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A Study on the Relationship between Earnings Management Incentives and Earnings Response Coefficient

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Abstract

The earnings management has attracted scholars, researchers, and policy makers' attention in many countries and has been raised as one of the most important issues for investors and owners of corporate interests. The main objective of this study is to investigate the possible relationship between earnings management incentives and earnings response coefficient. To investigate this matter, a sample of 100 companies have been selected out of companies listed in Tehran Stock Exchange and data required in the timeframe of 2007 to 2013 have been extracted based on the sample companies. In this study, the correlation coefficient was used to analyze the data statistically at 95% level and hypothesis testing was performed with multivariate linear regression model. The findings, according to the results of the first and third hypothesis suggest no relationship between earnings management incentives and earnings response coefficients, and also the results of the second hypothesis test suggest a negative relationship between earnings management incentives and earnings response coefficient in most of the test sub- hypotheses.

1. Introduction

The primary purpose of financial accounting is to provide useful information for investors to predict the performance of the economic unit. The need to report earnings as a primary source for investors, executives and analysts' decision-making has been well documented and earnings report helps to the economy in various ways, such

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as providing a basis for tax calculation, criteria for evaluating the success of the company's performance, to determine the amount of divisible earnings, to manage the distribution of earnings, to manage an economic unit and other items. Also, because the value of a company is related to the current and future earnings, the determination of earnings enjoys a great importance (Ansari et al., 2012).

The executives often manage the earnings in order to mislead shareholders regarding the company's actual economic performance. The earnings management which is performed through the manipulation of real activities or accounting figures, reduces the accuracy of the earnings messaging, increases the risk and uncertainty of the people outside the organization and also likely leads to an information asymmetry and reduction in the efficiency of investment. The earnings management, not only hides the company's actual performance, but also hides the actual process of earnings growth and company's revenue that is useful in predicting future growth of the company (McNichols & Stubben, 2008).

The importance of the earnings management is to the extent that in recent years not only many studies have been conducted on its different aspects, but also the subjects of earnings management incentives and earnings response coefficients have been investigated in many countries, particularly developed ones. Therefore, doing a research on the subject and explaining its effects on financial performance can clear the way for the capital market participants and insiders' useful economic and investment decision makings.

2. Literature review

Many individuals' decisions are based on extra organizational accounting reports. Therefore, executives should make decisions on the choice of measurement practices; and financial reporting and accountants have to offer the appropriate procedures in order to provide advisory services to executives. The companies' reported earnings has always been considered as a financial decision making criteria, but whenever executives and owners' objectives are not aligned, the management may provide financial statements in order to serve his/her interests. The users of financial information also have always been unhappy from accounting information asymmetry and are looking for information that they can use it for rational decision-makings. In other words, digits and numbers can have a booster or regulator role in this regard (Watts and Zimmerman, 1998).

2.1. The agency theory and earnings management incentives

Jensen and Meckling (1976) propounded the agency theory which defined the companies' executives as "agents" and shareholders as "principals ". In their analysis, a shareholder is at odds with executives. In other words, decision-making is delegated to executives. But the problem is that the agents do not decide in favor of principals. One of the main hypotheses of agency theory is that "principals" and "agents" are in conflict of interest. In their opinion, management incentives are for private interests which are in contrary to the interests of maximizing shareholders' wealth. According to this viewpoint, reward incentives, contract incentives (including agreements with third parties, secret agreements or commission contracts), political incentives, tax incentives, initial offering to the public and change of executives (especially the CEO), the are among the main earnings management incentives.

2.2. The researchers' perspectives in relation to earnings management

In connection with the earnings management, the researchers have two views, some researchers believe that with companies growing in size, the executives do earnings negative management to reduce the sensitivity. Another view believes that with companies growing in size, supervision and social effects of financial reporting results increase; and consequently, the manager's tendency increases to manage earnings. Regardless of the above two views, based on this assumption that in the real world all people seek to maximize their wealth and prosperity and the executives are also not exempt from this rule and the direction of these incentives is not the same in the various executives. So, we can expect that earnings management does not depend on the size of the companies. With regard to the behavioral aspects of management, with a same reasoning it could be said that earnings management depends on the industry which companies operate on it (Etemadi et al, 2012).

2.3. The earnings management and the quality of financial statements

The former director of America stock, Arthur Levitt (1998), believes that the erosion of the quality of financial statements is due to the high tendency of executives to achieve the specified earnings or creating savings for false accounting. These statements implied a relationship between the effect of earnings management and the risk and uncertainty of investors on the earnings quality. The evidences likewise show the increase of investors' distrust, especially among companies that were exposed to earnings management. The financial statements of companies which have been exposed to earnings management, rather than the actual performance of the company, it reflects the interests of executives. Also, the strong market reaction to general news on earnings management represents the investors' lack of awareness on executives' incentives (Anvaz, 2011).

Regarding the matters presented, followed by the researches carried out in other countries and in order to clarify the role of earnings management incentives and its impact on financial performance, in this study, the relationship between earnings management incentives and earnings response coefficients in companies listed in Tehran Stock Exchange, has been studied and the earnings management incentives in earnings response coefficient metrics are used to analyze it.

3. The importance and necessity of research

The earnings management impresses the healthy life of a business firm and therefore seeks to protect the interests of shareholders against the management of the firm. The importance of the earnings management is to the extent that in recent years not only many studies have been conducted on its different aspects, but also the subjects of earnings management incentives and earnings response coefficients have been investigated in many countries, particularly developed ones. Therefore, doing a research on the subject and explaining its effects on financial performance can clear the way for the capital market participants and insiders' useful economic and investment decision makings. Therefore, doing a research on the subject and explaining its effects on financial performance can clear the way for the capital market participants and insiders' useful economic and investment decision makings. With the explanation of management incentives on earnings response coefficient, the quality rate of information in the presentation of financial statements can be manifested and the executives' manipulation rate in the financial statements can be measured. The research on the relationship between factors affecting earnings management incentives and their reaction coefficient can lead to useful applications in the capital market. Because, if there is a significant relationship, the characteristics and mechanisms of earnings management can be used as a criterion to understand and predict the performance of the companies.

4. The research history

Some of the research results conducted in relation to earnings management and earnings response coefficient are as follows:

Kormendi and lipe (1987), in their research focused on the magnitude of the relationship between earnings and returns and the test regarding the quality of this greatness in the time series properties of earnings. Their Prediction indicated that the relationship between the magnitude of stock returns and earnings probably depends on the continuity of the profitability process. The research results in the model which they have designed on the basis of the continuity of profitability, confirmed their prediction and one of the factors affecting earnings response coefficient entitled the continuity of the profitability process was specified. Chambers et al. (2005), in their study examined the effect of risk on earnings response coefficient. They defined the ultimate risk as uncertainty about future dividends or future earnings. Based on the results, they found that the ultimate risk has a positive relationship with earnings response coefficient.

Cheris and sommers (2005), in their study, correlated the earnings response coefficients directly with the continuity of profitability process to provide another way to interpret the market through the information transmitted by the announcement and publication of earnings. The difference between this study and other studies concerning the effect of the continuity of the profitability process on the earnings response coefficient was that instead of continuing profitability process, the continuity of unexpected earnings process has been considered as a variable

affecting the earnings response coefficient. Additionally, in order to interpret the earnings response coefficient, it has been divided into several new classes instead of dividing it into two unstable and stable ones. The findings also confirmed the relationship between research variables.

Pourheydari and Aflatooni (2006), in a study entitled "incentives for income smoothing in the companies listed in the Tehran Stock Exchange", investigated the size of the company, the corporate income tax, the ratio of debt to total assets, deviation from operational activities and earnings volatility as the incentives for executives for income smoothing using discretionary accruals. The results showed that income smoothing using discretionary accruals is carried out by Iranian companies' executives and income tax and deviation from operational activities are the main drivers for income smoothing using discretionary accruals. They also found that, unlike Western researchers' findings, the company size, the ratio of debt to total assets, and earnings volatility as drivers for income smoothing do not have much importance.

Moradi et al. (2009), in their research, examined the relationship between earnings quality and earnings response coefficient. The research findings showed that there is no significant difference between the earnings response coefficient of companies with different earnings quality. In other words, investors does not consider the quality of earnings at the time of earnings response.

Perlos and Lougee (2011), in a study entitled the relationship between earnings management and fraudulent financial statements by providing new evidences on the characteristics of the companies which commit fraud in the submission of financial statements, found that companies which had earnings management in the previous year act more dishonestly.

Anvaz (2011), in his research, entitled the study of earnings management incentives with earnings response coefficient, with regard to the accounting theory came to the conclusion that there is a negative relationship between the three incentives namely executive compensation plan, debt limit and decline in the executives' performance and earnings response coefficient.

Khodadadi and Janjani (2011), in a study entitled, "the study of the relationship between earnings management and the profitability of companies listed in Tehran Stock Exchange" categorized the companies into two groups namely "income smoother and non-income smoother" in order to detect earnings management. They also used univariate and logistic regression models to test research hypotheses. The results obtained from the univariate model estimates show that companies that have had earnings management have a poor performance at the level of operational profit and net profit and have more growth in profit before tax level and the level of net profit, in net profit level have a larger size and finally in earnings per share level have a high dividend rate in comparison with the firms which have not managed their earnings. Additionally, the results obtained from the logistic model shows that the companies which have had the earnings management, have enjoyed more growth and less efficiency.

Darabi et al (2012), in a research entitled "the explanation of earnings management on the quality of reporting and factors affecting it", argue that there is an exclusive access possibility for executives to some part of the information such as financial information. This feature is created by the accrual accounting for the executives because of the accruals (the difference between the cash profit and accrual earnings) and incentives such as bonuses, earnings smoothing and regulations aversion in order to manipulate the information in favor of itself and in conflict with the interests of other groups, or in other words, try to apply earnings management. They concluded in their study that theoretical and empirical studies show that whatever a company's disclosure is of higher quality, less earnings management has happened. In other words, there is a significant relationship between the quality of reporting and earnings management.

Etemadi et al (2012), in a study entitled ", how earnings management impresses the quality of the companies' earnings?" came to the conclusion that by increasing discretionary accruals, the optimum amount of gain characteristics will be reduced. In the meantime, accruals quality more than other properties will be influenced by earnings management. Additionally, the increase in the amount of discretionary accruals is associated with a reduction in the quality scores of the firms' profits. These results support the theory of opportunistic earnings management; indicate that earnings management damages the accounting information content.

5. Research purposes and hypotheses

Regarding the aforementioned matters, the main purpose of this study was to investigate the relationship between earnings management incentives and earnings response coefficients in companies listed on the Stock Exchange in Tehran is trying to answer the following questions:

Is there a significant relationship between the earnings management incentives and earnings response coefficient in the companies listed in Tehran Stock Exchange?

With regard to the aforementioned purpose and some evaluation models and the results of similar studies including Anvaz (2011), it is specified that there is a negative relationship between earnings management incentives and earnings response coefficient. Therefore research hypotheses to answer the research question is formulated as follows:

- The relationship between the plan executive compensation and earnings response coefficient is negative.
- There is a negative relationship between debt limit and earnings response coefficient.
- The relationship between the reduction of the executives' financial performance and earnings response coefficient is negative.

6. Research methodology

The research is an applied one in terms of the purpose and the method used is descriptive. And since it is going to find a significant relationship between the research variables as well as the precinct of the changes in the dependent variable with respect to the changes in the independent variable, it is a correlational research. The statistical model used in this study was a multiple regression model. The information required by the companies has been extracted through databases including Rhavarde-Nowin software and the official website of the Tehran Stock Exchange. Then, with sum up and needed calculations in a Microsoft Excel spreadsheet, the hypotheses were tested using panel data.

7. The statistical population and sampling

The study sample included companies listed in Tehran Stock Exchange in the period covered includes a period of seven years from the beginning of 2007 until the end of 2013. The sample has been selected using the elimination method and based on the following criteria:

- Financial information to be available during the study period.
- In terms of increase in comparability, the end of the company's financial year should finish to the end of March and not to change fiscal year during the study period. The reason for choosing these criteria was that the time periods to be similar as much as possible and conditions and seasonal factors not to be effective in the selection of variables and factors.
- They should not be one of the banks and financial institutions (investment companies, financial brokers, holding companies and leasing). The reason for choosing this criterion is the different structure of the income statement of these companies compared with other firms.
- In order to homogenize the statistical sample in the study period, by the end of 1385, the companies should be listed in Tehran Stock Exchange and during the years 1386 to 1392 not to exist from Tehran Stock Exchange.
- The companies should not lose money in any of the years studied.

In this study, after applying the conditions mentioned above, 100 companies out of the companies listed in Tehran Stock Exchange that were eligible for the study, were selected as the sample.

8. Data analysis

As mentioned, the aim of the study is to show the relationship between earnings management incentives and earnings response coefficients in the companies listed in Tehran Stock Exchange, given that earnings management

incentives depends on several factors. In this study, the three first and common factors which are effective in creating incentives for earnings management have been used; with respect to the Dechow et al. (1996) and Theo (1998) models, a specific criteria has been intended for each one so that the first factor in earnings management incentives is financial incentives, the second factor is debt limit and the third factor is reduction of the performance of company's executives. Finally, the related variables such as net income, operating income, cash on hand obtained from operating activities and accruals have been used for earnings response coefficient.

In this study, the model (1), Anvaz (2011), were used to examine the relationship between variables:

$$R = a_0 + a_1 z_i + \lambda_1 EARN * z_i + \lambda_2 \, EARN * z_i + \lambda_3 \, EARN \, [DAC] + \sum_{(i=1)} \xi_i (EARN * Control_i) \tag{1}$$

Where:

R: earnings response coefficient.

a_0: Width of origin.

a_1: The coefficient of the relationship between earnings management incentives and the dependent variable.

λ_1: The coefficient of the relationship between the first earnings management incentive (financial incentive) and the dependent variable.

λ_2: The coefficient of the relationship between the second earnings management incentive (debt limit) and the dependent variable.

λ_3: The coefficient of relationship between the third earnings management incentive (reduction of the executives' performance) and the dependent variable.

ξ_i: The coefficient of the relationship between the control variable and the dependent variable.

With regard to the four indexes of earnings response coefficient, the above model has been investigated based on each index (net profit, operating profit, cash on hand obtained from operating activities and total accruals) and finally, a model has been chosen considering measurement tests. As described, the present study aims to investigate the relationship between earnings management incentives and earnings response coefficients in the companies listed in Tehran Stock Exchange, so the three variables have been defined and used in this study as follows:

8.1. The dependent variables

In this study, the earnings response coefficient is the dependent variable and four factors are taken into consideration to measure it as follows:

Net profit: (R) Net profit as profit and loss statements.

Operating profit: (EARN) operating profit as profit and loss statements.

Cash on hand obtained from operating activities (CFO): Cash flow obtained from operating activities as cash flow statements.

Total accruals (TAC): The difference between net profit and cash on hand obtained from operating activities.

According to the four factors for the dependent variable, the research model has been separately investigated for each factor four times and the results have been stated separately.

8.2. Independent variables

In the present study, the independent variables are the three factors of earnings management incentives including financial incentive, debt limit and the executives' performance reduction and a corresponding variable has been considered for each factor.

Financial incentive: one of the goals of the executives is the executive compensation (BNS) and the amount paid to the executives or the donor share, which represents a financial incentive ξ in this research.

Debt limit: the other goal of the executives to manipulate earnings is debt with lower interest rates that are two factors in this study, the program one year before financing from capital (XFE), which is derived from the issuance of stock in the next year and the program one year before financing from debt (XFD), which is derived from the increase in debt, have been considered as the representative of the debt limit.

The executives' performance reduction: Other objectives of the executives is to demonstrate performance of the company poor in order to pay less taxes or prevent the merger, the loss of last year or two consecutive years are as the representative of the executives' performance reduction (EDSS), in this research.

8.3. Control variables

The method of determining control variables is as follows:

The discretionary accruals (DAC), in accordance with the Jones (1991):

(Changes in accounts payable (-) Change in commodity inventory (+) Changes in accounts receivable) cash in hand + net profit = accruals

Growth: (GROW) the market value of the company's assets divided by the book value.

Company size: (SIZE) logarithm of the total assets.

The standard profit derived from the asset (SDROA): profit before the financial cost and taxes divided by total assets.

Industry adjustment lever (LEV): long-term debt divided by total assets.

To test the first, second and third hypotheses, the correlation coefficient of the independent variables including the first (financial incentive), second (debt limit) and third (executives performance reduction) and the dependent variable (earnings response coefficient) were reviewed and they have been confirmed in the case of significance of the mentioned hypotheses and otherwise they have been rejected. Given that the four agents have been considered for earnings response coefficient (net profit, operating profit, cash flow from operating activities and total accruals), the model has been tested for each agent.

9. Research findings

Table (1), shows the results obtained from the estimation of the model separated according to the dependent variables (net profit, operating profit, cash from operating activities and total accruals).

Table 1. The results obtained from the estimation of the model, separated according to the dependent variables

Independent and control variables	Model 1. The dependent variable R			Model 2. The dependent variable EARN			Model 3. The dependent variable CFO			Model 4. The dependent variable TAC		
	Coefficient	T-statistics	p-value	Coefficient	T-statistics	p-value	Coefficient	T-statistics	p-value	Coefficient	T-statistics	p-value
BNS	-0.65	-0.84	0.339	-0.96	-2.74	0.006	-0.10	-1.24	0.210	-0.55	-0.70	0.479
XFE	-4.85	-2.62	0.009	0.01	0.01	0.980	0.32	1.77	0.070	-4.91	-2.79	0.005
XFD	-0.08	-3.31	0.001	-0.04	-4.01	0.000	-0.01	-3.71	0.000	-0.07	-2.90	0.004
EDSS	9.92	1.05	0.292	-3.62	-0.08	0.932	-3.97	-0.39	0.690	1.03	1.09	0.275
LEV	2.14	2.24	0.025	1.66	3.84	0.000	1.32	1.30	0.190	2.01	2.09	0.036
DAC	0.13	11.73	0.000	0.04	9.52	0.000	0.01	14.37	0.000	0.11	10.16	0.000
GROW	0.512	0.50	0.612	0.502	1.09	0.270	0.259	0.24	0.800	0.484	0.47	0.632
SIZE	2.74	4.15	0.000	2.10	7.05	0.000	1.72	2.47	0.010	2.56	3.87	0.000
SDROA	8.20	3.39	0.000	1.79	0.16	0.870	-2.99	-1.16	0.240	8.50	3.49	0.000
C	-3.19	-4.12	0.000	-2.41	-6.88	0.000	-1.83	-2.23	0.020	-3.01	-3.87	0.000
R2	0.67			0.81			0.91			0.60		
FLimer	1.875		0.000	4.41		0.000	9.50		0.000	1.46		0.000
χ^2 Hausman	180.70		0.000	396.06		0.000	511.96		0.000	142.51		0.000
Effect Type	Fixed			Fixed			Fixed			Fixed		

Durbin-Watson	1.86		2.40		2.03		1.92	
F Fisher	5.69	0.000	12.22	0.000	27.99	0.000	4.08	0.000

It should be noted that before the model estimation, it should be specified that there is individual differences or the so-called heterogeneity in the sections, or that are similar to each other, and for estimation, the statistical data should be accumulated over each other and do the estimation using pooling data or panel data methods. F Limmer test has been used to choose one of the methods namely pooling data or panel data, that with regard to Table (1), is the four models (p-value = 0.000 < 0.05), so the null hypothesis regarding the ability to estimate the data using pooling data method will not be accepted and the data should be estimated by the panel model.

Having been assured that the model should be estimated in the form of panel, the most important question is that whether the temporary effects are fixed (existence of fixed effects) or random (existence of random effects)? To answer to the above question Hausman test was used in this study. According to Table 1, in order to determine the fixed effects or random effects in four models, the null hypothesis regarding the existence of random effects (p-value = 0.000 < 0.05), is rejected, so the model has been estimated as fixed effects. Watson camera statistic value according to Table (1), for four models is between 1/5 and 2/5. This number shows that the errors are independent of each other and there is no correlation between errors (the hypothesis regarding the correlation between errors is rejected) and regression can be used. Additionally, considering the fact that the significance level of the F-statistic of the F-Fisher in the four under test models is (p-value = 0.000 < 0.05), therefore, based on the analysis carried out, the whole model (four models tested) is significant at 99% confidence level. Then, the results obtained from testing the hypotheses have been analyzed as follows:

9.1. The first hypothesis test results

The first main research hypothesis is as follows:
The relationship between the executive compensation plan and earnings response coefficient is negative. Since four indexes have been separately considered for earnings response coefficient, so four tested subsidiary hypotheses and the interpretation of the results obtained from Table (1), are as follows:

9.1.1. There is a negative relationship between executive compensation plan and net profit.
Statistically, There is no significant relationship between the executive compensation plan (BNS) and the net profit (R) of the selected companies, (p-value = 0.399 > 0.05). So the above hypothesis is rejected.

9.1.2. There is a negative relationship between the executive compensation plan and operating profit.
Statistically, There is a significant and reverse relationship (coefficient value = - 0.96) between the executive compensation plan (BNS) and the operating profit (EARN) of the selected companies at a confidence level of 99%, (p-value = 0.006 < 0.05). So the above hypothesis is confirmed.

9.1.3. There is a negative relationship between executive compensation plan and cash on hand from operating activities.
Statistically, there is no significant relationship between the executive compensation plan (BNS) and cash on hand from operating activities (CFO) of the selected companies, (p-value = 0.021 > 0.05). So the above hypothesis is rejected.

9.1.4. There is a negative relationship between executive compensation plan and the total accruals.
Statistically, there is no significant relationship between the executive compensation plan (BNS) and the total accruals (TAC) of the selected companies, (p-value = 0.479 > 0.05). So the above hypothesis is rejected.

According to the subjects mentioned in the first hypothesis, the subsidiary hypothesis 1.2 shows the negative relationship between executive compensation plan and operating profit and in the three other hypotheses, there has been no significant relationship between executive compensation plan and earnings response coefficient.

9.2. The second hypothesis test results

The second main research hypothesis is as follows:
There is a negative relationship between debt limit and earnings response coefficient. In this study, two indexes namely financing from capital and financing from debt has been used to measure the debt limit and four indexes of earnings response coefficient, so eight tested subsidiary hypotheses and the interpretation of the results obtained from Table (1), are as follows:

9.2.1. There is a negative relationship between financing from capital and the company's net profit.
Statistically, there is a significant and reverse relationship between financing from capital (XFE) and the net profit (R) of the selected companies at a confidence level of 99%, (p-value = 0.009 < 0.05). So the above hypothesis is confirmed.

9.2.2. There is a negative relationship between financing from capital and operating profit.
Statistically, there is no significant relationship between the financing from capital (XFE) and the operating profit (EARN) of the selected companies, (p-value = 0.980 > 0.05). So the above hypothesis is rejected.

9.2.3. There is a negative relationship between financing from capital and cash from operating activities.
Statistically, There is no significant relationship between the financing from capital (XFE) and the cash from operating activities (CFO) of the selected companies, (p-value = 0.070 > 0.05). So the above hypothesis is rejected.

9.2.4. There is a negative relationship between financing from capital and total accruals.
Statistically, there is a significant and reverse relationship (coefficient value = - 4.91) between financing from capital (XFE) and the total accruals (TAC) of the selected companies at a confidence level of 99%, (p-value = 0.005 < 0.05). So the above hypothesis is confirmed.

9.2.5. There is a negative relationship between financing from debt and the company's net profit.
Statistically, there is a significant and reverse relationship (coefficient value = - 0.08) between financing from debt (XFD) and the net profit (R) of the selected companies at a confidence level of 99%, (p-value = 0.001< 0.05). So the above hypothesis is confirmed.

9.2.6. There is a negative relationship between financing from debt and operating profit.
Statistically, there is a significant and reverse relationship (coefficient value = - 0.04) between financing from debt (XFD) and the operating profit (EARN) of the selected companies at a confidence level of 99%, (p-value = 0.000 < 0.05). So the above hypothesis is confirmed.

9.2.7. There is a negative relationship between financing from debt and cash from operating activities.
Statistically, there is a significant and reverse relationship (coefficient value = - 0.01) between financing from debt (XFD) and the cash from operating activities (CFO) of the selected companies at a confidence level of 99%, (p-value = 0.000 < 0.05). So the above hypothesis is confirmed.

9.2.8. There is a negative relationship between financing from debt and ctotal accruals.
Statistically, there is a significant and reverse relationship (coefficient value = - 0.07) between financing from debt (XFD) and the total accruals (TAC) of the selected companies at a confidence level of 99%, (p-value = 0.004 < 0.05). So the above hypothesis is confirmed.
According to the subjects mentioned in the second hypothesis, in six of the eight sub-hypotheses, there is a negative and significant relationship between the debt limit and earnings response coefficient which reflects the reduction in earnings quality, and in two other hypotheses there is no significant relationship between the debt limit and earnings response coefficient.

9.3. The third hypothesis test results

The third main research hypothesis is as follows:
There is a negative relationship between the decline in executives' financial performance and earnings response coefficient. Since four indexes have been separately measured for earnings response coefficient, so, four tested subsidiary hypotheses and the interpretation of the results obtained from Table (1), are as follows:

9.3.1. There is a negative relationship between the reduction in executives' financial performance and the net profit.
Statistically, there is no significant relationship between the reduction in executives' financial performance (EDSS) and the net profit (R) of the selected companies, (p-value = 0.292 > 0.05). So the above hypothesis is rejected.

9.3.2. There is a negative relationship between the reduction in executives' financial performance and the operating profit.
Statistically, there is no significant relationship between the reduction in executives' financial performance (EDSS) and the operating profit (EARN) of the selected companies, (p-value = 0.932 > 0.05). So the above hypothesis is rejected.

9.3.3. There is a negative relationship between the reduction in executives' financial performance and the operating activities.
Statistically, there is no significant relationship between the reduction in executives' financial performance (EDSS) and the operating activities (CFO) of the selected companies, (p-value = 0.690 > 0.05). So the above hypothesis is rejected.

9.3.4. There is a negative relationship between the reduction in executives' financial performance and the total accruals.
Statistically, there is no significant relationship between the reduction in executives' financial performance (EDSS) and the total accruals (TAC) of the selected companies, (p-value = 0.275 > 0.05). So the above hypothesis is rejected.
According to the subjects mentioned in the third hypothesis, there is not any significant relationship between the reduction in executives' financial performance and earnings response coefficient.

Table 2. The summary of the statistical relationship between earnings management incentives and earnings response coefficient

Independent and control variables	Model 1. The dependent variable R	Model 2. The dependent variable EARN	Model 3. The dependent variable CFO	Model 4. The dependent variable TAC
	atistical relationships type	Statistical relationships type	Statistical relationships type	Statistical relationships type
BNS	-	negative	-	-
XFE	negative	-	-	negative
XFD	negative	negative	negative	negative
EDSS	-	-	-	-
LEV*	positive	positive	-	positive
DAC	positive	positive	positive	positive
GROW	-	-	-	-

| SIZE** | positive | positive | positive | positive |
| SDROA | positive | - | - | positive |

* One of the most important criteria for corporate profitability is the degree of industry leverage (LEV) that in this research has a positive and significant relationship between profitability and the degree of industry leverage.

** meaning that investors consider respond to earnings, firm size (SIZE), or in other words, the total assets of the company as a positive factor during respond to the earnings.

10. Discussion

Since the recent studies have shown that the quality of accounting information leave the significant economic consequences behind, the determinants of the quality of information are very important factors. Meanwhile, the management reporting decisions are one of the most important determinants of the quality of accounting information. The aim of this study was to investigate the relationship between earnings management incentives and earnings response coefficients in companies listed in Tehran Stock Exchange and the incentives including the financial incentive, debt limits and reduction in the executives' performance have been used.

The results of the first hypothesis test showed that out of four sub-hypotheses, there is a significant and negative relationship only between the executive compensation plan and earnings response coefficient (a measure of operating profit) that is compatible with the researches conducted Darabi et al. (2012) and Anvaz (2011). In the other three hypotheses, there is no significant relationship that, the results of these three hypotheses are in line with the study carried out by Moradi et al (2009). The results of the second hypothesis test indicates a negative relationship between earnings management incentives and earnings response coefficients in six of the eight sub-hypotheses hypothesis that the result of the mentioned hypotheses are compatible with the researches carried out by Darabi et al. (2012) and Anvaz (2011). Finally, the results of the third hypothesis suggests that there is no statistical meaningful relationship between the reduction in executives' performance and earnings response coefficient in the four subsidiary hypotheses. The result of the third main hypothesis is compatible with the study conducted by Moradi et al. (2009), and is not in line with Anvaz's research (2011). In general, theoretically there is a negative relationship between the earnings management incentives on earnings response coefficient. In such circumstances, the management involvement in the financial reporting process decreases the quality of the reported data. For the proper functioning of financial markets, especially the capital market, the existence of a high-quality information is necessary. So that, regarding the released information, a sound decision making take place when the mentioned information are on time, relevant, reliable, important, complete and understandable, otherwise it will lead to information asymmetry. In an environment where investors have less information compared to the executives, they cannot observe and supervise the company's performance and its prospects thoroughly. Therefore, in such an environment, the executives can use the available flexibility in applying the accounting options for opportunistic earnings management. The theoretical and empirical studies show that whatever a company's disclosed information enjoys a higher quality, the earnings management have occurred to a lesser extent, in other words, there is a significant relationship between the reporting quality and earnings management.

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