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# The relationship between disclosure quality of information on its asymmetry and the cost of capital of all accepted companies in Tehran Stock Exchange

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**Abstract**
One of the most important components in how to provide financial information of firm is timeliness of financial reports because it can make better and more efficient use of information by users. Providing timely information can reduce information asymmetry among investors with companies. In this study, the impact of disclosure quality score on information asymmetry and cost of capital has been investigated. For this purpose, about 123 companies in the time period between 2008 and 2014 were analyzed. Research hypothesis have been analyzed by use of GLS Regression Model. The obtained results from hypothesis of this study, show a significant non-correlation between quality of information disclosure score and information asymmetry and there is a negative and significant relation between the quality of information disclosure score and the cost of capital.

**Keywords:** quality of disclosure score, information asymmetry, cost of capital

## Introduction
Market efficiency based on assumption of capital market research is at semi-strong level. Therefore, current companies in the capital market seek to mark the market by providing optional and compulsory reports to reduce information asymmetry. As a result, the more the company reports, the lower the information asymmetry on the market.
One of the most important factors in making the right decision is to have appropriate and relevant information about the issue of decision making which, if it is not properly processed, will have negative effects for decision maker.
If the information is distributed incorrectly, the group will have more information which will create unequal conditions in decision making.
From the theoretical point of view, the impact of number of reporting on information asymmetry is unclear.
A series of analytical studies in this regard show that public disclosure can reduce information asymmetry, so increasing the number of financial reports only if the set of reports provide more information to the public can reduce information asymmetry.
Accounting has played a very important role in the past, present and future, and will have. Therefore, the need for accounting information (financial reporting) is necessary for making decisions. Among the goals of the stock Exchange and the healthy economy, we can point out to reduction of information asymmetry and the cost of equity capital among investors and the creation of suitable platform for attract and direct capital to the market. Given the importance of topics such as the quality of disclosure, information asymmetry and the cost of equity capital, this study seek to survey the impact of increased disclosure quality on information asymmetry and cost of capital.

Fu and *et al*. (2012) [12] reviewed the impact of the disclosure quality on information asymmetry and the cost of equity capital between 1951 and 1973.
They concluded that cost of capital and information asymmetry would be reduced with increasing disclosure quality. While preliminary studies in this like (Diamond & Verhcia 1991) [14] suggested that further disclosures would result in lower cost of equity by reducing the false choice and the risks of wrong estimates, but next studies presented some other points.
Hughes *et al*. [22] in a study titled information asymmetry, variety and cost and Lambert *et al*. [27] in other study entitled Accounting information, Disclosure and Cost of capital concluded that all disclosures would have no impact on the cost of equity.
Also, Van Buscett [34] has not seen any evidence based on that information asymmetry is less for companies with high levels of disclosure. So, previous empirical studies show combined documentation and evidence and confirm the relation between disclosure and cost of equity.
Batisan [5], states that there is negative relation between the disclosures made by company and the cost of equity for companies with low –level analysts. Batisan & Pulmely [7], concluded that cost of equity declines at level of disclosure of annual reports and increase in level of disclosure of quarterly reports.

## Theoretical fundamentals and research background
The timeliness of financial reports is one of the most important basics of the quality of presenting financial information of the companies due to The fact that the timeliness of information can lead to better and more efficient use of information by users.

Increasing the reporting speed due to the timely use of information in making economic decisions by investors, can lead to greater transparency of financial information of the companies, and consequently, greater transparency in the capital market which in turn can have a significant impact on the attractiveness of financial markets (Biddle *et al* 2010) [4].
(Barth *et al*, 2013) [1] By examining the effect of transparency of accounting information on the cost of invests, they concluded that an increase in the transparency of accounting information leads to a reduction in the cost of capital.
(Bradbury, 1992) [8] examined the relationship between the frequency of short-term reporting, the fluctuation of profit, unexpected profit and size of the company in New Zealand, but there was no relationship between the frequency of reporting and fluctuations.
(Batassan & Harris, 2000) [6] Studied corporate decisions on the information of different sectors with more frequently than the annual report for the period of 1987-1944. Their results showed that in companies with low sales volume, companies with higher information asymmetry and growing companies, it is more likely that there is a high frequency of reporting for the sectors.
(Gigler and Hammer, 1998) [20] Concluded that the lower frequency of reporting is better than the frequency of reporting more. Information efficiency of stock prices is reduced by increasing frequency of reporting which is needed, because mandatory disclosures can reduce the discretion of directors to disclose.
(Yi, 2004) [37] Claims that the greater the frequency of reporting, forces companies to provide more information not only for investors and competitors, which reduces information asymmetry between competing companies but also it will affect the competition itself.
In addition, McNacilles and Mangold (1983) [31] examined the effect of short-term reporting on return variability around annual annuity dates and concluded that short-term reporting prioritizes annual reporting data.
(Botosan, 1997) [5] Has shown that the higher the frequency of reporting, leads to the lower the cost of invest.
(Lee *et al*, 1993) [28] Found that the depth of the market and the difference in bid prices suggested that they would be reduced by declining profits. While Krinsky and Lee (1996) [26] state that seeking earnings announcement will increase asymmetric information on the primary capital market.
Welker (1997) [36] has shown that there is a reverse relationship between the disclosure quality and the price difference between Proposed price of stock and stock sale.
Verdi (2006) [35] used the new criteria to estimate the cost of investment and showed that smooth earning causes to decrease the cost of investment for companies.
Espinosa and Trombetta (2007) [15] studied Spanish companies and concluded that the relationship between disclosure and the cost of investment is affected by accounting policy. Cohen (2008) [11] investigated the effect of high-quality accruals on the cost of investment and showed that there is no evidence of pricing risk factor and also high-quality accruals and smooth earning cause not to decrease the contingent cost of investment.
Bhattacharya *et al*. (2009) [2] studied the different relationships between cost of investment and the quality of earning. They showed that the quality of earning influences on asymmetric information and the cost of investment.
Ghaemi and Vatan Parast (2005) [19] studied the role of the accounting information in reducing asymmetric information in stock exchange of Tehran. The results showed that level of asymmetric information is increased before estimating the earning and it shows the content of information for the estimated earnings.
Khoshtinat and Yousefia [25] studied the relationship between symmetric and asymmetric information with conservatism. The results showed that asymmetric information between informed and uninformed investors leads to conservatism.
Rezazade and Azad (2008) [32] showed that the demand for conservatism in financial reporting is increased by high level of asymmetric information among investors.

**Research Hypotheses**

In this research based on patterns used by Fu *et al*. (2012) [18], the relationship between the quality of disclosure score on information asymmetry and cost of capital is investigated.

**Research hypotheses will be expressible as follows**

**Hypothesis 1:** is there a positive and meaningful relationship between the quality score of information disclosure with information asymmetry.

**Hypothese2:** is there a positive and meaningful relationship between the quality score of disclosure information with cost of capital.

123 companies were selected and the information about the research variables were extracted using the database of Rahavard Novin the site and the stock exchange and after validation statistical analyzes have been performed.

**Research patterns and method of calculating variables**

According to Fu *et al*. (2012) [18] to measure the relationship between the quality of disclosure quality of information on information asymmetry and cost of capital the following model is used: IAspread =B0+B1 (Disclosure i.t)+B2(size i.t)
The scope of the price difference between stock prices was raised in 1986, in the Winkates and Chiang, research subsequently several researchers such as Abiankar *et al* (1997), Yuang and stole (2000), Wassan and Boone (2010) and Jayaraman (2008) used this method to measure information asymmetry. In Iran Ghaemi and Vatanparast (2005) [19], Rezazade and Azad (2008) [32] and Rahimian and Saleki (2009) from this method used to measure information asymmetry is as follows. (Khodami Pour and QADIRI, 2010) [24].

**Research findings**

Research findings are guided by analyzing data as a process of scientific method, from problem selection to access to a variable. The investigator will analyze the statistical data of research into the experimental data to describe the issue or decide on the rejection or confirmation of the hypothesis that has been formulated. The purpose of the analysis and description in the statistics is to analyze the community of the society, which is described in two ways: descriptive and descriptive**.**

**Descriptive statistics**

In table 1, descriptive statistics results of the variables are presented. In the descriptive domain, data analysis was performed using central indicators such as mean, middle, and standard deviation indexes. Descriptive statistics results in the diversity of sample companies and, as a result of the generalizability of sample data, to the community**.**

**Table 1:** Descriptive variables of research

| Variable | Average | Middle | the most | The least | Standard deviation | observations |
|---|---|---|---|---|---|---|
| IASPREAD (Information asymmetry) | 0.0203 | 0.0200 | 0.1000 | 0.0000 | 0.0115 | 861 |
| CAPITAL EXPENDITURE (CAPITAL) | 0.1696 | 0.1500 | 25800 | 0.1 | 0.1426 | 861 |
| Disclosure (Quality Disclosure Disclosure Information) | 681161 | 630000 | 100000 | -1 | *20.2932* | 861 |
| SIZE (Company size) | 60116 | 59200 | 82600 | 43600 | 0.6623 | 861 |

**Test results of hypotheses**

Before testing the hypothesis of the research based on the results, we must ensure the accuracy of the results. For this purpose, F test was used to examine the significance of the whole model. Considering the significance level of the calculated F statistics (0.0000), it can be claimed that the fitted regression model is significant.

According to the coefficient of determination of the fitted model, it can be claimed that about 56% of the changes in the dependent variable of the model (information asymmetry) are explained by independent variables.

$$IASPREAD_{it} = \beta_0 + \beta_1 DISCLOSURE_{it} + \beta_2 SIZE_{it} + e_{it}$$

**Table 2:** Summary of statistical results of the first model research

| Variable | Coefficients | Standard deviation | Statistics t | Significance level (P-Value) |
|---|---|---|---|---|
| B0 (width of origin) | -0.1124 | 0.0240 | -4.6857 | 0.0000 |
| DISCLOSURE (Quality of disclosure information) | 0.0002 | 0.0003 | 0.8591 | 0.3906 |
| SIZE (size of the company) | 0.0218 | 0.0039 | 5.5579 | 0.0000 |
| F Fisher Statistics | 7.6737 | The significance level of the F Fisher statistic | | 0.0000 |
| The coefficient of determination | 0.5639 | Watson Camera Statistics | | 1.6264 |

**The first hypothesis**

**H0:** With increasing the quality of disclosure quality, information asymmetry is not reduced.

**H1:** decreases information asymmetry by increasing the quality of disclosure quality.

The estimated coefficient of the independent variable DISCLOSURE in the table above shows a significant non-significant correlation between the quality of disclosure quality and information asymmetry at the error level of 0.05.

Because the calculated p-value for the coefficient of this independent variable is more than 0.05Therefore, the assumption H0 is confirmed and the H1 assumption is rejected.

The results of estimating the second model of research are described in Table 3.

$$CAPITAL\ EXPENDITURE_{it} = \beta_0 + \beta_1 DISCLOSURE_{it} + \beta_2 SIZE_{it} + e_{it}$$

**Table 3:** Summary of the statistical results of the second research model test

| variable | Coefficients | Standard deviation | Statistics t | Significance level (P-Value) |
|---|---|---|---|---|
| B0 (width of origin) | 0.1240 | 0.0675 | 1.8368 | 0.0666 |
| Disclosure (Quality of disclosure information) | -0.0005 | 0.0002 | -2.2036 | 0.0278 |
| SIZE (size of the company) | 0.0130 | 0.0125 | 1.0436 | 0.2970 |
| F Fisher Statistics | 3.0543 | The significance level of the F Fisher statistic | | 0.0477 |
| The coefficient of determination | 0.4071 | Watson Camera Statistics | | 1.5871 |

**Second hypothesis**

**H0:** By increasing the quality of disclosure quality, the cost of ordinary stock capital does not decrease.

**H1:** By increasing the quality of disclosure information, the cost of ordinary stock capital decreases.

The estimated coefficient of the independent variable DISCLOSURE in the table above indicates that there is a negative and significant relationship between the quality of disclosure information and the cost of ordinary equity capital at the error level of 0.05. Because the calculated p-value for the coefficient of this independent variable is less than 0.05.

Therefore, the assumption H0 is rejected and the H1 assumption is confirmed.

**The result of research control variable**

Estimated coefficient of independent variable SIZE in the above table indicates meaningless relationship between firm size and cost of common stock capital in 0.05 error level. Since the amount of estimated p-value for the efficient of this independent research variable is more than 0.05. So there can be no meaningful relationship between size and cost of stock capital in confidence level %95.

**Conclusion**

In this research we have investigated the relationship between disclosure quality score with information asymmetry and cost of capital. The results of the first hypothesis show that there is no meaningful relationship between disclosure quality score with information asymmetry. Therefore the main hypothesis is rejected. According to the hypothesis of investor recognition, these investors tend to invest and exchange in stock of companies which are well known or judged ideally.

The results of second hypothesis show a meaningful relationship between disclosure quality score and the cost of equity capital. As a result the second hypothesis is accepted. The results correspond to other researchers results like diamond ver gia (1985) [13], brown and hilligist (2004) and it is opposite to the research of other researchers like botosan and plumleei (2002) [7], batasen (1997) [5]. The reason for disagreement among researchers may be that in the investigated companies the correct information dis closure hasn't done. Because the correct and on time information disclosure is among corporate executives more important tools for reducing cost of capital. However it seems, big companies gain more benefits from improving and raising the level of disclosure than smaller companies. In other words, in addition to financial and non-financial reporting times, the amount of information accuracy will also affect cost of capital. Also the more the quality and quantity of the provided information increase on the other side the less information asymmetry and cost of equity capital will be.

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