

# The Relationship between Corporate Disclosure Adequacy and Bid-Ask Spread in the Capital Market of Iran

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## ABSTRACT

The capital market is an appropriate place for investing and leading the rigid funds in most of the developed countries. The decisions made without required information in the capital market brings about information asymmetry and a slow trend in a transaction which will finally make the transaction unfair. According to the theoretical concepts, information transparency is an approach to mitigate the information asymmetry that is resulted from increasing the disclosure level because of the regulations in accounting. The present study is designed and performed in order to examine the corporate disclosure score with the information asymmetry of the Tehran Stock Exchange.

We have selected 60 firms according to the systematic sampling for a six year (2004-2009) period. The required data about these firms have been collected and analyzed. Corporate disclosure score has been used to measure the adequate disclosure. The information asymmetry has been examined by the bid-ask prices. Multivariate pooled regression is the statistical method used to test the hypotheses. The findings demonstrate that there is a significant negative relationship between the disclosure adequacy and the information asymmetry.

**KEYWORDS:** Disclosure Adequacy, Information Asymmetry, Timelines, Reliability

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## INTRODUCTION

Financial statements users are from different spectrums of people with different purposes and interests. On one hand, the accountants confront some environmental limitations and are required to follow some rules derived from the accounting aims and assumptions. Adherents of efficient market hypothesis believe that all the information about the security's price is reflected on the efficient market and the transaction cost and information provision are zero. There are also some reasons argued by commentators about the necessity of the disclosure regulations. They all agree upon the point that the investors and capital markets have no way to distinguish between efficient and non-efficient corporations.

The current disclosure regulations aim to meet the benefits of some groups of the capital market. Those who are in a better position than the other participants of the capital market from the perspective of informative needs, can influence on the supply and demand of the market and create a price gap. The existing reason of accounting is the information asymmetry in which one party possesses more information than the other individual. This is caused because of the internal transactions and information.

The effective transfer of information to the external users in a competent and timely manner is defined as the main role of financial reporting. The managers might use their knowledge about their business activities of the firm in order to improve effectiveness of the financial statements as a device to transfer information to the potential investors and creditors (Hosseini, 2010).

Establishing the correct price in the initial and secondary markets, declining the cost of capital and informative risk, increasing the stock liquidity and mitigating the risk of participants are among the satisfactory results of adequate disclosure. The capital market position is known to be under the effect of disclosure quality and financial reporting. When the financial reporting and corporate disclosures are in accordance with the standards and regulations, the confidence of the investors and other participants of the market will enhance. Public corporate disclosure can mitigate the asymmetry among managers and other users of the financial statements only if they are timely and reliable enough (Hosseini, 2007).

Proper and related information is one of the most effective factors of accurate decision-making. The inappropriate provision and process of this information is expected to have negative consequences over the decision maker. On the other hand, it is important to know how to obtain this information. The asymmetric distribution of information among the individuals might result in different interpretations made about a same topic. Hence, this is the quality of information distribution which is to be considered formerly (Vatanparast, 2005).

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Capital market establishment is regarded as an economic development signal and its activity leads to simple finance of the firms and financial resources application. The information related to a proper allocation of available resources is required for making economic decisions. Consequently, the pattern of achieving information and its qualified value is an essential subject. Information is called the most valuable asset in the stock exchanges and this is because of the significant role of the information on the capital market. The quality of disclosure has always been considered by the academic researchers.

The new regulation enacted by the governmental agencies of Iran increased the participation of the investors in the capital markets. This rule required the development of privatization and expanded distribution of the stocks. Mitigating the information asymmetry is intended to contribute the investors and verify the transaction of the capital market along with the development of this market. Accordingly, investigating the approaches to mitigate the information asymmetry and also strengthening the effect of the disclosure level of the capital market plays a vital role in the emerging capital market of Iran. The present study is designed and performed to analyze the relationship of supply and demand of stocks' gap and the score of corporate disclosures.

### **Research Background**

Petersen & Plenberg (2006) analyzed the level of voluntary disclosure in a paper titled "Voluntarily Disclosure and Information Asymmetry". They examined 185 listed companies of Denmark during the years of 1997 to 2000. They used bid-ask spread as the proxy of the information asymmetry measurement. Their conclusions indicated that the disclosure level of the selected firms is in a negative relationship with the information asymmetry.

Mclaughlin & Safieddine (2008) tried to determine the role of regulations on mitigating the information asymmetry among the internal individuals and external investors. They found that those companies operating in regulating industries are confronted with a lower level of information asymmetry. Additionally, these companies have more abnormal performance than the other industries without this regulation and their periodic return was less negative than the other group.

Cormier et al (2009) tried to find the effect of corporate governance on the information asymmetry among managers and investors. They also reviewed the other studies conducted about the extension of voluntary disclosure in this field. They selected the size of the auditing committee and the board of directors along with the level of voluntary disclosure as the proxies of corporate governance. The indicator of information asymmetry is also consisted of volatility, stock price and Tobin's Q. The results show that the improvement of corporate governance might reduce the information asymmetry.

Ghaemi and Vatanparast (2005) examined the existence of information asymmetry and its influence on the stock price and trade volume in 21 days before and after the announcement of earnings per share. They analyzed 121 announcements for 93 listed companies on the Tehran Stock Exchange for a three year period including 2002-2004. Their findings confirm the information asymmetry between the investors of Tehran Stock Exchange and this has been much higher in the pre-announcement period. It was also found that information asymmetry influenced on the trade volume and stock price so that the trade volume was increased because of trade volume. In other words, investors could gain abnormal return before the announcement period.

Rezazadeh and Azad (2008) studied the level of information asymmetry among investors and more conservatism on the financial reporting. Conservatism is known as a significant source of information asymmetry, investment opportunities and enterprise growth. Their empirical findings based on the positive relationship between information asymmetry among investors and the level of conservatism was derived from a set of data from listed companies in 2007-2008.

Rahimian et al (2009) analyzed the relationship between liquidity variations of the market (the variations of bid-ask spread and market depth) around the earnings announcement in a four year period including 2004-2007. They selected earnings announcement as an indicator of the information asymmetry and the ratio of non-executive members of the board, the ownership percentage of institutional investors and internal audit as the corporate governance mechanism. They found that the internal audit and the ratio of non-executive members of the board are not significantly related to the measures of information asymmetry. While the percentage of institutional shareholders ownership and information asymmetry is negatively associated. Additionally, the level of information asymmetry after the earnings announcement was more than before this period.

Noravesh and Hosseini (2009) found the relationship of disclosure quality with the reliability and timely information. The historical data of 51 listed companies were examined for six years from 2002-2007. The earnings management of the firm was estimated by the Jones model. Their results demonstrated that there is a negative significant relationship between corporate disclosure quality and earnings management.

Ahmad Pour and Ajam (2010) examined the relationship between accruals quality and information asymmetry in Tehran listed firms. They have analyzed 346 cases of profit estimation during the ears of 2002-2008. Accruals quality

has been considered as the independent variable; while bid-ask spread was regarded as the dependent variable. Their findings showed that accruals quality has no significant influence on the level of information asymmetry.

Malekian et al (2011) tried to find the relationship between independent audit quality and bid-ask spread in Tehran listed companies. They selected 108 companies for a period of 2005-2008 as the sample. They found that there is a significant negative relationship between big auditing firms and bid-ask spread.

Setayesh et al (2011) explored the effect of disclosure quality on the stock liquidity and cost of equity on the Tehran listed firms. They considered 105 companies from the years of 2002-2008. Disclosure quality was measured by the scores of each company evaluated by the announcement of disclosure quality and appropriate information. Liquidity was measured by the stock flow rate, stock trade turnover and dollar volume. They found that there is a positive significant relationship between firm size and current and future liquidity. However, there is no significant relationship between disclosure quality and current and future liquidity. There is a significant negative relationship between disclosure quality and the cost of current and future common stock capital.

Rahimian et al (2012) tried to find the relationship of earnings quality and information asymmetry. There were 51 companies for the years of 2004-2009 selected to collect the data. Information asymmetry was measured by two metrics of effective price gap and the price impact percentage. Earnings quality was also measured by two patterns of Dechow and Dechow (2002) and Sloan (1996). Their findings revealed that there is a significant relationship between earnings quality and information asymmetry and reducing earnings quality would lead to increasing information asymmetry. Additionally, information asymmetry in the prior period of earnings announcement is in a higher level than the post period of earnings announcement.

Mohammadabadi and colleagues (2012) examined the effect of conservatism and structural and functional specifications of the firm on the disclosure quality. They selected 111 companies during the years of 2004-2007 and found that conducting a higher degree of conservatism leads to a higher qualitative disclosure of the firm.

### **Statistical Population and Sample**

The statistical population of this study is composed of the whole elements and individuals in a specific geographic scale with one or two joint characteristics. The research sample consists of the companies listed on the Tehran Stock Exchange which were selected by filtering technique. These companies were of the following requisites:

1. They should have been listed before 2003.
2. Their end of the fiscal year should have been consistent with the calendar year.
3. During the research period, there should have been no variation in the fiscal year.
4. There should have been no transaction cease for more than 3 months.
5. Their data should have been available.

There were sixty firms selected as the sample to be analyzed. According to the main objective of the study which aims to examine the relationship between corporate disclosure and its components with the information asymmetry, the following hypotheses are regarded:

The main hypothesis:

1. There is a negative significant relationship between corporate disclosure and information asymmetry.

The sub- hypotheses:

1. There is a negative significant relationship between timeliness of corporate disclosure and information asymmetry.
2. There is a negative significant relationship between reliability of corporate disclosure and information asymmetry.
3. There is a negative significant relationship between timeliness and reliability of corporate disclosure and information asymmetry.

### **Research Variables**

#### **Dependent Variable**

The dependent variable of this study is the relative bid-ask spread which is calculated consistent with Stoll (1978), Morse & Ushman (1983), Venkatesh & Chiang (1986) and Stoll (1989). This is computed as follows:

$$S_{i,t} = \frac{ask - bid}{(ask + bid)/2} \times 100$$

S= relative bid-ask spread

Ask= the best selling price of the firm *i* in *t* period

*Bid*= the best purchase price of the firm *i* in *t* period

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$$S_{i,t} = \frac{ask - bid}{(ask + bid)/2} \times 100$$

*i*= the sample firms

*t*= time period

*S*= relative bid-ask spread

*Ask*= the best selling price of the firm *i* in *t* period

*Bid*= the best purchase price of the firm *i* in *t* period

### Control Variables

- *The market value of the owner's equity*

The market value of the owner's equity is calculated by multiplying the number of stocks by the stock price. Finally, its logarithm is used as the variable for the market value of the owner's equity. This variable is considered as the lowest control component on the informative environment of the firm. The market value of the firm is considered as the size measure of the model because the prior studies have shown that this variable has a significant relationship with the proxy measures of information asymmetry and corporate disclosure. Its impact ought to be controlled in the model (Petersen and Plenberg, 2006; Botosan, 1997).

- *Systematic Risk*

Systematic risk is defined as the return volatility of an asset in comparison with the total risky assets and is calculated as follows:

$$\beta = \frac{COV(R_{it}, R_{mt})}{R_{m\sigma^2}}$$

*R<sub>it</sub>* is the stock return of a company and *R<sub>mt</sub>* is the yield of the market portfolio.

Therefore, the systematic risk is controlled in the regression model. This measure is directly related to the equity cost based on the pricing model of the capital assets and it is expected that demand and supply price gaps to be directly related (Petersen and Plenberg, 2006).

- *Solvency*: This is calculated by dividing the owner's equity to the total debt. From the shareholders' perspective, the expected risk of those firms with higher liquidity is in a lower level. That is, liquidity should be in a negative relationship with the demand and supply gap. On the other hand, the lower liquidity of the firms causes the creditors and shareholders to be closely supervised through higher costs and avoid bankruptcy, though. However, the impact of this variable is also being controlled (Petersen and Plenberg, 2006).

- *Return on Investment (ROI)*: It is measured by dividing operating income to the total assets. This variable is also controlled in the model. This is because when the firms' performance improves, there are more tendencies toward information disclosure. For example, those firms which have higher corporate disclosure score indicate more consistency in earnings. Hence, this variable can influence on disclosure adequacy and information asymmetry (Petersen and Plenberg, 2006; Healy and Palepu, 2000).

### Independent Variable

- *Corporate Disclosure Score*: This score is stated as a quantitative figure issued annually by the Tehran Stock Exchange for all the firms. The higher this ratio, the better disclosure of the firm is considered.

- *Reliability*: This score is calculated the same as the above score.

- *Timely Score*: Timely score of any listed company is issued by Tehran Stock Exchange annually.

Table1. The Selected Variables of the Study

No.	title	symbol	Position in the Model	Resource
1	Demand-Supply Price Gap	INF	Dependent	Peterson and Pelenberg (2006)
2	Disclosure Score	DS	Independent	Hosseini (2009)
3	Reliability Score	RELY	Independent	Hosseini (2009)
4	Timely Score	TIME	Independent	Hosseini (2009)
5	Solvency	SOLVE	Control	Peterson and Pelenberg (2006)
6	Return on Investment	ROIC	Control	Peterson and Pelenberg (2006); Healy and Palepu (2000)
7	Systematic Risk	BETA	Control	Peterson and Pelenberg (2006)
8	Market Value of Owner's Equity	MV	Control	Peterson and Pelenberg (2006); Botosan (2006)

**Data Analysis**

In this section, the descriptive statistics of the research variables are initially provided and the hypotheses are then analyzed. Table 2 shows the most significant descriptive statistics of the research variables.

Table2. Descriptive Statistics of the Research Variables

Symbol	Type of Variable	Median	Maximum	Minimum	Std. Deviation
RELY	Dependent	49	100	0	25.869
TIME	Independent	45	98	-113	36.9003
DS	Independent	50	96	-13	20.9786
INF	Independent	6.23853	109.963	0.04145	14.8855
SOLVE	Control	0.41468	3.77E+14	0.04833	1.99E+13
ROIC	Control	0.17967	5.13062	0.00889	0.31327
MV	Control	3.45E+11	2.31E+13	1.35E+10	3.57E+12
BETA	Control	0.26	3.32	-0.52	0.73147

**The Main Hypothesis**

The main hypothesis tries to find the negative relationship between score of corporate disclosure and information asymmetry. This is tested by using the following model:

$$INF_{i,t} = \beta_0 + \beta_1 DS_{i,t} + \beta_2 BETA_{i,t} + \beta_3 MV_{i,t} + \beta_4 SOLVENCY_{i,t} + \beta_5 ROIC_{i,t} + \epsilon_{i,t}$$

Table 3 depicts the statistical findings of the study.

Table3. Results of the First Hypothesis

Estimation period: 2004-2009				
$INF_{i,t} = \beta_0 + \beta_1 DS_{i,t} + \beta_2 BETA_{i,t} + \beta_3 MV_{i,t} + \beta_4 SOLVENCY_{i,t} + \beta_5 ROIC_{i,t} + \epsilon_{i,t}$				
Explanatory Variable	Coefficient	t-statistics	Prob.	Confidence level
Intercept	59.87067	5.769546	0	99%
DS	-0.06732	-2.70121	0.0073	99%
BETA	1.723261	1.996963	0.0466	95%
MV	-4.20663	-4.56102	0	99%
SOLVENCY	0.02751	2.371694	0.0183	95%
ROIC	-0.01911	-1.30143	0.194	-
R <sup>2</sup>	0.10			
Adj. R <sup>2</sup>	0.08			
F	5.53			
Durbin-Watson	1.56			
Prob.	0.000005			

The regression model is significant according to the results indicated in table3. The adjusted R<sup>2</sup> of the model explains that the independent variables are related to the dependent variable. Accordingly, 0.08 percent of the variation in the dependent variables is explained by the independent variables. It can also be concluded that the data is relatively independent. Finally, it can be concluded that there is a negative relationship between the final score of the corporate disclosure and information asymmetry.

**The first sub-hypothesis**

This hypothesis is tested to prove whether there is a negative relationship between timeliness score of corporate disclosure and information asymmetry. The following model is used to test this assumption:

$$INF_{i,t} = \beta_0 + \beta_1 TIME_{i,t} + \beta_2 BETA_{i,t} + \beta_3 MV_{i,t} + \beta_4 SOLVENCY_{i,t} + \beta_5 ROIC_{i,t} + \epsilon_{i,t}$$

Table 4 summarizes the findings related to the model.

Table4. Results of the First Sub-Hypothesis

Estimation Period: 2004-2009				
$INF_{i,t} = \beta_0 + \beta_1 TIME_{i,t} + \beta_2 BETA_{i,t} + \beta_3 MV_{i,t} + \beta_4 SOLVENCY_{i,t} + \beta_5 ROIC_{i,t} + \epsilon_{i,t}$				
Explanatory Variable	Coefficient	t-statistics	Prob.	Confidence level
Intercept	59.76	5.444941	0	99%
TIME	-0.03151	-2.27231	0.0237	95%
BETA	1.912857	2.227115	0.0266	95%
MV	-4.17734	-4.43378	0	99%
SOLVENCY	0.022132	1.880337	0.0609	90%
ROIC	-0.01965	-1.30984	0.1911	-
R <sup>2</sup>		0.10		
Adj. R <sup>2</sup>		0.08		
F		5.08		
Durbin-Watson		1.56		
Prob.		0.000017		

The regression model is significant at 99 percent. The findings related to the Durbin-Watson statistics indicate the relative independence of data. Adjusted R<sup>2</sup> of the model shows that 0.08 of the changes in the dependent variables are explained by the independent variables. The significance level of timely corporate disclosure is 0.0237. The conclusions reveal that the data is relatively independent. It can be concluded that there is a negative relationship between corporate disclosure score and information asymmetry according to the significance of timely corporate disclosure score and its coefficient.

### The Second Sub-Hypothesis

This hypothesis is tested to measure the relationship between reliability score of the corporate disclosure and information asymmetry by using the following model:

$$INF_{i,t} = \beta_0 + \beta_1 RELIABLE_{i,t} + \beta_2 BETA_{i,t} + \beta_3 MV_{i,t} + \beta_4 SOLVENCY_{i,t} + \beta_5 ROIC_{i,t} + \epsilon_{i,t}$$

Table 5 shows the results of the defined hypothesis.

Table4. The Results of the Second Sub-Hypothesis

Estimation Period: 2004-2009				
$INF_{i,t} = \beta_0 + \beta_1 RELIABLE_{i,t} + \beta_2 BETA_{i,t} + \beta_3 MV_{i,t} + \beta_4 SOLVENCY_{i,t} + \beta_5 ROIC_{i,t} + \epsilon_{i,t}$				
Explanatory Variable	Coefficient	t-statistics	Prob.	Confidence level
Intercept	59.31759	5.695514	0	99%
RELIABLE	-0.04228	-2.15261	0.0321	95%
BETA	2.100447	2.501882	0.0128	95%
MV	-4.26452	-4.60824	0	99%
SOLVENCY	0.026619	2.287853	0.0228	95%
ROIC	-0.02218	-1.51494	0.1307	-
R <sup>2</sup>		0.10		
Adj. R <sup>2</sup>		0.08		
F		5.12		
Durbin-Watson		1.53		
Prob.		0.000015		

As the above table depicts, the regression model is significant. The adjusted R<sup>2</sup> of the model is 0.08 and this means that 0.08 of the variations in the dependent variable is explained by the independent variable. There is also an indicator of the relative independence of the data. According to the findings, the reliability of corporate disclosure score is negatively related to the information asymmetry.

### The Third Sub-Hypothesis

This hypothesis examines the simultaneous relationship between reliability scores of corporate disclosure and timely score of corporate disclosure with the information asymmetry and is tested using the following model:

$$INF_{i,t} = \beta_0 + \beta_1 TIME_{i,t} + \beta_2 RELIABLE_{i,t} + \beta_3 BETA_{i,t} + \beta_4 MV_{i,t} + \beta_5 SOLVENCY_{i,t} + \beta_6 ROIC_{i,t} + \epsilon_{i,t}$$

As prescribed in the variables section. The corporate disclosure score is composed of two component variables and the third hypothesis examines the simultaneous impact of the components of disclosure score on the information asymmetry. This can be completely different from the statistical point of view.

Table 6 shows the statistical results of the model.

Table6. The Results of the Third Hypothesis

Estimation Period: 2004-2009				
$INF_{i,t} = \beta_0 + \beta_1 TIME_{i,t} + \beta_2 RELIABLE_{i,t} + \beta_3 BETA_{i,t} + \beta_4 MV_{i,t} + \beta_5 SOLVENCY_{i,t} + \beta_6 ROIC_{i,t} + \epsilon_{i,t}$				
Explanatory Variable	Coefficient	t-statistics	Prob.	Confidence level
Intercept	16.73602	0.775845	0.4396	-
TIME	-0.00106	-0.04836	0.9615	-
RELIABLE	-0.05478	-1.69456	0.0932	90%
BETA	0.123042	0.070013	0.9443	-
MV	-0.40484	-0.20844	0.8353	-
SOLVENCY	0.070101	3.195406	0.0018	99%
ROIC	-0.23314	-2.62416	0.01	95%
R <sup>2</sup>	0.18			
Adj. R <sup>2</sup>	0.12			
F	2.88			
Durbin-Watson	1.94			
Prob.	0.006104			

This regression is the same as the prior ones and is significant at 99 percent. Approximately 0.12 of the variations in the dependent variable is described by the independent variable. The results indicate that there is a negative relationship between reliability scores of corporate disclosure and information asymmetry; while there is no relationship between timely score of corporate disclosure and information asymmetry.

### DISCUSSION AND CONCLUSION

The negative relationship between information asymmetry and corporate disclosure score has been confirmed in all models. This finding is consistent with the theoretical concepts which show that improving disclosure leads to mitigating the information asymmetry. Additionally, these conclusions are consistent with the findings of Leuz and Verrecchia (2000) and Petersen and plenborg (2006).

It must be mentioned that regardless of the confirmation of the negative relationship between corporate disclosure score and information asymmetry in all models, the fourth model can only explain 12 percent of the information asymmetry which might be because of the following reasons:

1. The capital market has not yet paid enough attention to the accounting information and financial information plays no considerable role in the decisions of the capital market participants. Accordingly, the relationship between accounting information disclosure and information asymmetry is significantly related but not considerable. This weak relationship is measured by corporate disclosure score of the Stock Exchange and possibly does not disclose the maximum significant aspects of disclosure.
2. Information asymmetry proxy of this research is the relative bid-ask spread of the capital market. The main part of the price variations in the recent years belongs to the political issues. Additionally, the stock exchange has experienced different periods including a downturn (pessimism period), logical period and boost (optimism period) and it is possible that the prices are impacted by the psychological issues. In doing so, the relative price gap is not a good indicator to calculate the information asymmetry.

In addition, some significant financial variables such as sales, earnings to sale ratio and systematic coefficient in the model are controlled. Their existence in the model has had no influence on improving the model. These findings confirm that accounting variables has been less considered in investment decisions. Accordingly, their impact on reducing the information asymmetry is not significant. However, this relationship is statistically significant for some variables such as sale, which is significantly related to information asymmetry.

### Research Based Suggestion

The following hypotheses can be suggested according to the descriptions:

The findings show that there is negative relationship between information asymmetry and information disclosure quality. Information asymmetry might cause the transactions of the capital market to be fair and it can consequently lead to its prevalence. Those agents which are responsible to develop accounting standards are offered to keep up with the required approaches for improving the disclosed information by the companies. Stock exchanges, as the supervisors of the capital market, are also suggested to make proper decisions in line with making investors sure about more application of the financial information.



### Further Researches

Further studies can be focused on the relationship between corporate disclosure quality based on quarterly financial statements and other information disclosed by the firms with the information asymmetry. There is also another chance to examine the relationship between disclosure and information asymmetry by using other measures of information asymmetry. Examining the relationship between voluntary disclosure and information asymmetry can be also regarded as a field to be studied.

### Limitations

The main limitation of this study is the inconsistency of databases which are available about Tehran listed firms. This caused the process of collecting data to be a time consuming procedure.

### REFERENCES

1. Ahmadpour Kasgari, A. and Ajam, M., (2010), "The Relationship of Accruals Quality and Information Asymmetry", *Stock Exchange Quarterly*, No. 11, pp. 107-124.
2. Botosan, C. A., (1997). "Disclosure level and the cost of equity capital". *The Accounting Review*, 72(3), 323-349.
3. Cormier, D., & Ledoux, M., & Magnan, M., & Aerts, W., (2009). "Corporate governance and information asymmetry between managers and investors". *Journal of Finance*, Vol 10, pp. 574 – 589.
4. Ghaemi, M. and Vatanparast, M., "Analyzing the Role of Accounting Information in Mitigating the Information Asymmetry", *Accounting and Auditing Review*, 12<sup>th</sup> period, No.41, pp.85-103.
5. Hafeznia, M., (2005), "An Introductory to the Research Methodology in Human Resources", first publication.
6. Healy, P., & Palepu, K. G., (2000). "A review of the empirical disclosure literature". Working paper, Harvard Business School. *Accounting Research*, 40(1), 2-40.
7. Hosseini, S.A, (2007), "The Role of Financial Reporting on Mitigating the Financial Market Risks", *Stock Exchange Journal*, No.66, pp.4-33.
8. Malekian Kalebasti, E., Moeinaddin, M. and Kalantari, E. (2011), "The Relationship of Audit Quality on the Bid-Ask Price", *Accounting and Auditing Reviews*, No. 18, pp 69-80.
9. McLaughlin, R., & Safieddine, A., (2008). "Regulation and information asymmetry". *Journal of financial regulation and complicity*, vol 16, pp. 59 – 76.
10. Morse, D., & Ushman, N., (1983). "The Effect of Information Announcements on The Market Microstructure". *The Accounting Review*, pp. 247 – 258.
11. Mohammad Abadi, M., Mashayekhi, B., Mirzayi, M. (2012), "Impact of Conservatism and Structural Characteristics and Firm's Performance on the Disclosure Quality", *Accounting and Auditing Studies*, No. 13, pp. 96-116.
12. Nadi Ghomi, V. (2007), "Information Asymmetry of Disclosure and Capital Market", *Iran Accounting Association Quarterly*, No.10, pp.28-33.
13. Noravesh, I. and Hosseini, A. (2009), "The Relationship of Disclosure Quality and Earnings Management", *Accounting and Auditing Review*, 16<sup>th</sup> period, No.55, pp.117-134.
14. Petersen, ch. & plenborg, T., (2006). "Voluntary disclosure and information asymmetry". *Journal of international Accounting, Auditing and Taxation* vol 15, pp 127 – 149.
15. Rahimian, N., Salehnezhad, H., Saleki, A. (2009), "The Relationship between Corporate Governance Mechanisms and Information Asymmetry", *Accounting and Auditing Review*, 16<sup>th</sup> period, No.58, pp.63-80.
16. Rahimiyan, N., Hemmati, H., Soleymain Fard, M., (2012), "The Relationship of Earnings Quality and Information Asymmetry", *Accounting Knowledge Quarterly*, No. 10, pp. 157-170.
17. Rezazadeh, J. and Azad, A. (2008), "The Relationship between Information Asymmetry and Conservatism in Financial Reporting", *Accounting and Auditing Reviews*, 15<sup>th</sup> period, No.54, pp. 63-80.
18. Setayesh, M., Kazemnezhad, M. and Zolfaghari, M., (2012), "Examining the Relationship of Disclosure Adequacy on the Stock Liquidity and Equity Cost", *Financial Accounting Researches*, No.9, pp. 55-75.
19. Stoll, H., (1989). "Inferring the Components of the Bid – Ask Spread Theory and Empirical Tests". *The Journal of Finance*, Vol 46, pp. 115 – 134.
20. Stoll, H., (1978). "The Supply of Dealer Services in Securities Markets". *Journal of Finance*, pp. 1133 – 1151.
21. Vatanparast, M. (2005), "The Role of Accounting Information in Mitigating the Information Asymmetry", M.A Thesis of Accounting, Imam Khomeini International University.
22. Venkatesh, P., & R., Chiang, (1986). "Information Asymmetry and the Dealer's Bid – ask Spread". A Case Study of Earnings and Dividend Announcements. *The Journal of Finance*, Vol 41, pp. 89 – 102.