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The impact of administration efficiency on financial reporting quality (FRQ) in small sized companies listed in the Tehran Stock Exchange: Evidence from Iran

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In this study, the effect of administration efficiency (AE) on financial reporting quality (FRQ) in small size companies listed in Tehran Stock Exchanges (TSE) has been surveyed in order to evaluate financial reporting quality used from the expected cash flow from operations. To this end, we chose 80 firms (as example) from companies listed in Tehran Stock Exchanges during the period 2001 to 2008. To test the hypothesis, correlation analysis, homogeneity of variance, and independence of Residual, scatter and NORMAL P-P diagrams have been used. This inductive research is based on real information of the audited financial statements. The results show that the impact of AE on FRQ in the small size companies is little.

Key words: Efficiency, firm size, quality of reporting, corporate governance, AE, TSE.

INTRODUCTION

Capital market circulates based on information. In this market, correct stream of information led to correct and logical decision making by participants and also to economic development and improvement of social welfare (Badavar Nahandy, 2008). Such information helps government in policy making and planning in economic affairs and administration of operations of business units while providing field of work activities and effectiveness of capital markets. When the information is relevant for economic decisions, the firm and the economy move towards efficiency and optimality. This will be created only when the information is useful for predicting the future and controlling economic activities, and when managers of commercial units give information to the users timely.

On the other hand, users can rely on information of financial reports when they are accurate and impartial in representation of events and can be substantiated. The general purpose of financial reporting is to provide information that expresses financial effects and operations and financial events affecting the financial condition and

the results of operations of a business unit and through it help internal and external users, investors in decision making and judgment. Consequently, FRQ is important. So it is natural that the factors influencing the quality of financial reporting be examined. One of these factors is management. It is one of the components of corporate governance whose efficiency (or non efficiency) can be investigated. In fact, management is a category that should be considered for growth and excellence culturally, economically, industrially and politically in society. Today, due to the globalization of economy, particularly globalization of capital markets and new technologies entering the field of telecommunications, and in comparison with the past, remarkably we see that the role of managers and the efficiency of their management have been different.

Also our country is trying to attract international capital with development of capital market and is preparing for globalization.

The indicators measuring the firm size

Size is a criterion used for the diagnosis of large or small company. It is identified by several indicators, including

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assets value, sales, market value of shares and number of shares. The research measures the size of company from different aspects as follows:

- i. Leftwich (1981) says that firm size may be a general variable. Firm size can be proxy of company leverage. Operational leverage relies on fixed costs of operating companies (all fixed costs except interest and liabilities) and financial leverage relies on financial fixed costs of companies. Operational and financial leverage can be instrument for achieving higher profits.
- ii. Firth (1979) expressed that firm size can be proxy of competitive superiority.
- iii. Belkqoi (1978) expressed that it can be proxy of management ability and quality of accounting plans. Development of firm size is indicator of strong management.
- iv. Butter and Nilan (1949) said that it can be an indicator of information efficiency. Larger companies usually have more attention from analysts and investors.
- v. Moses (1978) expressed that firm size can be proxy of company overall risk. Higher financial power can reduce overall risk in larger companies (Pahlevan, 2007) and so on.

Indicators measuring the quality of financial reporting

Many studies have been performed in this field. This research measures the quality of financial reporting from different aspects as follows:

Dechow and Dichev model (2002)

$$TCA_{it} = \theta_0 + \theta_1 CFO_{it-1} + \theta_2 CFO_{it} + \theta_3 CFO_{it+1} + V_{it}$$

This model is used to measure earnings quality measurement that deviated from operational accruals current year estimates.

Francis et al. model (2005)

$$TCA_{it} = \theta_0 + \theta_1 CFO_{it-1} + \theta_2 CFO_{it} + \theta_3 CFO_{it+1} + \theta_4 \Delta RE_{it} + \theta_5 PPE_{it} + V_{it}$$

Francis et al. (2005) developed the models, and expressed that with controlling earnings, growth and property, and equipment rate of machine tools can improve the model.

Bharath et al. model (2001)

$$CFO_{i,t+1} = \alpha_0 + \beta_1 CFO_{i,t} + \beta_2 \Delta AR_{i,t} + \beta_3 \Delta INV_{i,t} + \beta_4 \Delta AP_{i,t} + \beta_5 DEPR_{i,t} + \beta_6 OTHER_{i,t} + \varepsilon_{i,t+1}$$

Accuracy of financial information is considered as a criterion for measuring quality and the capability of

forecasting the expected cash flows from operating income accounting component. We used this model in this paper.

Zmijewski and Stone model (1989)

Using these criteria, we assess the quality of earnings subject to the stock market response to earnings information.

Leuz et al. model (2003)

$$\text{Accruals} = \Delta(\text{Accounts Receivable} + \text{Inventory} + \text{Other Current Assets}) - \Delta(\text{Accounts Payable} + \text{Other Current Liabilities}) - \text{Depreciation}$$

Other models include Hand (1984), Collins (1989), Kormandi and Lipe (1990) and Leuze and Zarowin (1996). These models measure the quality of financial reporting based on time series of profit feature.

Different approaches to evaluate the quality of financial reporting

Different approaches exist for evaluating quality of financial reporting quality. These approaches can be divided into two groups: 1) user needs approach; 2) approach to protecting investors / shareholders.

One approach focuses on relevant issues of evaluation. In this group, the quality of financial reporting is determined based on the usefulness of financial information for users. This approach contains the following models:

- i. FASB conceptual framework
- ii. Profit continuation model
- iii. Suggestion of Jenkins Committee.

Second approach lays emphasis on relevant issues of company administration and stewardship. This approach contains the following models:

- i. SAS No. 61 (revised)
- ii. SEC Model
- iii. Suggestion of Committee Kirk
- iv. Suggestion of Blue Ribbon Committee

LITERATURE REVIEW

Today, business operations and financial position reporting influence directly or indirectly the individual's decisions, which is very important. In fact, financial reports provide a picture of how the company is run and

can also be a way to monitor business unit and its activities from the perspective of management and the board. External financial reporting should be able to present such a view to individuals (shareholders, creditors and...)

As we know, the accuracy of the financial information increases the quality, for example, relevance and reliability comparability. So, stakeholder such as investors and creditors can make better decisions based on qualified financial reporting information.

Many researches have been done in the context of financial reporting quality and each selected a criterion for evaluating the quality of financial reporting. Some of such researches have considered the quality of profit (Shoorvarzy, 2008) and some accruals (Talebian, 2008; Bharath, 2006; Francis and Shipper, 2005).

Financial reports are an important source of information for stakeholders, who use them for investing, contracting, and regulating decisions. Low quality reporting can lead to suboptimal decisions and potential misallocation of resources (Yatman, 2008). So, financial reporting quality is important.

Rather than defining "quality of financial reporting," prior literature has focused on factors such as earnings management, financial restatements, and fraud that clearly inhibit the attainment of high quality financial reports and have used the presence of these factors as evidence of a breakdown in the financial reporting process.

Based on the literature, we can divide two altitudes toward earnings quality; decision usefulness and Hicksian attitude toward earnings definition. Based on the first view different users should assess the quality of earnings before making decisions. On the other hand "quality for whom" and the "quality for what" is the main subject in the first view.

But in the second view earnings quality is assessed by comparing earnings and Hicksian definition for earnings. As much as the definition matches the Hicksian, it is assumed that quality of earnings is higher than before (Schipper and Vincent, 2003).

Management efficiency, defined as the management's capability of minimizing input usage in the production of output (or vice versa), was determined relative to this efficient (Best practice) frontier (Hahn, 2008).

Also, the management efficiency is manager's ability in managing its limited resources in order to achieve company's goals (Badavar Nahandy, 2008).

Domestic evidence

Based on domestic studies, Pahlevan (2007) studied the relationship between size firm and income smoothing. The findings of this study showed there is significant direct relationship between two variables. Also large size companies smoothed their profits more than the smaller

companies.

Fadayinejad (2004) found evidences that cannot predict profitability with attention to size firm. Zalghi (1996) studied the relationship between financial reporting quality and number of qualified accountants in companies listed in Tehran Stock Exchange.

Result indicated that there is a significant relationship between financial reporting quality and number of qualified accountants.

Badavar Nahandy (2008) has identified and evaluated quality of financial reporting in Iran. Results showed that the quality of financial reporting is positively related with management efficiency and company's profitability and it is negatively related with competition in product market, management conservative, size, capital of the activity, operating cycle of activity and environmental complexity of companies.

Ahmadpour and Ahmadi (2008) and also Shoorvarzy (2008) found evidences that earnings response coefficient is higher in higher earnings quality portfolios established based on qualitative characteristics of financial statements. Talebian (2008) found evidences that cost of capital (cost of debt and equity costs) in companies with lower quality accruals is higher than cost of capital companies with high quality accruals.

Musavishiry (1999) has shown that audit report is influential in enhancing the quality of reporting. Tuzandehjani and Shoorvarzy (2010) studied the relationship between management performance and financial reporting quality in companies listed in Tehran Stock Exchange. Result indicated that there is a significant relationship between these two variables.

International evidence

The following researches cover a part of present research: research results conducted by Gloston and Milgrom (1985), Amihud and Mandelson (1986), Diamond and Verrchicca (1991), show that increasing the quality of financial information reduces information asymmetry and thus, reduces the cost of equity. Welker (1995) and Healy et al.'s (1999) show that the quality of financial reporting has direct relation with advantages of proper evaluation of capital markets. The investigation conducted by Haley, Palepu and Hatton (1999) indicated that improving the quality of financial reporting increases stock performance (Badavar Nahandy 2008).

Cohen (2002) did a study entitled "The quality of financial reporting and cost assets". In this study the ability of forecasting the expected cash flow has been used as proxy. Results of this study indicate negative relationship between these two variables. In another research, Cohen (2003) found that the reporting quality choice is positively associated with capital markets benefits and negatively associated with proprietary cost proxies. Francis (2004, 2005) seeks to provide evidence

consistent with the pricing effects of information quality and claims that accrual quality is a systematic priced risk factor. The evidence documented in Francis suggests that information seems to affect the cost of capital. Verdi (2006) studies the relation between financial reporting quality and investment efficiency. He has shown that financial reporting quality has economic consequences such as increased liquidity, lower costs of capital, and higher firm growth.

Biddle et al (2009) found that higher financial reporting quality is associated with higher investment among firms that are cash constrained and highly levered; and lower investment among firms that are rich in cash and unlevered. In addition, firms with high financial reporting quality invest less when aggregate investment is high, and invest more when aggregate investment level is low.

DATA AND METHODOLOGY

This study is inductive and makes use of past information and historical financial statements. This experimental research is based on real information of the audited financial statements. This study is also a correlative study since it seeks to investigate the relation between dependent and independent factors. It is a periodic study because it studies a specific period of time and it can be an applied research. In order to gather theoretical information, library research was selected and the books in the libraries together with articles found in internet were used. In order to determine firms' size, the logarithm value of total assets on the basis of ten was used. To separate firms based on size, average was used.

The study uses an inductive research that describes the events in Tehran Stock Exchange (TSE) and investigates the correlation of variable by regression analysis. The TSE listed companies were chosen as a population and then some samples were selected based on the following conditions:

- 1- The entities should be listed before 2000.
- 2- Date of financial firms should be at the end of March of each year.
- 3-The entities should be activated during 2001-2008.
- 4-The entities should not change their financial periods.
- 5 - The availability of entities' information is required.
- 6-The entities' activity should be manufacturing (no investment)

Based on these conditions, 80 companies qualified and were chosen as the samples in this study. Among the 80 firms, rest along 42 firms with small size.

Data analysis

As we wanted to investigate the effect of administration efficiency on financial reporting quality (FRQ), H_0 and H_1 contain:

- H_0 : In small size firms, Administration Efficiency has no influence on QRP.
 H_1 : in small size firms, Administration Efficiency has influence on QRP.

The study uses the following multiple regressions to calculate financial reporting quality:

$$CFO_{i,t+1} = \alpha_0 + \beta_1 CFO_{i,t} + \beta_2 \Delta AR_{i,t} + \beta_3 \Delta INV_{i,t} + \beta_4 \Delta AP_{i,t} + \beta_5 DEPR_{i,t} + \beta_6 OTHER_{i,t} + \varepsilon_{i,t+1} \quad (1)$$

Where: $CFO_{i,t}$: Cash flow from operations for firm i at year t ; $\Delta AR_{i,t}$: Change in accounts receivable account per the statement of cash flows firm i at year t ; $\Delta INV_{i,t}$: Change in inventory account per the statement of cash flow; $\Delta AP_{i,t}$: Change in accounts payable and accrued liabilities account per the statement of cash flows; $DEPR_{i,t}$: Depreciation and Amortization Expense; $OTHER_{i,t}$: Net of all other accruals, calculated as: $OP_{i,t} - (CFO_{i,t} + \Delta AR_{i,t} + \Delta INV_{i,t} - \Delta AP_{i,t} - DEPR_{i,t})$; $OP_{i,t}$: Operating income; $\varepsilon_{i,t+1}$: Error term assumed to have zero mean and constant variance.

All variables are deflated by average total assets. To measure the level of precision empirically, we focus on the residuals obtained from top regression of future operating cash flows on previous period earnings components.

Based on an accrual reporting system, the model estimated in Equation (1) suggests that future operating cash flows are predicted by current disaggregated earnings. The evidence presented in Barth et al. (2001) emphasizes the importance of disaggregating accruals, given the different information each major accrual reflects about future cash flows.

By focusing on aggregate earnings rather than on the specification identified in Equation (1), one places the same weight on each earnings component, and may disregard any information relevant to predicting future cash flows.

The study focuses on the residuals obtained from estimating Equation (1).

The empirical measure of reporting quality is the absolute value of these residuals: $RES = |e_{i,t+1}|$. These residuals reflect the magnitude of future operating cash flows unrelated to current disaggregated earnings.

In the empirical analysis that follows, we interpret lower absolute value as representing a higher quality of financial reporting, which corresponds to a higher level of cash flow predictability.

Also administration efficiency calculated by the following model:

$$MAEF_{i,t} = [SALE_{i,t} / (COGS_{i,t} + SG\&A_{i,t} + DEPR_{i,t} + R\&D_{i,t})]$$

Where: $SALE_{i,t}$: sales revenue company i in year t ; $COGS_{i,t}$: cost the company i in year t ; $SG\&A_{i,t}$: general costs, administrative and sales costs company i in year t ; $DEPR_{i,t}$: Depreciation and Amortization Expense company i in year t ; $R\&D_{i,t}$: research and development expenses in the company i in year t . (BadavarNahandy,2008).

RESULTS AND FINDINGS

In order to analyze the hypothesis, dependent and independent variables were studied and measured at first. Then, the ability of each independent variable in explaining QRP was analyzed. (in regression model). To do this, in order to correlation analyze between AE and FRQ Pierson's model were used.

Testing hypothesis

"In small size firms, Administration Efficiency is influential on QRP".

Table 1 shows that coefficient of determination between dependent variable (FRQ) and independent variable is equal to 0.935. It means that approximately 93.5% of changes in quality of financial reporting are explained by independent variables. We reported the ANOVA in Table 2.

Table 1. Regression statistics.

Durbin Watson	Standard error	Adj. R ²	R ²	R
1.86	5929.1461	0.851	0.874	0.935

Table 2. ANOVA.

Model	Sum of squares	df	Mean square	F	Sig.
Regression	7836515729.3	6	1306085955	37.152	0.000
Residual	1124952740.5	32	35154773.14		
Total	8961468469.83	38			

Table 3. The estimation of coefficients.

Coefficient	Estimation	Standard error	T-value	P-value
Constant	-650.768	2246.212	-2.290	0.774
CFO _{i,t}	0.994	0.087	11.443	0.000
AR _{i,t}	-0.275	0.128	4.567	0.039
INV _{i,t}	0.124	0.151	-0.247	0.417
AP _{i,t}	0.23	0.174	0.822	0.197
DEPRO _{i,t}	0.656	0.496	1.319	0.195
OTHER _{i,t}	-0.535	0.125	-4.264	0.000

1% of the significant level.

Table 4. Kolmogorov-Smirnov test.

Un-standard residual	Statistics
Number of observations	39
Standard deviation	544095
Kolmogorov-Smirnov Z	0.544
P- value	0.939

The sig. is equal to 0, which is less than 0.01. It means that the lack of correlation between dependent variable and independent variables is rejected (with 99% certainty). Subsequently, we reported the coefficients in Table 3. According to the table, Regression model fitted into the data:

$$CFO_{t+1} = -650.768 + 0.994CFO_t - 0.275\Delta AR_t - 0.535 OTHER_t$$

Survey assumptions of linear regression model

In Table 4, the data can be accepted as normal according to Kolmogorov-Smirnov test > 0.05. Based on Figure 1, the data can be accepted as normal. Also based on runs test > 0.05, the independency of residuals in Table 5 is accepted.

Also in the residual statistic of this model, it is shown

that there are no remote observations (Table 6 and Figure 2). Additionally, based on 3 >residuals statistics test > -3, we accept that there are no remote observations.

Correlation analysis

According to Table 7, in order to test the connection between variables in the hypothesis Pearson correlation coefficients were used. The correlation coefficient between administration efficiency and quality of financial reporting is equal to 0.169 and the probability value is equal to 0.304 that is higher than 0.05.

So we are 95% certainty there are no correlation between variables. In other words, the impact of AE on FRQ in the small size companies is little small size companies is little. It means that hypothesis (H₁) is not confirmed.

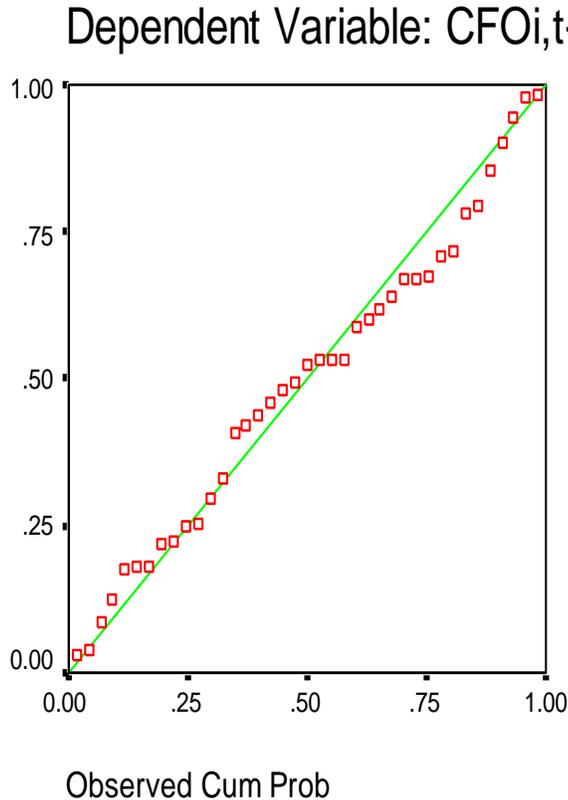


Figure 1. Normal p-p plot of regression standardized residual.

Table 5. Run test.

Un-standard residuals	Statistics
T -value	0
z	0.654
P- value	0.513

Table 6. Residuals statistics.

Statistics	Minimum	Maximum	Mean	Std. deviation
Predicted value	-6931.38	55817.64	149437	14360.50
Residual	-11325.5	12422.55	0	5440.9576
Std. predicted value	-1.982	2.388	0	1.000
Std. residual	-1.91	2.095	0	0.918

DISCUSSION AND CONCLUSION

This study indicates that the impact of AE on FRQ in the small size companies is little. The expected operating cash flow has been used for evaluating the quality of financial reporting.

The research is carried out on 80 companies accepted

in Tehran's stock market in a Seven-year period (2001 to 2008), and the coefficient of determination of 93% showed that 0.93% of changes in quality of financial reporting are explained by independent variables (in regression model).

Also in Pearson correlation, p-value is higher than 0.05. So 95% certainly there aren't correlation between AE and

Table 7. Correlation analysis.

Variable		QRP	Efficiency management
QRP	Correlation analysis	1	0.169
	P-value		0.304
	number	39	39
Efficiency administration	Correlation analysis	0.169	1
	P-value	0.304	
	number	39	39

Table 8. Summary of the result of test of hypothesis.

Testing hypothesis	Dependent variable	Independent variable	Regression model	Model's coefficient determination	Modified coefficient determination	Null hypothesis
1	QFR	AE	$CFO_{t+1} = -650.768 + 0.994CFO_t - 0.275 \Delta AR_t - 0.535 OTHER_t$	0.935	0.93	Confirmed

Scatterplot

Dependent Variable: CFO_{i,t+1}

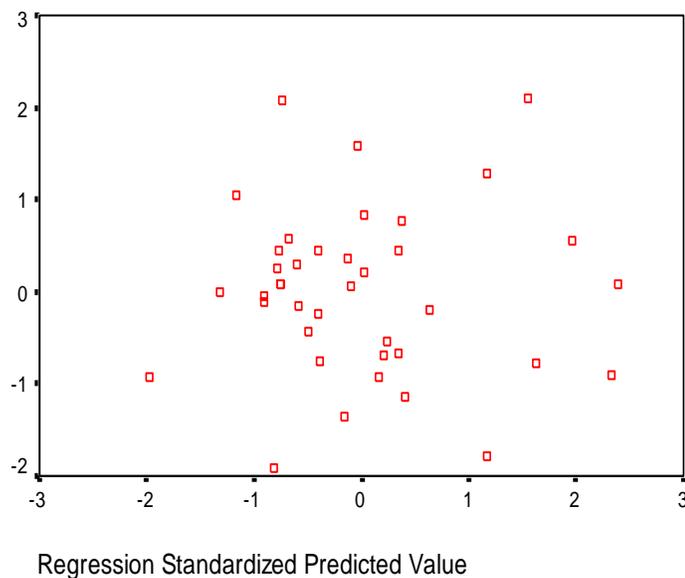


Figure 2. Scattering of standardized residuals against standardized predictions.

FRQ. Also, this test method was performed for large-sized companies but result was reverse. In the large-sized companies, AE influenced quality of financial reporting and the relationship was positive. Nonetheless, we reported the summary of the result of test of hypothesis in

Table 8.

These results indicated that in the Tehran Stock Exchange markets, administration efficiency is not important factor in increasing the quality of financial reporting. And the impact of AE on FRQ in the firms with

small size is little.

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