

The effect of financial reporting quality and disclosure on percentage of individual Investors ownership in firms enlisted of Tehran Stock Exchange

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ABSTRACT

Financial reports of firms should prepare data that are useful for potential and current investors, creditors, and other users in logical investments, rendering credits and similar decisions. Accordingly the present research is going to deal with investigating the effect of financial reporting quality and disclosure on the percentage of ownership of individual investors. In this research 203 firms enlisted in Tehran Stock Exchange have been studied for the time period between 2008 and 2013. To test the hypotheses we have used a pooled linear regression model. Research findings showed that financial reporting quality based on abnormal accruals does not affect the ownership percentage of individual investors meaningfully. But financial reporting quality based on accruals' quality and disclosure quality affect the ownership percentage of individual investors positively and meaningfully.

KEYWORDS: *financial reporting quality, accruals quality, disclosure quality, individual investors' ownership*

INTRODUCTION

Rapid growth and changes of economic relationships result in a severe competition in business, industry, and investment. Thus, firms need appropriate and in time investment to survive and develop their activities. Financial reports of firms should prepare some information that is useful for potential and current investors, creditors, and other users in logical investments, rendering credits, and similar decisions. Financial reports should prepare required information to assess financial status and economic strength of an entity, to assess performance and profitability, to assess financing type and cash expenditure, to assess how to render consulting the management and to do legal responsibilities and to prepare complementary information to have a better understanding of financial information presented and to predict future status. Thus, these reports have a tremendous importance in realization of the goals mentioned and increasing their quality can result in more efficient investments by firms and maintaining and developing their resources. Some recent researches claim that increasing financial reporting can have some important economic outcomes such as increasing investment efficiency.

Theoretical foundations and research literature

Accounting information (including accounting disclosure and financial reporting) have a very important role in developed capital markets. First, accounting information makes it possible for the firm capital suppliers (including shareholders and creditors) to assess the potential return of investment opportunities (assessment role or ex-ante accounting information). Second, accounting information lets capital suppliers control how the conferred capital is being used (the counseling role or post accounting information role). On the whole, agency problem and information asymmetry halt optimal appropriation of resources in capital market (Bear & et al, 2010). Disclosure is a mechanism that fosters reliable information transfer between management and investors and plays an important role in reducing information asymmetry (Hilly & Pulpo, 2001).

Firm's disclosure is necessary for performance efficiency of capital market. Also the firm carries out its disclosure through legal financial reports including financial statements, notes, discussion, and management's analysis and other legal efforts. Additionally, some firms do voluntary disclosures such as management predictions, surplus information published in journals and...The demand for financial reports and firms' disclosure results from information asymmetry and agency problem between management and outsider holdings. Firms try to present disclosures with high quality in order to satisfy the investors and reduce lack of reliability. Financial reporting quality refers to a boundary through which firm's financial reports, economic status, and its performance is measured during a time period and honestly. Although the literature related to financial reporting quality and earnings qualities emphasizing at dominant principles in financial reporting have concentrated on financial statements' quality, the comprehensive discussion on financial reporting quality should

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be beyond the quality of financial statements because firms can also publish their financial information through using other methods. On the other hand, financial reporting is not solely a final product but it is a process comprised of several elements and financial reporting quality depends on financial reporting process quality in each part (ibid.)

On the other hand ownership structure or shareholder's composition means the distribution of equity and ownership equity due to vote right and capital in addition to identity and existence and equity owner. The ownership structure in a company is important due to several dimensions and primarily it was defined based on the two variables including insider holdings or shares owned by insider and outsider shareholders. Accordingly, institutional holdings and public holdings are considered as the main sections of firms. Insider holdings represent the percentage of outstanding shares owned by managers and staffs of the company. Institutional holdings refer to the percentage of firm's stocks owned by institutional and legal investors. Also the ownership composition of a firm can be noticed regarding different dimensions in addition to insider or outsiders such as: concentration of de-concentration of ownership, institutional or real and managerial or non-managerial features of shareholders (Beik Boshroyeh, 2011).

Financial reporting quality can improve investment by reducing information asymmetry in two ways: 1- reducing information asymmetry between the firm and shareholders and then reducing costs of capital increase to reduce information asymmetry among shareholders, and 2- supervising managers and improving the selection of investment projects by managers and then reducing shareholders' costs for investment (Khodaei & Yahyaei, 2010). Thus, in this research we would try to study about the effect of financial information quality on the ownership percentage of individual investors in firms. Therefore, the main problem we are going to answer in this research is: what effect does financial information quality have on the ownership percentage of individual investors in firms enlisted in Tehran Stock Exchange?

Research literature

The research literature for domestic and foreign studies is as follows:

Lawrence (2013) studied about the effect of the ratio of individual investors in firms on information disclosure quality in firms and concluded that in firms that the ratio of individual investors is higher, the disclosure quality is lower than other firms.

Reeb & Zhao (2013) investigated about the relationship between education, job experience, and the communication network of board with disclosure quality. Results of their findings showed that there has been a direct and meaningful relationship between education, job experience, and the communication network of board with disclosure quality.

Piotrosky (2012) concluded in his research that firms with high growth opportunities tend to present low financial reporting quality and disclosure. On the contrary, when firms are approaching end of their investment projects and their potential future growth ability is lower, information asymmetry is reduced and thus the disclosure quality increases.

Frager & et al (2012) stated in their research that accounting disclosure with a high quality results in information risk reduction and thus there would be a difference in analysts' predictions. They also concluded that disclosure quality results in capital cost reduction.

Results of a research by Watts & La fond (2008) showed that firms with high growth opportunities tend to show a lower financial reporting and disclosure quality. On the contrary, when firms are approaching end of their investment projects and their potential future growth ability is lower, information asymmetry is reduced and thus their financial reporting quality increases.

Regarding that the present research is being carried out in Iran for the first time, our research results are similar to those as follows:

Setayesh & Kazemnejhad (2012) carried a research entitled: "the recognition and identification of effective factors in information disclosure quality in firms enlisted in Tehran Stock Exchange" and concluded that disclosure quality has had a direct and meaningful relationship with experience, liquidity, profitability, and size of auditing entity and it has had a reverse and meaningful relationship with financial leverage and family ownership in firms enlisted in Tehran Stock Exchange.

Etemadi & et al (2011) investigated about the value content of disclosure in identifying information asymmetry phenomenon. Results of their research showed that the disclosures carried out in reports of firms entailed information content about information asymmetry of future earnings and the investors utilized these disclosure data in their decision makings.

Kamalian & et al (2010) used data investigation approach to investigate about effective factors in advantages and disclosure rank of firms. These effective factors included firm's auditor entity quality, return on assets, and the ratio of debt and the CEO of board being in charge or not in charge.

Noravesh & Hosseini (2009) studied the relationship between firm's disclosure quality (reliability and timeliness) and earnings management. Their research findings showed that there has been a negative relationship between firm's disclosure quality and earning management. Also their findings showed that there

has been a negative and meaningful relationship between timeliness of firm's disclosure and earning management.

Hypotheses development

Regarding what was pointed above and research questions, the hypotheses of this research were presented in the form of two major hypotheses and two minor hypotheses as follows:

First major hypothesis: financial reporting quality affects ownership percentage of individual investors.

First minor hypothesis: financial reporting quality based on unusual accruals affects ownership percentage of individual investors.

Second major hypothesis: financial reporting quality based on accruals affects ownership percentage of individual investors.

Second minor hypothesis: disclosure quality affects ownership percentage of individual investors.

METHODOLOGY

The present research is correlation type and is applied regarding its goal. Additionally, since historical information will be used in testing hypotheses, it is categorized among quasi-experimental researches. Also the present study is experience-based and it is inductive and field study or library study type using historical information in the form of post-incident. Below we have represented how each of the variables has been calculated:

First hypotheses' testing model

Individual Investors_{it} = β₀ + β₁ Financial Reporting Quality_{it-1} + β₂ RET_VOL_{it-1} + β₃ EARN_VOL_{it-1} + β₄ MTB_{it-1} + β₅ Beta_{it} + β₆ LogAsset_{it-1} + β₇ Leverage_{it-1} + β₈ ROA_{it-1} + ε_{it}

Dependent variable

Individual investors: the average ratio of individual investors of the firm in year t. by individual investors we mean real investors and in the present study we have used the percentage of stock owned by real individuals from the whole firm stocks to assess real investors.

Independent variable

Financial Reporting Quality: in this research and according to Raj Gupal & Von Catachelm (2011) we have used two indexes of: 1) unusual accruals 2) accruals' quality to assess financial reporting quality as follows:

Financial reporting quality model based on unusual accruals

In this model financial reporting quality (EQ) based on unusual accruals is measured and assessed based on interference element below:

$$TA_{it} = \delta_0 + \delta_1 (\Delta REV_{it} - \Delta AR_{it}) + \delta_2 PPE_{it} + \delta_3 ROA_{it} + \eta_{it}$$

In this model the amount of optional accruals is estimated and predicted as follows:

$$TA = NI - CFO$$

Where TA is total accruals, CFO is cash flow resulting from operation, and NI is net income. Then the following model was adjusted for total accruals:

$$TA_{it} = \alpha (1/A_{it-1}) + \beta (\Delta REV_{it} / A_{it-1}) + \gamma (PPE_{it} / A_{it-1}) + \epsilon_{it}$$

Where TA_{it} is total accruals in year t for firm i, ΔREV_{it} is the incomers of year t minus previous year's income for the firm i, PPE_{it} is gross fixed assets in year t, A_{it-1} is total assets at the end of the previous year for firm I, the coefficients α, β, and γ, Jones's model coefficients, ε_{it} is model error in year t for firm I, non-optional accruals can be calculated through the following model:

$$NDAC_{it} = \alpha (1/A_{it-1}) + \beta (\Delta REV_{it} - \Delta REC_{it} / A_{it-1}) + \gamma (PPE_{it} / A_{it-1})$$

In this model ΔREC_{it} is accounts rcievable in year t-1 to the firm I, and α, β, and γ can be achieved through least squares method in total accruals' model and finally regarding the equations above, optional accruals (DAC) is calculated through the following model:

$$DAC_{it} = TAC_{it} - NDAC_{it}$$

In this model Financial reporting quality model based on accruals' quality

In the model above, financial reporting quality (EQ) based on accruals' quality based on interference element will be measured and assessed as follows:

$$TCA_{it} = \varphi_0 + \varphi_1 CFO_{it-1} + \varphi_2 CFO_{it} + \varphi_3 CFO_{it+1} + \varphi_4 \Delta REV_{it} + \varphi_5 PPE_{it} + v_{it}$$

Second hypotheses testing model

Individual Investors_{it} = β₀ + β₁ Disclosure Quality_{it-1} + β₂ RET_VOL_{it-1} + β₃ EARN_VOL_{it} + β₄ MTB_{it-1} + β₅ Beta_{it} + β₆ LogAsset_{it-1} + β₇ Leverage_{it-1} + β₈ ROA_{it-1} + ε_{it}

Independent variables

Disclosure quality: in the present study disclosure quality would be calculated as by Reeb & Zhao (2013):

$$\ln \left| \frac{P_t - P_{t-1}}{P_{t-1}} \right| = \beta_0 + \beta_1 (VOL_t - AVGVOL) + \varepsilon_t$$

P = final price of daily share

VOL = volume of daily exchanges

AGVOL = the average volume of daily exchanges during 6 recent months

After balancing the regression equation for each company, an estimation coefficient of β_1 is considered as the criterion for disclosure quality.

Control variables: regarding Ray Dick & Witted model (2009) and Chang & et al (2012), these five variables were considered as control variables.

RET_VOL = return on stock fluctuation calculated through standard deviation of daily stock return during the year

EARN_VOL = earning fluctuation calculated through earning's standard deviation of the firm during the year.

MTB = the ratio of market value to book value of owner's equity.

Beat = the index for systematic risk calculated through capital assets' pricing (CAPM)

Log asset = firm size calculated through logarithm of total firm assets

Leverage = the leverage ratio calculated through the ratio of liabilities to assets is calculated

ROA = return on assets that can be gained through net profit ratio to net assets.

Data analysis

The following table has shown the results of descriptive test of 1193 year-firms for research variables.

Table (1): Results of descriptive statistics

Variable	Kurtosis	Skewness	Std. Dev	Minimum	Maximum	Mean
INDINVEST	2.062	-0.129	0.078	0.019	0.337	0.171
FRQ1	1.96	-0.028	0.026	-0.001	0.093	0.045
FRQ2	2.092	-0.01	0.014	0.000	0.06	0.026
DQ	2.992	0.722	0.366	-0.024	1.758	0.529
RET_VOL	2.052	-0.045	0.346	1.019	2.308	1.67
EARN_VOL	2.057	0.013	0.592	2.025	4.308	3.166
MTB	1.986	0.046	4.167	4.05	19.296	11.598
BETA	2.156	-0.025	1.528	1.01	8.69	4.53
SIZE	4.659	0.915	1.356	9.821	19.618	13.041
LEV	12.682	2.096	0.104	0.000	0.982	0.141
ROA	4.913	0.157	0.118	-0.224	0.63	0.090

Regarding the descriptive statistics, we can divide the indexes above into central tendency, dispersion, and other indexes. The central tendencies are mean, and mode. The dispersion indexes are criterion deviation error index and other indexes were least, most, skewness, and pulled. The results of normality test were as follows:

Table (2): Results of Normality changes

Variable	Asymp (sig)	K
INDINVEST	0.113	1.108
FRQ1	0.107	1.167
FRQ2	0.054	1.344
DQ	0.000	2.358
RET_VOL	0.053	1.349
EARN_VOL	0.056	1.337
MTB	0.014	1.576
BETA	0.033	1.434
SIZE	0.000	2.540
LEV	0.000	3.230
ROA	0.000	2.836

Results of K-S test showed that the dependent variables follow normal distribution and accordingly we have used parametric statistical methods.

In this article we have used consistence test of Dickey-Fuller and adjusted Dickey-Fuller. Results of this test have been presented in table (3).

Table (3): Results of Dickey-Fuller test resource

Variable	Prob	t-Statistic	Lag Length
INDINVEST	0.000	-36.373	0
FRQ1	0.000	-34.210	0
FRQ2	0.000	-33.982	0
DQ	0.000	-34.951	0
RET_VOL	0.000	-35.703	0
EARN_VOL	0.000	-34.020	0
MTB	0.000	-35.192	0
BETA	0.000	-33.274	0
SIZE	0.000	-29.733	0
LEV	0.000	-33.399	0
ROA	0.000	-29.494	0

Regarding the results represented in table above, all research variables have consistency in an assurance level of %95. Next we will deal with testing hypotheses:

Table (4): Results of testing hypotheses

Variable	DQ		FRQ2		FRQ1	
	Prob	Coefficient	Prob	Coefficient	Prob	Coefficient
INDINVEST	0.000	0.004	0.000	0.692	0.708	0.034
RET_VOL	0.945	0.0004	0.921	-0.0006	0.936	0.0005
EARN_VOL	0.862	-0.0006	0.923	-0.0003	0.853	-0.0007
MTB	0.873	-0.0001	0.932	5.030	0.875	9.533
BETA	0.002	-0.005	0.003	-0.004	0.002	-0.005
SIZE	0.284	0.001	0.300	0.001	0.292	0.001
LEV	0.627	-0.011	0.587	-0.012	0.625	-0.011
ROA	0.009	0.054	0.007	0.056	0.009	0.054
C	0.000	0.168	0.0000	0.150	0.000	0.166
R-squared	0.118		0.133		0.018	
Adjusted R-squared	0.111		0.127		0.011	
Durbin-Watson	2.109		2.098		2.108	
F	Prob. 0.000	12.883	Prob. 0.000	15.151	Prob. 0.004	2.777
Godfrey	Prob. 0.155	1.864	Prob. 0.218	1.524	Prob. 0.159	1.841
F-white	Prob. 0.000	3.793	Prob. 0.000	3.648	Prob. 0.000	4.103
F-limer	Prob. 0.863	0.378	Prob. 0.842	0.409	Prob. 0.863	0.379

Regarding results of testing research hypotheses represented in table (4), the meaningfulness level of F-Limer statistic has been more than acceptable error level (%5), thus pooled data method has had a priority to panel data method. Then, the meaningfulness level of F-White statistic has also been less than 0.05 and this showed that the regression has had variance divergence. Therefore, after removing standard error and variance divergence, the regression was balanced and finally the meaningfulness level of Godfrey statistic was higher than 0.05. Therefore, the regression did not have serial self-correlation problem. In next stage and regarding that F statistic has had a meaningfulness level of below %5, the regression has had identification power. Durbin-Watson statistic has also been between 1.5 and 2.5. Thus, we can conclude that there has not been self-correlation problem among variables.

In first stage and since the meaningfulness level of financial reporting quality based on unusual accruals (independent variable) has been more than %5, it can be said that financial reporting quality based on unusual accruals did not have any effect on ownership percentage of individual investors. Also the control variables of systematic risk and return on assets' rate have had negative and positive effects on ownership percentage of individual investors, respectively. Additionally, the amount of identification coefficient showed that changes in independent and control variables represented %1.8 of change in dependent variable. Results and findings of this hypothesis contradict with those in a research by Lawrence (2013).

In second stage, since the meaningfulness level of financial reporting quality based on accruals' quality (independent variable) has been less than %5. Therefore, we can say that financial reporting quality based on accruals' quality has had a positive and meaningful effect on ownership percentage of individual investors. Also the control variables of systematic risk and return on assets' rate have had negative and positive effects on

ownership percentage of individual investors, respectively. Additionally, the amount of identification coefficient showed that changes in independent and control variables represented %13.3 of change in dependent variable. Results and findings of this hypothesis were similar to those in a research by Lawrence (2013) and Khodae & Yahyae (2010).

In third stage, we can say that disclosure quality has had a positive and meaningful effect on ownership percentage of individual investors. Also the control variables of systematic risk and return on assets' rate have had negative and positive effects on ownership percentage of individual investors, respectively. Additionally, the amount of identification coefficient showed that changes in independent and control variables represented %11.8 of change in dependent variable. Results and findings of this hypothesis were similar to those in a research by Lawrence (2013) and Khodae & Yahyae (2010).

Conclusions and suggestions

The goal of doing the present study was to investigate about the effect of financial reporting quality and disclosure on ownership percentage of individual investors in Tehran Stock Exchange. The research hypotheses were studied in isolation. Research findings showed that financial reporting quality based on unusual accruals did not have any meaningful effect on ownership percentage of individual investors. But financial reporting quality based on accruals and disclosure quality has had a positive and meaningful effect on ownership percentage of individual investors. Regarding the analysis of the results from the research we can say that financial reporting quality based on accruals and disclosure quality can increase individual investors for at least two reasons: 1) it leads to reduce information asymmetry between firm and shareholders and even leads to reduce difference of information between the shareholders. Thus this can finally lead to important economic outcomes such as increasing liquidity, reducing capital cost, and increasing firm's growth. 2) we can analyze this result regarding an employer's point of view where financial accounting information in stock market plays the role of a supervisor as an important source of certain information in the company. Thus, if financial reporting quality and disclosure quality can reduce employment problems, it can also increase investment efficiency and this improves the capability of shareholders to supervise managers and then improve project selection and reduce financing costs. But, regarding the rejection of the hypothesis result of the effect of financial reporting quality based on unusual accruals on ownership percentage of individual investors, we can say that probably the investors do not have the ability to analyze financial statements based on unusual accruals and accordingly they do not react to it.

Regarding the results of the research, it can be suggested to the investors to pay attention to financial reporting quality based on accruals and firm's disclosure rank when they make decisions for investment. Because the goal of managers is to absorb the trust of firm owners, they should consider that increasing financial reporting quality based on accruals and disclosure quality result in increasing the trust of owners, profitability for the economic unit, and finally reduce controversies. It can be suggested to bourse organization to devise rules and regulations to enable firms to have a strong control structure to lead to increase financial reporting quality and disclosure quality.

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