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# *Investigating the relationship between voluntary disclosure and the performance of companies listed on the Tehran Stock Exchange*

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ABSTRACT

*To restrict undesirable investor's perception and create awareness about future prospects, companies may make voluntary disclosure. Providing voluntary information about identification, measurement and disclosure of accounting numbers in financial statements lead to attract investors and effectively help to improve the company's financial position and managerial popularity. In this regard, data of selected 124 firms, over the period of 2013-2020 were analyzed to examine the relationship between variables to test the hypothesis through panel data structure. By testing research hypothesis and with the respect to significant level of hypothesis there is positive significant relationship between firm size and voluntary disclosure quality and there is inverse significant relationship between debt ratio, profitability ratio and voluntary disclosure quality and there is significant difference between effective factors for voluntary disclosure of information among different industries.*

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## 1- Introduction

Organization management can only make the right decisions by using integrated system and guide the organization towards the main objective. For sound economic decisions, investors (shareholders) needs information that by using them maximizes profitability in other words, possible transparency, capital (savings attract to the most profitable economic activities. The information that is most helpful for investors is firm financial information which are extracted from financial reports. According to the information content of financial reporting, investors make decisions that a have major impact on resources allocation at the capital market.

One of the objectives of financial reporting is preparing and presenting information to provide the basis for investors and creditors' rational decision making. In this regard, information must be useful and relevant and must have the power to influence the economic decisions and lead to the best decisions. The financial information to be useful in the decision-making, the accounting and financial reporting purpose, requires that relevant information discloses properly and access to this information be possible for all investors and creditors (Jesperc and Plenborg, 2018).

Achieving long-term economic growth requires resources allocation and mobilization at the national level and this is not possible without the help of financial



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markets, especially extensive and efficient capital markets The proper functioning of capital markets can increase efficiency, investment and growth (Chiang, 2015) and is also capable to increase economic growth through reducing maintenance of cash assets and increasing growth rate of physical capital in the long term that more transparency information, better this role will be play Elnaz, 2017).

Information disclosure by firms is one of the most important management tools to convey information related to firm financial performance and firm guidance toward investors, creditors and other stakeholders and one of the important reasons of demand for information disclosure is representative issues and information asymmetry (Healy and Palepo, 2001).

Basis of representation theory is according to this assumption that managers as representatives of shareholders may act such way or make decisions that are not necessarily for maximizing shareholders, wealth. According to this theory there must be sufficient control or oversight mechanisms to protect shareholders against interest conflicts. Financial statements transparency and disclosure quality of information is considered as a practical solution. Often it is argued that the transparency and information quality reduces information asymmetry. Information asymmetry is said to condition that the directors' knowledge of the firm activities is more than potential investors and stakeholders and other shareholders. Reducing information asymmetry leads to information transparency and more knowledge of investors. As a result, tend to buy and sell securities and trading volume will increase.

Literature review: In general, disclosure can be divided into two parts: mandatory disclosure and voluntary disclosure. Mandatory disclosure includes all of the items that base on legal requirements, rules and regulations governing financial reporting (business law, tax laws and stock exchange rules), accounting standards and professional bodies should provide for authorities, Voluntary disclosure is used when additional information are released in the market more than information which are required to be published. Management can disclose information voluntarily in order to enhance financial reports credibility. Although, accounting standards required minimum amount of necessary disclosure but did not limit voluntary disclosure of additional information. If management can provide guidance about achieving short term and long term goals of the organization and the efficient use of allocated resources and report a clear picture of prospects of decisions by representing additional information can answer investors' critics about current performance and make them hopeful about the future of the firm. The voluntary disclosure helps investors to inform of management trade measures. In fact, investors consider voluntary disclosure on management forecasts as authentic information (Amin, 2005).

The main reason for emphasizing on voluntary disclosure and transparency is that these two are main basis for protecting shareholders, interests. Full disclosure and transparency in financial reporting can create secure conditions and ensure the protection of investors' interest. Research also has shown that voluntary disclosure has a positive effect on the firm performance and is effective for protecting interests of shareholders and other interested parties. In other words, lack of clarity and ambiguity in reporting may lead to suspicious and unethical behavior and firm devaluation (Madhani, 2017).

The voluntary disclosure is a factor that creates a sound capital market and avoids from trades by people that access to information and also recognize new items and delete poor items and finally affect on people and lead them to make the right decision. The results of this research can be used by economic policy makers, accountants, capital market makers decision, issuers, financial institutions and individual investors. It is expected that the country's financial management and

capital market participants with a better understanding of the effects of voluntary disclosure of information and

corporate characteristics, provide capital market prosperity and ultimately the country's economy prosperity by applying suitable and effective policies.

In this research, Mohammad et al. (2019) studied the relationship between two control mechanisms, the voluntary disclosure (external control mechanism) and non-executives (internal control mechanism) which reduces the agency problems. For this purpose, a sample of manufacturing companies in the stock exchange that published financial statements and reports of the board of directors, activities on 29 March 2006 were selected and were eventually included 239 companies. Voluntary disclosure was determined by 71 indexes. The results showed no significant relationship between disclosure and non-executives.

**Bahman and Mohsen** (2010) studied voluntary disclosure quality of information and some factors influencing it for this purpose, companies ranked on the Tehran Stock Exchange which included 311 companies were chosen as the research statistical society. The research result suggests that there is positive significant relationship between disclosure rank and firm size and industry type but there is negative significant relationship between disclosure rank and the auditor's report and share ownership percentage. Also there was no relationship between assets efficiency, financial leverage, the auditor and the entity with disclosure rank

Kazemnejad conducted a research to identify and explain the factors affecting the disclosure quality of information of listed companies on the Tehran Stock Exchange that results showed that there is a significant relationship between disclosure quality with firm age, liquidity, profitability and audit firm and there is a reverse significant relationship between financial leverage and family ownership and there was no significant relationship between fum size and board of directors combination.

Mashaykhi and Farhadi (2014) examined the impact of firm size on the relationship between disclosure quality and cost of stockholders, equity of listed companies on the Tehran Stock Exchange. The considered period was 2003-2010. The results showed that there is negative significant relationship between disclosure quality and cost of stockholders, equity for large companies.

Wallace et al. (1994) conducted empirical research in the context of the relationship between comprehensive annual reports of firms and firm characteristics in Spain this research was included two questions, the first question: whether the difference in disclosure level is resulting from difference in firm characteristics? Second, properties related to the disclosure level in Spain are also used in other countries? Research findings indicate that comprehensive annual reports in Spain have a direct relationship with size and admission to Madrid or Valencia stock exchange have inverse relationship with liquidity. Ferguson et al. (2002) conducted a research about voluntary disclosure in Hong-Kong. In this research, a sample of 142 companies was selected then a list of 93 disclosures was prepared and by using linear regression analysis, examined the voluntary disclosure in companies of Hong-Kong Stock Exchange. The research results showed that disclosure index has relationship with financial leverage and disclosure index has no relationship with industry type and firm size.

Alsaeed (2006), in his research in Saudi Arabia, entitled the relationship between private companies and the disclosure, by using the checklist of 20 cases of voluntary disclosure in the annual reports of 2003, selected 40 companies as samples and concluded that firm size is an effective factor on disclosure and factors such as financial leverage, ownership dispersion, firm age, profit margin, retum on stockholders, equity,

liquidity, industry type and audit firm size have no effect on disclosure.

Haddad et al. (2009) measured voluntary disclosure level and as well as the relationship between voluntary disclosure level and stock market in Jordan. The results show that disclosure level depends on firm size, firm conditions on represented index and industry type. For second goal they achieved this result that increasing the voluntary disclosure level will lead to a reduced range of bid difference of buy and sell shares which represents increasing liquidity

**Research hypotheses**: Following hypotheses are considered based on previous researches and the research problem:

- Firm size has a significant effect on quality of voluntary disclosure
- Firm age has a significant effect on quality of voluntary disclosure
- Combination of board of directors has a significant effect on quality of voluntary disclosure
- Firm debt ratio has a significant effect on quality of voluntary disclosure
- Profitability ratio has a significant effect on quality of voluntary disclosure
- Free cash flow has a significant effect on quality of voluntary disclosure
- Audit firm size has a significant effect on quality of voluntary disclosure

**Research variables:** Independent variables include as follows:

**Firm size:** For recognizing large or small firms, various criteria, including assets value, sales and stock market value can be used. In this research, the following criteria were used:

Size = Ln (assets)

**Firm age:** The natural logarithm of years of firm age since firm establishment as follow

Age = Ln(age)

**Combination of board of directors:** The variable is measured through the ratio of non-executive members to executive members:

Board of directors' combination= Non-executive members / Executive members

**Debt ratio:** The variable is calculated through debt divided by assets:

Debt ratio = Total debt / Total assets

**Profitability ratio:** For this variable return on asset is used. The reason for selecting return on asset as a Variable to measure firm's profitability is that profitability ratio has a direct relationship with firm's strategy and management performance

ROA= Net operating income / Total asset

**Free cash flow:** The variable is calculated as follow:

FCF = Net operating income+Depreciation expenset

Working capital changes

**Audit firm size:** Almost all researchers divide audit firms into two categories of large and small firms and by assigning a zero and one value to this variable, measure it. The large audit firms are ones that firm financial statements are audited by audit organization, otherwise are considered as small audit firms.

**Dependent variable:** In the present study, voluntary disclosure is used as a dependent variable.

**Voluntary disclosure index:** For calculating firm voluntary disclosure, based on Omid and Hamze (2012), a checklist of voluntary disclosure of financial statements was collected and by using financial experts opinions, final checklist, consisted of 60 voluntary disclosures, was provided. By examining board of directors reports

to each item which is expressed in the checklist, if disclosed by firms one value and otherwise zero value is belonged and finally the voluntary disclosure index is calculated by dividing the sum of disclosed items to total items that must be disclosed. Overall, voluntary disclosure index is calculated as follows:

$$VDI = di/n$$

where, each item is disclosed, di is considered equal to one, otherwise is considered zero.

**Control variable Industry type:** In this research, listed firms in Tehran Stock Exchange are categorized in 5 groups:

- Mining and related products
- Agriculture, animal husbandry and related industries
- Chemical, petrochemical, pharmaceutical and related products
- Machines and equipment and electrical machines
- Basic metals and related products

**Population and statistical sample:** The sample in the study with taking into account the nature of the study, the informational requirements and characteristics of the firms in statistical sample have been determined such that the obtained sample in the process of research hypotheses test with saving money and time in the best way are expand the obtained results to statistical sample Therefore in this study, we use removal method. The sample consisted of all listed firms in Tehran Stock Exchange in five mentioned industries which contain following characteristics:

- The firms must be accepted in Tehran Stock Exchange before 2013
- Due to the consistency of the reporting date, removal of seasonal effects and enhancement of information comparative capability, the fiscal year were in March month
- Due to the necessity to calculate variables and hypotheses test for every firm there was been necessary information for measuring variables and must be disclosed
- Firm stocks in the years of research must be traded
- Investment companies, insurance firms and banks are excluded from the sample
- Since, the data structure of the this study is a panel, at least 7 years of firms data is needed then studied firms stock must be traded over the period of 2013-2019

## 3- MATERIALS AND METHODS

At the first with descriptive test, variable distribution with 3 indexes, central dispersion and distribution in the

studied sample were analyzed. One of the basic assumptions of non existence regression is the correlation between the error terms. For investigating this hypothesis, the Durbin-Watson statistic is used to test the absence of co-linearity among independent variables of model are used tolerance and VIF statistic. Tolerance Statistic is a value between zero and one. If the tolerance value is >0/5, indicating non co-linearity, to test normality of the dependent variables at 95% confidently level was used normal probability diagram. One of the other basic assumptions of regression is consistency of error variance that can be studied with values diagram plot against model remnants (error terms). If the resulting graph does not show any specific trend, error variance is constant. Finally, the data based on the manner of data combination are analyze; in order to test relative information content, corporate characteristics on voluntary disclosure are review that the model by using linear regression and concept model will be tested.

**Linear regression model:**

$$VDI = \alpha + \beta_0 SIZE + \beta_1 AGE + \beta_2 BORD + \beta_3 DEBET + \beta_4 PROF + \beta_5 FCF + \beta_6 AUDIT + \beta_7 IND + \varepsilon_{t,i}$$

Where:

VDI = Voluntary disclosure

SIZE = Firm size

AGE = Firm age

BORD - Board of directors

DEBT = Debt ratio

PROF = Profitability ratio

FCF = Free cash flow

AUDT = Audit firm size

IND - Industry type

E = Error term

According to the regression model variables belong to 124 firms during 7 years, thus before performing the model must be determined if there are any regression correlation with width on the shared origins and slope or not. The integration test or F Limer will be used for this purpose. The null hypothesis of this study is based on a homogenous section within the same origins. The results are reported in Table 1.

***Table 1: Results of the integration test for research model***

| Statistic value F | Numerator freedom grade | Denominator freedom grade | p-value |
|---|---|---|---|
| 2/345 | 47 | 776 | 1/804x10 |

***Table 2: Results of the Hausman test for the research model***

| Kido statistic | Freedom grade | P-value |
|---|---|---|
| 11/ 315 | 6 | 0/0.794 |

According to the Table 1, 0/0.5>1/804x10-'p-value = Sections homogeneity hypothesis and width from same origins must be rejected and therefore must be used width of different origins for different times in the above model. In other words, regression model should be done in panel form.

Other tests that should be measured prior model are random effects test or Hausman test. The test statistic is Kido statistic and the null hypothesis of this test is based on the random model effects. The results of this test for the mentioned model is presented in the Table 2.

As it observed in Table 2 = p-value 0/0.794>0/0.5. Thus, the hypothesis of random model effects with 95% confidence were accepted and the research model must be fitted with random effects.

## 4- RESULTS AND DISCUSSION

According to obtained results of the above tests, the research model is panel least squares regression method. The results are presented in the Table 3.

As it is showed F-statistic equals to 4/457 and p-value associated with this statistic is 0/000 that has the value <0/0.5 (test significant level), so the null hypothesis that mentioned above is rejected at 0/0.5 level This means that the mentioned model is significant at 5% level. In other words with 95% confidence we can reveal that the research model is significant.

**Hypothesis 1:** The first hypothesis deals with the effect of firm size on the quality of information voluntary disclosures. Because of the size of the t-statistic are belong to firm size 3/405 and p-value corresponding to it 0,001 is <0/0.5, so with 95% confidence, the first research hypothesis is accepted. In other words, "firm size has a significant effect on the quality of voluntary disclosure".

**Hypothesis 2:** Effect of firm age on the quality of information voluntary disclosure is examined in the second hypothesis. The above table results shows that t-test statistic for firm age -0/341 and also p-value corresponding to it 0/733 is larger than 0/0.5, so with 95% confidence, the second hypothesis is rejected. In other words;

"firm age has no significant effect on the quality of information voluntary disclosure".

**Hypothesis 3:** The subject of third hypothesis is the significant survey of board of director combination effect on the quality of information voluntary disclosures. According to above table can be seen that the t-statistic corresponding to the third hypothesis test, 1/100 and p-value corresponding to it 0/271 is larger than 0/0.5, so with 95% confidence, the third hypothesis is rejected. In other words; "board of directors combination's firm has no significant effect on the quality of information voluntary disclosure".

**Hypothesis 4**: The fourth hypothesis was tested the effect of firm debt ratio on the quality of information voluntarily disclosure. t-statistic related to debt ratio is reported in Table 3, is -2/236, Also the p-value corresponding to it is 0/0.26 that is smaller than significance test level (0/0.5). Thus with 95% confidence, fourth hypothesis is accepted. In other words, "firm debt ratio has a significant effect on the quality of voluntary disclosure".

**Hypothesis 5:** A significant impact of profitability ratio on the quality of voluntary is the subject of fifth hypothesis. The results are represented in Table 3 that t-statistic belong to this hypothesis -2/261 as well as the p-value corresponding to it 0/0.24 is lower than 0/05 value (test significant level) that is indicated significant the fifth hypothesis. Therefore, with 95% confidence, we can reveal that profitability ratio has a significant effect on the quality of voluntary disclosure".

**Hypothesis 6:** The sixth hypothesis was surveyed the effect of free cash flow on the dependent variable (quality of information voluntary disclosure). According to reported results in Table 3 and since t-statistic value associated with free cash flow variable is -0/557 and p-value corresponding to it is obtained 0/578, thus the sixth hypothesis with 95% confidence is rejected. In other words; "free cash flow has no significant effect on the quality of voluntary disclosure",

**Hypothesis 7:** Finally, in the seventh hypothesis of this study was surveyed the significant effect of audit firm size on the quality of information voluntary disclosure. According to t-statistic value (0/776 ) and p-value corresponding to it (0/438) that is larger than test significance level (0/0.5), the seven hypothesis with 95% confidence is rejected. In other words; "audit firm size has no significant effect on the quality of voluntary disclosure".

## 5- CONCLUSION

The obtained results of data collection about 104 selected firms on the Tehran Stock Exchange during the years 2013-2019 were studied. Statistical analysis was performed by the method of least squares regression. In this regard, two Software SPSS and Eviews have been used. The results can be summarized as follows:

The results of the model showed that the variables of corporate characteristics, firm size, debt ratio, profitability ratio on the quality of information voluntary disclosure have significant effect. In this regard, a brief explanation is offered: firm size has a significant effect on the quality of information voluntary disclosure, this indicates larger firm size and information disclosure is done on time. Because of many important reasons, the larger firms have more tendency for information voluntary disclosure. One of the reasons for this case that larger companies have more tendency for information voluntary disclosure is shareholders expectation and totally beneficiary and creditors are more than larger firms and for this reason, larger companies are represented more information that would lead to higher levels of transparency and disclosure. Firm debt ratio has a significant impact on the quality of information voluntary disclosure. With regard to the transparency of financial statements

and quality of information voluntary disclosure as a practical solution for reducing of agency costs, it is expected that leverage firms (with less agency costs) have less commitment on the information disclosure with high quality and as a result, less information are expose with lower quality. In other words, it is expected that there are an inverse

relationship between leverage and disclosure level Profitability ratio has a significant impact on the quality of information voluntary disclosure, profitability is a measure of good and suitable management Management of profitable firm in order to explain its ability for maximizing shareholder wealth and support of opportunity and it's rewards are provided detailed information with better quality. In contrast when profitability is low in order to hide loss reasons or reduction of benefits, management may disclose less information. Firm management is reluctant to provide information about the loss of sales and profits, particularly when one or many sections have loss. In contrast, director general will disclose profit to hide downward trends of sub-sections in the total mumber.

## 6- RECOMMENDATIONS

The following recommendations are offered for the users of research results:

According to significant relationship between firm size and quality of disclosure it is necessary that compilers of standards and accounting rules and financial reporting are concentrated on the small firms too and compile optimized rules about these firms to gain confidence about financial reporting quality in such firms In order to observe optimal extent of cash flow, especially in small firms should make decisions about economic conditions and in this regard, the managers of the business units should be more sensitive It can be recommended for using more control variables for examining voluntary disclosure of accounting information Study the effect of information disclosure on the product marketing development Study the effect of factors and monitor devices on information voluntary disclosure level Study the relationship between mandatory disclosure levels of firms in different industries

***Table 3. The results of regression model study of research model significant investigation (dependent variable: the quality of information voluntary disclosure)***

| Variables | Parameter assessment | t-statistic value | p-value | coefficient | VIF | Tolerance |
|---|---|---|---|---|---|---|
| **Regression fix** | -0/101 | -0/834 | 0/404 | -- | -- | -- |
| **Firm size** | 0/0.35 | 3/405 | 0/0.01 | 0/14 | 1/521 | 0/657 |
| **Frim Age** | -0/0.08 | -0/341 | 0/733 | -0/0.5 | 1/0.57 | 0/982 |
| **Board of director combination** | 0/0.09 | 1/100 | 0/271 | 0/0.7 | 1/0.20 | 0/987 |
| **Debt ratio** | -1/797 | -2/236 | 0/0.26 | -0/0.1 | 1/0.55 | 0/948 |
| **Profitability ratio** | -1/822 | -2/261 | 0/0.24 | -0/0.4 | 1/0.17 | 0/984 |
| **Free cash flow** | -0/0.04 | -0/557 | 0/578 | -0/0.1 | 1/228 | 0/815 |
| **Audit firm size** | 0/0.19 | 0/776 | 0/438 | 0/0.4 | 1/247 | 0/802 |
| **Industry type** | 0/0.20 | 2/187 | 2/187 | 0/0.29 | 1/0.18 | 0/982 |

***Correlation coefficient (R)=0/23; Detemination coefficient (R4) = 0/0.5; F-statistic = 4/457; p-value=0/000: Durbin-watson statistic = 1/80***

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