are adopted which information related to their ask-bid spread and market depth is available.

Systematic elimination method was used to determine sample size.

Among 448 companies active in Stock Exchange in 2010, 131 companies did not comply with the first condition. 24 companies experienced non-alternative interruption. 13 companies experienced varied fiscal year. In 100 companies, fiscal year did not end in March 19. Among companies listed in stock exchange, 33 companies were investor; finally, 59 companies did not possess complete information during study. Totally, 89 companies were selected.

Data related to best bid price, best ask price, market depth and profit announcement were extracted from dataset of software package 'Rah Avard Novin' and data related to non-executive directors were extracted from reports of Ordinary General Assembly Decisions published by Tehran Stock Exchange as well as annual activity report of board to the Assembly. Since companies do not necessarily publish information related to internal auditing unit, this information is collected using dataset of companies available in the Tehran Stock Exchange website and contact with sample companies (in person and by telephone).

Hypotheses have been non-parametrically tested by statistical correlation methods. Variables used in the study are defined as follows:

#### A. Independent Variables

1. Shares percent held by major investment institutions to total released shares available for shareholders.
2. Non-executive members' percent (ratio) to total board members.
3. Internal auditing which is an allowed variable in two situation, with internal auditing unit and without it.

#### B. Dependent Variables

1. ask-bid spread: using the best bid price (BP) and the best ask price (AP), average bid-ask spread is obtained. As this difference approaches to zero, information asymmetry decreases:

$$\%SPREAD = (AP - BP) / ((AP + BP) / 2)$$

2. Market depth: it is equal to average shares sum supplied for sale and shares demanded for buy.

To test hypotheses, Inter regression was used. Regression is a test to evaluate the influence of independent variables on dependent variables. Due to unilateral influence of independent variable on dependent one, it is not

possible to use relational tests (Pearson, Spearman,); because the relation becomes bilateral in these tests. While in the present study, the influence of independent variables on dependents is unilateral. Also, considering the large amount of data from variables (over hundred) data is automatically assumed normal; thus it does not need normalization. To evaluate error independence, Watson camera test was used.

The present study used EXCEL spreadsheet to filter data and SPSS 18 to analyze data. If over half of the marginal hypotheses are approved, the main hypothesis will be approved (Raei & Falahpoor, 2004).

**RESULTS**

Results from hypotheses are as follows:

Results derived from the first sub-hypothesis (Table 1).

**Table 1: The effect of independent variable on dependent variable for the first sub-hypothesis research**

y=a0+β1x1					
Variables	B(coefficient)	Standard error	Beta	t	Sig.
Constant	.007	.000		20.264	.000
Institutional ownership	1.739 E-5		.134	2.845	.005
Watson Camera: 1.96					
Correlation coefficient: .134 (sig. in 3%)					
Standard determination factor (R2): .016					
F (probability): 8.09 (.005)					
Dependent variable: bid-ask spread					

As Table 1 shows, assumptions required to conclude regression equation are admitted. Therefore, it is possible to cite and conclude from regression equation. Obviously, t-test significance is <.001 for institutional ownership. Therefore, this variable is able to form an equation. As a result, it is able to influence on dependent variable (spread). Thus, there is a significant relationship between institutional ownership and bid-ask spread. Results derived from the second sub-hypothesis (Table 2).

**Table 2: The effect of independent variable on dependent variable for the second sub-hypothesis**

y=a0+β1x1					
Variables	B(coefficient)	Standard error	Beta	t	Sig.
Constant	1.352 E 11	9.007 E 10		1.501	.134
Institutional ownership	2.177 E 9	1.702 E 9	.061	1.280	.201
Watson Camera: 2.02					
Correlation coefficient: .061 (is not significant in any level)					
Standard determination factor (R2): .001					
F (probability): 1.63 (.201)					
Dependent variable: market depth					

As Table 2 shows, assumptions required to conclude regression equation are not admitted. Thus, the correlation is very low (.061) and explanation of model by independent variable is almost zero (.1). On the other hand, there is no linear relationship between two variables. Obviously, t-test significance is >.005. Therefore, institutional ownership is not able to form the equation. Thus, there is no significant relationship between institutional ownership and market depth.

Results derived from the third sub-hypothesis (Table 3).

**Table 3: The effect of independent variable on dependent variable for the third sub-hypothesis**

y=a0+β1x1					
Variables	B(coefficient)	Standard error	Beta	t	Sig.
Constant	.007	.000		24.434	.000
Non-executive directors	-2.314 E -6	.000	-.017	-.356	.722
Watson Camera: 1.96					
Correlation coefficient: .017 (not significant)					
Standard determination factor (R2): .002					
F (probability): 0.127 (.722)					
Dependent variable: bid-ask spread					

As Table 3 shows, assumptions required to conclude regression equation are not admitted. Thus, the correlation is very low (.017) and explanation of model by independent variable is almost zero (.2). On the other hand, there is no linear relationship between two variables. Obviously, t-test significance is >.005 for non-

executive directors. Therefore, this variable is not able to form the equation. Thus, there is no significant relationship between non-executive directors and spread. Results derived from the fourth sub-hypothesis (Table 4).

**Table 4: The effect of independent variable on dependent variable for the fourth sub-hypothesis**

$y=a_0+\beta_1x_1$					
Variables	B(coefficient)	Standard error	Beta	t	Sig.
Constant	2.34 E 11	8.238 E 10		4.312	.000
Institutional ownership	-4.120 E 9	1.787 E 9	-.109	-2.306	.022
Watson Camera: 2.02					
Correlation coefficient: .109 (sig. in .005)					
Standard determination factor (R <sup>2</sup> ): .010					
F (probability): 5.3 (.022)					
Dependent variable: market depth					

As Table 4 shows, assumptions required to conclude regression equation are admitted. Therefore, it is possible to cite and conclude from regression equation. Obviously, t-test significance is <.005 for non-executive directors. Therefore, this variable is able to form the equation. As a result, it is able to influence on dependent variable (market depth). Thus, there is a significant relationship between non-executive directors and market depth.

Results derived from the fifth sub-hypothesis (Table 5).

**Table 5: The effect of independent variable on dependent variable for the fifth sub-hypothesis**

$y=a_0+\beta_1x_1$					
Variables	B(coefficient)	Standard error	Beta	t	Sig.
Constant	.007	.000		3.295	.000
Audit	.000	.001	.019	.405	.685
Watson Camera: 1.96					
Correlation coefficient: .019 (not significant)					
Standard determination factor (R <sup>2</sup> ): .002					
F (probability): 0.164 (.688)					
Dependent variable: bid-ask spread					

As Table 5 shows, assumptions required to conclude regression equation are not admitted. Thus, the correlation is very low (.019) and explanation of model by independent variable is almost zero (.2). On the other hand, there is no linear relationship between two variables. Obviously, t-test significance is >.005. Therefore, internal auditing is not able to form the equation. Thus, there is no significant relationship between internal auditing and spread.

Results derived from the sixth sub-hypothesis (Table 6).

**Table 6: The effect of independent variable on dependent variable for the sixth sub-hypothesis**

$y=a_0+\beta_1x_1$					
Variables	B(coefficient)	Standard error	Beta	t	Sig.
Constant	2.515 E 11	6.570 E 10		3.828	.000
Audit	-1.534 E 11	-1.534 E 11	-.048	-1.020	.308
Watson Camera: 2.03					
Correlation coefficient: .048 (not significant)					
Standard determination factor (R <sup>2</sup> ): .002					
F (probability): 1.04 (.308)					
Dependent variable: market depth					

As Table 6 shows, assumptions required to conclude regression equation are not admitted. Thus, the correlation is very low (.048) and explanation of model by independent variable is almost zero (0). On the other hand, there is no linear relationship between two variables. Obviously, t-test significance is >.005. Therefore, internal auditing is not able to form the equation. Thus, there is no significant relationship between internal auditing and market depth.

Given that over half of the sub-hypotheses are not approved, then the main hypothesis is not approved.

### Managerial Implications

1. it is recommended that companies increase institutional ownership as much as is possible to decrease ask-bid spread considering the significant relationship between institutional ownership and ask-bid spread; since this is effective on decreased information asymmetry.

2. It is recommended that companies increase non-executive directors' shares to decrease market depth followed by decrease in information asymmetry considering the significant relationship between non-executive directors and market depth.

## **DISCUSSION AND CONCLUSION**

This study examined the relationship between corporate governance principles and information asymmetry within companies listed in Tehran Stock Exchange. Here, results from hypotheses test are provided:

Results does not support a significant relationship between internal auditing and variables of ask-bid spread and market depth which is not consistent with Kanagaretnam et al (2007). But results support a significant relationship between institutional ownership and ask-bid spread as well as non-executive directors and market depth. However, the results did not support a significant relationship between institutional ownership and market depth as well as non-executive directors and ask-bid spread. Studying the influence of asymmetric information on governing mechanisms, Cai et al (2008) found that asymmetric information causes high costs of board direct observation. Therefore, it makes companies rely on indirect governing mechanisms including consistent motivated directors and market discipline (Ben Ali,2009). This can justify low effect of governing mechanisms in the present study on asymmetric information.

### **Future research directions**

1. It is recommended that a similar study is conducted considering industries or firm sizes (small, average, large).
2. It is recommended that a study is conducted to evaluate the relationship between ownership structure and information asymmetry.
3. It is recommended that future researchers study the relationship between ownership focus and information asymmetry.

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