



Intermediary Effect of Income Smoothing on the Relationship between the Non-Financial Characteristics and Reporting Quality of Listed Companies in Tehran Stock Exchange

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Abstract: The aim of this study is to investigate the intermediary effect of income smoothing on the relationship between the non-financial characteristics and reporting quality of listed companies in Tehran Stock Exchange. Research methodology in terms of purpose is an applied research and in terms of method is a correlational one. The study population included 203 accepted companies in Tehran Stock Exchange during an 8-year period from 2004 to 2011. In this study to analyze the collected data regression analysis, descriptive statistics, inferential statistics, tables drawing and also Eviews software and Excel software have been used. The results of the research show that, comparing the two types of income smoothing company and non- income smoothing company, the relationship between non-financial characteristics including directors reward, firm size and financial leverage, with the exception of the volume of transactions, the structure of the Board of Directors and debts contract, and the quality of financial reporting in both companies is significant.

Key words: Non-Financial Characteristics, Quality of Financial Reporting, Income Smoothing, Stock Exchange

INTRODUCTION

Capital market as the engine of the country economy works based on the information. Accurate information flow in the market leads to making correct and rational decisions by the participants. Ultimately, it will bring economic development and social welfare¹.

Accounting information is one of the most important sources of information through which financial data processing is provided on an information system. The financial report is one of the most important products of the accounting system that one of its major goals is providing necessary information for assessing performance and making economic decisions. The financial report provides major part of the information needed for capital market. Like all other goods that must meet required quality for consumers, accounting information, as a product, must be of sufficient quality, to be used by users. Based on the theoretical framework of financial reporting, financial information must be relevant, reliable, comparable and understandable to be useful to users².

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Today accounting information systems play an important role in organizations activities circulation and have an essential responsibility in the collection of countries economic environment. Many of the economic decisions are based on information from these systems. A major share of stock exchanges is allocated to the companies' stock purchase and sell that in turn can be affected by accounting figures and information. Any research on the impact of accounting information on a wide range of beneficiary decision-makers incorporates help better understand the role of this kind of information and the need to disclose it more and better. Shareholders and creditors are two main groups who are using financial information and providing relevant and reliable data for these two groups is the main concern of the management and accounting information systems. Therefore, considering the quality of information provided for these two groups is essential³.

In this paper, by a new insight to the quality of corporates financial reporting, the new non-financial factors affecting the quality of financial reporting in smoothing and non-smoothing companies in Iran's capital market are taken into consideration.

From the standpoint of accounting theory, the phenomenon of income smoothing is a considerable issue in the behavioral approach. Moreover, in practice, accountants, auditors and financial analysts in the financial reporting process, which earnings reporting is one of the most important components of it, have confronted some forms of this phenomenon and its consequences. Understanding the different aspects of income smoothing behavior will be helpful in order to identify the characteristics and limitations of accounting earnings. If possible, by providing a theoretical framework for this phenomenon, which seems to have not been achieved so far, it is likely to be able to reach an improvement in qualitative field of earnings reporting.

A major contribution of the research and theoretical studies on the subject of income smoothing belongs to developed countries. Therefore, given the substantial differences in environmental macro factors such as economic and culture, development of this research in developing countries might be effective in the completion of this phenomenon research literature. In addition, it seems that the results of these studies from the financing view point provide some necessary areas for capital market efficiency in the desired economic environment. This study investigates the intermediary effect of income smoothing on the relationship between the non-financial characteristics and reporting quality of listed companies in Tehran Stock Exchange.

LITERATURE

According to research subject some past researches related to the present research will be mentioned in this section:

Income smoothing

Francesco Puda has studied the relationship between long-term abnormal returns and income smoothing in the Spanish stock exchange in 2009.

The results indicate that there is a phenomenon of income smoothing in the Spanish stock exchange. Also it has been identified that income smoother corporates have benefited shareholders by more returns than the companies that are not trying to smooth income⁴.

The results of this study indicate that large companies have less risk than smaller companies.

Belkaoui and Picur dividing the companies into two categories of central and peripheral industries, tested the hypothesis that companies of central industries relative to companies of peripheral industries show less degree of smoothing.

Their hypotheses test result showed that companies of peripheral industries face more limited opportunities and a high degree of uncertainty. So they are more prepared and have more opportunities than companies of central industries to smooth their income flow.

Analysis conducted by Michelson and Wenger in America economic environment has been an investigation on the relationship between income smoothing and firms' returns. These Researchers have assumed that the market reaction to income smoother companies is positive. They have selected 358 companies among Sandep index companies and based on ECKLE index separated four levels of earnings into smoother and non-smoother. Using t-test, they have compared the abnormal returns average of the companies. They also have studied the effect of variables such as type of industry, firm size on the achievement of abnormal returns. To examine the effect of industry type they have categorized the enterprises into eight groups and using the F-test the following results have been achieved. There is income smoothing between the sample companies and smoother companies have had more abnormal returns than non-smoother companies⁵.

Ashari et al., on a study entitled "factors affecting income smoothing in listed companies on the Stock Exchange of Singapore" have examined factors associated with income smoothing. Their research included four hypotheses that tested the effect of size, profitability, industry and nationality variables on income smoothing. Ashari et al., initially using ECKLE Index, have divided the companies into two groups of smoothers and non-smoothers and confirmed the smoothing existence. Hypotheses test results show that firms with low profitability attempts to smooth income more and also industry has been effective on income smoothing and companies with higher risk (high-risk industries) are more likely to smooth income. Moreover, the results showed that the nationality is effective on income smoothing, but the firm size does not affect the smoothing.

The most comprehensive research in the field of smoothing that has been conducted in Iran is a study entitled "identifying factors affecting income smoothing by Badri under the title of the thesis to obtain a doctoral degree in accounting at Tehran University. Badri on his study has selected 139 companies

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among listed companies in Tehran Stock Exchange, as the sample and they were studied from 1990 to 1996.

To identify the effective factors on income smoothing phenomenon in this study, firstly using ECKLE index, the sample companies are divided into two groups: smoothing and non-smoothing. Three income levels are evaluated to divide companies into smoothers and non-smoothers. Companies that are smoothers at least in one of three levels (gross income, operating income, net income) have been classified as smoother companies group. At the end among the sample companies, 32 companies are in gross income level, 22 companies are in operating income level, 22 companies are in net income level and totally 42 companies are at least in one of the three levels of smoothing and 42 companies are smoothers and the rest are considered as non-smoothers. Based on this classification the main hypotheses have been examined. The results of the hypotheses of this study show that the firm size factor, profitability factor, industry type, property type, firm type factor in terms of including or not including product pricing provisions have not been identified as the affective factors in the income smoothing. The results obtained in Badri's study is quite different from the results of studies conducted in other countries, especially in the U.S . In studies conducted in other countries the profitability ratio is recognized as one of the affecting factors in income smoothing and it is concluded that income smoothing is more common in the companies with low degree of profitability and companies often use this behavior as a shield¹.

Quality of Financial Reporting

Jensen and Meyer in 1986 during an investigation on the quality of financial reporting concluded that the quality of financial reporting have an impact on the characteristics of the company, including financial leverage, investment, audit quality and financial structure^{3,6}.

Rajgopal and Venkatachalam, in their study have examined the impact of financial reporting quality on return volatility and trading volume. In this study, they used the level of discretionary accruals and accruals quality as indicators of the quality of financial reporting. Their research findings show that there is a significant inverse relationship between the quality of financial reporting and stock return volatility and there is a direct significant relationship between quality of financial reporting and trading volume⁷.

Research hypotheses

The main hypothesis of the research: the relationship between the non-financial characteristics and financial reporting quality in smoother and non-smoother companies are different .

1: There is a relationship between the non-financial characteristics and financial reporting quality in smoother companies .

2: There is a relationship between the non-financial characteristics and financial reporting quality in non-smoother companies.

MATEREALS AND METHOD

The present study is a PAT research and in terms of goal it is an applied one that empirically examined the relationship between non-financial characteristics and financial reporting quality. This research is a correlational study in terms of method.

The research population consisted of listed companies in Tehran Stock Exchange. Quality of information and access to financial statement information and other information such as companies' stock prices are reasons for selecting this population. Considering the nature of the study variables, conditions for sample selection were as follows: the company must be accepted at Tehran Stock Exchange before the end of March 2006, the desired company must not be bad and due to the consistency of reporting date and removing seasonal effects, its fiscal period is the end of the solar calendar year. After applying the above conditions, a sample of over 230 member companies of exchange has been selected and the information has been prepared.

Research statistical model

To estimate the regression model and test the research hypotheses the ordinary least squares regression (OLS) is used. Also, to perform statistical tests such as correlation, t, coefficient of determination Eviews software will be used. The regression models to examine the relationship between independent and dependent variables of the study have been developed in the form of the following multivariate model:

Model (1)

$$Q.R = \beta_0 + \beta_1 V.T + \beta_2 Ma.R + \beta_3 Bo.St + \beta_4 Debt.Co + \beta_5 Size + \beta_6 F.Lev + \epsilon_i$$

Where

Q.R = quality of financial reporting

V.T = volume of trading

Ma.R = Board reward

Bo.St = Board structure

Debt.Co = debt contracts

Size = firm size

F.Lev = financial leverage

ϵ_i = the error component

RESULTS

To achieve the research aim that is to investigate the relationship between non-financial characteristics and financial reporting quality in smoother companies and non-smoother companies at Tehran Stock Exchange, the results are obtained as follows:

Hypothesis (1-1)

Hypothesis (1-1) of the study examines the non-financial characteristics and financial reporting quality in the smoother companies. Following the regression assumptions testing and ensuring their establishment, the results of the fit of the above regression equation for smoother companies are presented in table 1. The F-statistic (21.747) also suggests the overall regression model significance.

As it is specified at table [1] underneath the, the coefficient of determination and the adjusted coefficient of determination of the model are respectively 47.8%, and 42.9%. Thus, we can conclude that in the mentioned regression equation, only about 42.9% of financial reporting quality variations of surveyed companies are explained by the independent and the control variables.

In this table, the positive (negative) numbers at coefficient amount column represents the direct (reverse) effect of each variable on the quality of companies financial reporting.

Test result: if the sig value calculated by the software is less than the intended error level (in this study 10%), the significance of the desired variable is approved and the related hypothesis is confirmed. Also given the t statistic value, if this statistics is higher its equivalent amount in t-student table with the same level of error (10%), its related hypothesis is confirmed. According to the above description and the data of table [1], we can say that in the above equation all variables are significant at the 90% confidence level. Therefore, the estimated regression model is as follows:

Equation 1

$$QR_{i,t} = 41/923 + 1/451 V.T_{i,t} + 3/712 Bo.St - 0/268 Ma.R_{i,t} - 0/4215 Debt.Co_{i,t} - 0/527 Size_{i,t} + 1/311 LEV_{i,t} + \epsilon_i$$

Table 1. The results of the fit of the regression equation in smoother companies

Variable	Variable coefficient	Coefficient value	T statistics	Significance level	Variable
Fixed Nom.	β_0	41.923	4.534		0.000
<i>V.T</i>	β_1	1.45	6.1032		0.000
<i>Bo.St</i>	β_2	3.712	2.871		0.004
<i>Ma.R</i>	β_3	-0.268	-2.342		0.0075
<i>Debt.Co</i>	β_4	-0.421	-2.38		0.018
<i>SIZE</i>	β_5	-0.527	-2.619		0.009
<i>F.Lev</i>	β_6	1.311	2.779		0.0056

Coefficient of determination	0.478	F statistics	21.741
Adjusted coefficient of determination	0.429	P-Value significance	0.000
		Durbin-Watson	1.589

Hypothesis (2-1)

The hypothesis (2-1) of the study examines the non-financial characteristics and financial reporting quality in the non-smoother companies. Following the regression assumptions testing and ensuring their establishment, the results of the fit of the above regression equation for non-smoother companies are presented in table 2. The F-statistic (14.891) also suggests the overall regression model significance. As it is specified at table [2] underneath the, the coefficient of determination and the adjusted coefficient of determination of the model are respectively 58.9%, and 53.8%. Thus, we can conclude that in the mentioned regression equation, only about 53.8% of financial reporting quality variations of surveyed companies are explained by the independent and the control variables.

In this table, the positive (negative) numbers at coefficient amount column represents the direct (reverse) effect of each variable on the quality of companies financial reporting.

Test result: if the sig value calculated by the software is less than the intended error level (in this study 10%), the significance of the desired variable is approved and the related hypothesis is confirmed. Also given the t statistic value, if this statistics is higher its equivalent amount in t-student table with the same level of error (10%), its related hypothesis is confirmed. According to the above description and the data of table [2], we can say that in the above equation all variables are significant at the 90% confidence level, except the variables of volume of trading, board structure and debt contracts. Therefore, the estimated regression model is as follows:

Equation 2

$$QR_{i,t} = -3/981 + 0/671Ma.R_{i,t} + 2/341Size_{i,t} - 3/286LEV_{i,t} + \epsilon_i$$

Table 2. The results of the fit of the regression equation in non-smoother companies

Variable	Variable coefficient	Coefficient value	T	Sig.
Fixed Nom.	β_0	-3.981	2.873	0.004
V.T	β_1	0.412	0.921	0.107
Bo.St	β_2	0.342	0.847	0.416
Ma.R	β_3	0.671	6.273	0.000
Debt.Co	β_4	-1.075	-0.838	0.402
SIZE	β_5	2.341	1.031	0.0871
F.Lev	β_6	-3.286	-1.124	0.0741
Coefficient of	0.589	F statistics	14.891	

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determination			
Adjusted	0.538	P-Value sig.	0.000
coefficient of determination		Durbin-Watson	1.698

CONCLUSIONS

According to the results of the hypothesis (1.1) it is clear that all coefficients are statistically significant at the 10% level, but in the assumption (2.1) the board reward, firm size and financial leverage is statistically significant at the 10% level. Also, in terms of the sign all the coefficients, except for financial leverage are different and it is expressed that the desired variables regard to the type of impact (positive and negative) on the dependent variable, are different from each other. In other words, changes in all variables, except for financial leverage, has the opposite effect on the dependent variable (quality of financial reporting) during the period 2004 to 2011 and also in terms of size, have different impacts. According to the present study, Bao et al., in their study examined the income smoothing effect on the quality of financial reporting. In this research, they used the quality of earnings as a measure of financial reporting quality. They concluded that there is a direct significant relationship between income smoothing and the quality of financial reporting.

According to the results presented some recommendations based on the findings of the study are presented as follows:

Recommendations to CPAs and auditing organization (independent auditors)

As the survey results show, corporates attempt to smooth income. This issue should be considered from two perspectives. First, when auditing the companies, to issue a report, special attention should be paid for distorting risk of financial statements using income smoothing tools. Secondly, when arranging the Accounting Standards by Audit Organization, the essential actions must be taken to minimize income smoothing tools⁶.

Recommendations to users of financial statements, especially investors

As it was mentioned during the research, income smoothing is actually a kind of earnings manipulation. In Iran's economic environment, income smoothing affect on the quality of reporting. So it is better be taken into consideration when deciding for investment.

Some of the issues and items that are recommended to be considered in future related studies are as follows:

1. Examining income smoothing in public and private companies.
2. Examining the relationship between financial ratios and income smoothing
3. Examining the impact of the global economic slowdown on increasing income smoothing of the firms to induce favorable economic conditions in certain industries such as petrochemicals

4. Examining the relationship between subsidies enforcement law and income smoothing in companies that are energy (electricity, water, gas) transporters, which include the most important part of the cost, such as the petrochemical industry. Due to the several times increase of cost and the actual income reduction in companies, so companies will attempt to smooth income to cover operating losses.

In the stages of this research there were some limitations. In addition to lack of full market efficiency of Stock in Iran, as one general limitation for all studies of the capital market, the following limitations can be mentioned:

1. Because of the time limitation, the present research includes just the years 2004 to 2011. Due to the policies and governmental regulations and economic problems in any year the research results can not be generalized to all years.

2. Lack of access to some companies' information and lack of publication of some companies' financial statements in the study years. The other restriction for choosing stock corporates is due to simplicity of access to the information and it does not include the whole economic units. Therefore, it is not applicable to all Companies.

The other notable limitation of this research is the lack of necessary information sources in order to use Eviews software in doing statistical analysis.

REFERENCES

1. Badri, E. (1999). "Identification of affective factors on income smoothing" PhD thesis, University of Tehran.
2. Bulow, Gh. (2007). "The impact of environment of business and current economic on financial reporting" quarterly of official accountant, fourth year number 12 spring: 20-31.
3. Francisco, P. F. (2009). "Long-run Abnormal Returns and Income Smoothing in the Spanish Stock Market. Critical Perspectives on Accounting; 20: 591-613.
4. Healy, P.M. & Palepu, K.G. (2001). "Earnings and risk changes surrounding primary stock offers". Journal of Accounting Research; 28(1): 25-48.
5. Belkaoui. & picur. (2004). "The smoothing income numbers some Empirical evidence on systematic difference between core and periphery industrial sectors" journal of business finance & Accounting.
6. Ashari, N., Koh, H.C., Tan, S.I. & Wong, W.H. (2001). "Factors affecting income smoothing among listed companies in Singapore" accounting and business research, autumn; 199: 291-301.
7. Rajgopal, S. & Venkatachalam, M. (2011). "Financial reporting quality and idiosyncratic return volatility", Journal of Accounting and Economic; 51: 1-20.