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PRECISION AND SENSITIVITY DIMENSIONS OF PROFIT AND BOARD OF DIRECTORS COMPENSATION (EVIDENCE FROM TEHRAN)

Sayed ali Vaez[1], Rahim Bonabi gadim*[2]

[1]Associate Prof in Accounting, Faculty of Economic and Social Sciences, Shahid Chamran University, Ahvaz, Iran
*[*2]Assistant Prof in Accounting, Hashtrood Branch, Islamic Azad University, Hashtrood, Iran*

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ABSTRACT

Research aim: This research aims to investigate how the precision and sensitivity dimensions of profit affect the board of directors' compensation. In this study, the precision indicators of profit namely earning management through accrual and manipulation activities in the form of increased profits, as well as conditional conservatism and the sensitivity indicators of profit namely earnings response coefficient and stock returns fluctuations were studied.

Design/ Methodology/Approach: The data related to the 121companies listed in Tehran Stock Exchange for the period 2008 to 2017 were extracted and the combination regression model was used to test the hypothesis.

Research finding: The results showed that the abnormal accruals on compensation had a significant and positive effect that indicated the lack of sufficient attention to them. Manipulation activities in the form of increased profits and conditional conservatism had significant effect on board of directors' compensation. The earnings response coefficients indicators, had a positive effect on board of directors' compensation and returns fluctuations indicators had a negative effect on board of directors' compensation.

Theoretical contribution/Originality: The novelty of this research is to introduce the precision and sensitivity dimensions of profit in board of directors' compensation. Because if the compensation is not commensurate with board of directors actual performance not only will increase corporate value but also will be a means to transfer wealth. From the important indicators in measuring performance in compensation plans is the precision and sensitivity of reported earnings.

Practitioner/Policy implication: One of the most important applications of this research is development of theoretical foundations associated with compensation Plans, as well as helping to improve the conclusion of compensation contracts to reduce the agency costs and maximize company value.

Research limitation/Implication: An important limitation of this study is the lack of access to information related to board of directors' non-cash compensation.

1- Introduction

If the reward does not correlate with the actual performance of board of directors, it will not only increase the value of the company but also be a means of transferring wealth. Several factors can lead to inefficient contracts and compensation schemes, one of the most important of them is the lack of proper measurement of performance and its accuracy and sensitivity. Generally, the components of remuneration of directors are based on two performance measures, namely net profit and stock prices. Based on the theoretical basis of compensation, it can be predicted that the percentage of each of these indicators in

*Corresponding Author: Rahim Bonabi gadim, Assistant Prof in Accounting, Hashtrood Branch, Islamic Azad University, Hashtrood, Iran
Email :Rahim.bonabi@yahoo.com
phone: +98(914) 920 0345

director's remuneration depends on three relative factors of precision and sensitivity as well as the horizons of time that the board of director decides in that area (Scott, 2006). Performance measures in board of directors' compensation are more based on accruals rather than cash items (Raithatha & Komera, 2016). Because accruals increase the usefulness of accounting profit in stock valuation and contract with creditors and board of directors (Kazan, 2016). Although based on the amount of financial distress or the company's financial need for liquidity, the remuneration of the board is more based on liquidity criteria (Sonenshine, Larson & Cauvel, 2016). However, the use of accruals and, as a result, net profit as a compensation index in compensations programs, motivates board of directors to manage earnings as a consequence, reduces conservatism and eventually reduces the quality of profits (Bianchi & Chen, 2015). If the net profit is calculated in such a way that it can accurately show management performance, or if the effect of other factors out of control is low and only affects the board of director's efforts and is sensitive to board of directorial activities, then net profit can be used to evaluate the performance of the board of director. The task of accounting and financial reporting in reducing moral hazard is also to provide the precision and sensitive performance measurement index (Mehrani, Karami, Seyedhosseini, & Jahroomi, 2015). If the compensation does not correlate with the actual performance of board of directors, it will not only increase the value of the company but also be a means of transferring wealth. Several factors can lead to inefficiencies in contracts and compensation plans, one of the most important of them is the lack of proper measure of performance and the lack of attention to the aspects of its precision and sensitivity. Considering the use of accounting numbers and reports to conclude compensations programs, for example, accruals are considered to be effective in concluding contracts with creditors and board of directors (Kazan, 2016), Therefore, there is the opportunity for board of directors to apply their accounting choices and abandon these attributes by managing accruals, real manipulating and conservative activities, and striving to secure their own personal interests that each of them affects the effectiveness of contracts (Bianchi & Chen, 2015) and in the long run, it will provide the interests of board of directors but does not necessarily provide the benefits of the entire company and its stakeholders. Therefore, in the remuneration system, only the reported accounting characteristic (net profit) is not the remuneration criterion but, based on what is reassessed from the theory of compensations, this performance measurement index must be precision in measuring and sensitivity. So the important thing is that when it comes to net profit as a management achievement during the fiscal year to be rewarded, Indicators and concepts of profit should be taken into consideration that are independent of the external fluctuations and disturbances beyond the control of the director and regardless of manipulation and profit management. In other words, they are more precise and their relationship to the market value of the unit is more accurate and more sensitive. In other words, the number belonging to net profit should reflect the effect of the board of director's actions on the market value of the company and increase the sensitivity of profit (Zimmerman & Watts, 2009; Zakaria, 2012).

The results of the research show that the current system of compensation in Iran is not proportional to the actual performance of board of directors and compensations are not paid based on the actual performance (Sajadi & Zarezadeh, 2012). Therefore, in Iran, board of directors in order to receive a compensation are not required to pay attention to the profits of the company, and they will receive their compensation on the basis of the usual process, even if the profit of the company is reduced(Pourzamani & Tarazian, 2016). So, perhaps, given that the trades law only states that the compensation is the equivalent of a percentage of reported net profit only (And this figure cannot exceed from 5% of the dividend in the public corporations and 10% of the dividend in other than public corporations in the same year), Determining the interested percentage in companies can be such that, although the earning is less than that in the previous year, the percentage should be increased compared to the previous year

(the maximum excess of dividend earning of the same year) to compensate for the decline in profits. Therefore, the compensation paid only on the basis of the percentage of net profit reported does not achieve the objectives of the incentive system and does not reduce the interest's conflict and agency problems. The goal of a motivated system such as performance-based compensations is to maximize the interests of all groups. Therefore, it must be said that the purpose is to push the managerial look from the point of view of agency to the look of stewardship, and this is not possible unless the compensation is based on the actual, correct and expected performance of the managers So that managers with good performance by more compensations and managers with poor performance by less compensations will be remunerated. In the meantime, the correct, real and expected performance of managers based on the rich theoretical foundations must be scrutinized and since the compensation has been reported based on accounting performance or earning in Iran, In order to achieve an appropriate incentive system based on performance, compensations need to be based on the earning accuracy and sensitivity. Because if the attributes of the accuracy and sensitivity of the earning are not approved, the board can manage and manipulate the earnings by the selection of the accounting procedures to achieve its own goals and reduces the efficiency of contracts (Scott, 2006, Zimmerman & Watts, 2009; Zakaria, 2012). In such a way that the reported earnings have the necessary accuracy in measuring, i.e., free of manipulation and under the control of the director (Beyond the uncontrollable actions by managers) and it has the necessary sensitivity to respond to the manager's efforts and represents a change in the value of the company. Lack of attention to the dimensions of the accuracy and sensitivity of the profit causes the lack of motivation of the managers and consequently the increase of representation problems which can itself be a tool for the unjust transfer of wealth and devaluation of the company. With regards to the theoretical foundations associated with compensations, we can say according to the agency theory, a compensations contract can be designed to reduce interest conflict problems and information asymmetry between board of directors and owners. In this regard, performance-based compensation contracts are designed to eliminate or at least minimize the conflict between board of directors and owners. Therefore, contracts that are properly set up, provide incentives for board of directors to maximize their efforts and align their interests with the owners. Consequently, in view of the objectives of compensation programs in the form of agency theory, the measurement criterion used should have indicators of accuracy and sensitivity in the measurement. Therefore, the main purpose of the present research is considering the fact that in Iran, the remuneration is based on net profit and its changes, does in the compensations of the board of directors enough attention is paid to factors that affect the accuracy and sensitivity of the profit? And that the compensations of the board, with which of the above features, are more relevant and consistent.

2- Literature Review and Hypothesis Development

2-1- Profit precision

Most current compensation schemes and contracts are based on accounting profit, and the compensations program that merely pays attention to accounting profit, less helps to create value (Namazi & Sirani, 2004). The precision of profit as a benchmark for performance measurement is that the measure of performance (profit) is due to real activities, independent of fluctuations and outsiders' disturbances beyond the control of the board of director, and regardless of the manipulation and earning management and opportunistic incentives that disrupts performance measurement and reduces the precision of profit (Pandher & Pathak, 2014; Zakaria, 2012; Zimmerman & Watts, 2009). Fluctuation, disturbances, and further changes to the earning, as a result of low precision to profit are associated with higher risk, and the effect is caused by several factors. However, several factors may affect earning accuracy and disruptions, but two main

reasons by researchs are: economic factors and accounting practices (Dichev &Tang, 2008; Donelcon, Jennings, &McInnis, 2011). The accounting factors, which mainly affect the way in which the revenue and expenditure are identified and the profit of the economic unit, can affect this mechanism (Dichev &Tang, 2008; Donelcon et al., 2011). Earning management in an incremental way will disrupt earnings measurement and, as a result, reduce earnings accuracy. The earning management in decreasing way is also the same, but the effect of decreasing earning management is interfered in the years or years to come, therefore, it is not the effective factor of precision dimension in determining board of directors' compensations this year. Rather it will have the same effect in next year. Therefore, increasing earning management in the current period is a reciprocal indicator of profit accuracy. By applying conservatism, the accuracy of reported earnings will be increased as a result of preventing board of directors from optimistic behaviors in profit reporting. Therefore, from this dimension, conditional conservatism is a direct indicator of the precision of profit (Watts, 2003). On the other hand, recognizing more quickly and more generally the less profitable events and the lack of recognition of the incremental events of profits can lead to the identification of part of the costs of future courses in the current period. This, in turn, can reduce the accuracy of profit and impose the cost of making false decisions on actual and potential investors. Therefore, from this dimension, conditional conservative is the reciprocity index for precision of profit (Paek, Chen, & Sami, 2007). Previous research results show that in Iran, directors do not need to pay attention to corporate profits in order to receive compensations, and they will still receive their remuneration, based on the usual practice, even if the profit of the company is reduced (Pourzamani & Tarazian, 2016). In line with the importance and role of earning management, we must say that for companies with high earning management, the earnings response coefficient would be less, that will turn the board of directors (Barrios, Fasan, & Macciocchi, 2013), due to increasing earning management, the level of conservatism in companies increases, which means that the profits of the above-mentioned companies Non-conservative, and in fact, the quality of profit is lower (Bianchi & Chen, 2015). Although during the financial crisis periods, compensations were usually based on cash flow, so as to motivate management to manage liquidity, profits and its changes will have the smallest share in the board of directors' motivational programs. But in the aftermath of crisis periods, the remuneration of the board is increased on the basis of reported earnings (Sonenshine et al, 2016). Accruals improved the usefulness of accounting profit in stock valuation and contracing with creditors and board of directors by improving the temporary changes in oprating cash flow and free cash flows (Kazan, 2016). However performance measurement criteria in board of directors compensationing programs are more based on accruals than cash items (Raithatha & Komera, 2016) and according to research results such as (Matsumoto, 2002; DeFond & Park, 2001; Burgstahler & Eames, 2003; Liang, 2014; Kazan, 2016; Bianchi & Chen, 2015), on the role of unusual accruals in reducing the earning quality and reducing the earning accuracy, according to the results of research by (Sonenshine et al, 2016, Gunny, 2010; Roychowdhury, 2006; Bartov, Givoly, & Hayn., 2002) Based on that the manipulation of real activities both efficiently and opportunistically form, reducing the accuracy of the calculated profit due to its manipulation, the hypothesis is formulated as follows:

1. ***The Positive unusual accruals items have a significant effect on the compensation of the board of directors.***
2. ***The positive real activities manipulating (through production costs manipulating, abnormal operating cash flows manipulating, and abnormal discretionary costs manipulating) have a significant effect on the compensation of the board of directors.***

Previous research results showed that accounting conservative led to the earning management and, as a result, decreased the earning accuracy. On the other hand, conservatism reduced information asymmetry

and improved the transparency of disclosure of financial information, which would increase the earning accuracy (Ruch & Taylor, 2011). Iwasaki, Otomasa, Shiba, and Shuto (2012) show that accounting conservatism has a negative relationship with the remuneration of directors and this relationship is higher in institutions with a large compensation of profit, as a result, accounting conservatism reduces board of directors' compensations. According to the results of research by (Shota, 2012; Bianchi & Chen, 2015; Ball & Shivakumar, 2005; Hui, Matsunaga, & Morse, 2009), for the effect of conditional conservatism on the earning accuracy from reducing the opportunistic actions of board of directors and also, asymmetric encounter with news before the occurrence, the hypothesis is formulated as follows:

3. ***The Conditional conservatism has a significant effect on the compensation of the board of directors.***

2-2- Profit sensitivity

In order to create a pay and compensation program for the motivation board of director to maximize the value of the company, the performance index for calculating the compensation (net profit) must be correlated with the effect that the board of director's actions places on the company's value. If other factors do not change, the greater the correlation between the profit and the effect of the board of director's actions on the company's value, the more likely it is to use a net profit-based program to pay a salary and compensation to the board of director. In principle, the greater the correlation between net profit and management effort, the contract will be more efficient (Scott, 2006). While stock prices may be more sensitive, they are less accurate than net profit. This is because stock prices are affected by a huge amount of events belonging to the entire economic system, which is beyond the control of management (Pandher & Pathak, 2014; Zakaria, 2012; Zimmerman & Watts, 2009). The index of profitability alone has less sensitivity to managerial efforts. For example, the profit against the work and the board of director's effort (for example, spending on research and development), instead of increasing it, decreases and reduces the remuneration of the director while doing so, the market value of the company increases. Therefore, to increase the sensitivity of profit, it is necessary to look at its effect on the company's market value. Therefore, earnings are sensitivities that can change the company's market value (Scott, 2006; Mehrani et al, 2015). Given that the earnings reaction coefficient reflects the market reaction to the changes in the profit of each share and is one of the best methods for assessing the quality of profit (Perotti & Wagenhofer, 2012), and the interpretation of market intelligence from the transmitted information by the reporting of profit (Cheris & summers, 2005), It can be said that high earnings response coefficient reflects the reported earnings with high quality by board of directors and the high sensitivity of reported earnings and thus the direct indicator of the sensitivity of the earning. Investors consider stock return volatility as a risk measure, as well as capital market makers can use this benchmark as a tool to measure the vulnerability of the stock market (Zafar, Urooj, & Durrani, 2008). Previous research (Chen, Huang, &Jha, 2010; Kothari, 2000; Rajgopal & Venkatachalam, 2011) pointed out that high-quality financial reporting and transparent financial statements could have important economic consequences, such as reducing the volatility of unconventional stock returns. In other words, The more the financial statements of the companies, and in particular the profit reported by the companies, are more qualitative, because, based on the efficient market hypothesis, it is expected that this information will be crystallized in stock prices, so stock prices will fluctuate less. Therefore, the increase of the fluctuation of returns is accompanied by the lowering of the financial reporting quality (Rajgopal & Venkatachalam, 2011), less transparency of financial information (Kothari, 2000), and fluctuations in accruals and earnings management (Chen et al., 2010), which results in a devaluation of the company and a reverse index for profit sensitivity. Previous research results show that there is a significant negative relationship between earnings response coefficient and earning management (Khaksarian, 2013), accounting earnings and dividend income had a high value

relevance and shareholders paid particular attention to accounting earning and stock returns fluctuate(Bouteska & Regaieg, 2017), earnings response coefficient for profits of companies with lower operating performance is lower than that of companies with high operating performance. That is, the profit of companies with less operational performance as opportunistic earning management strategies is less value relevance, and the awareness of managed earnings is less than unmanaged earnings (Mostafa, 2017). Earnings reaction coefficient provides a good understanding of the reason for the strong reaction of the market to disclosed information of some companies compared to other companies (Erah & Ibadin, 2017) and Hosseinia, Chalestorib, Rezahi, and Ebrahimia (2017) showed that there was a significant negative correlation between the remuneration of the board and the earnings response coefficient, and there is no relationship between the decrease in board performance and the earnings response coefficient. Given that the **e**arnings response coefficient reflects the market reaction to the changes in the earning per share and is one of the best methods for assessing the quality of profit (Mostafa, 2017; Perotti & Wagenhofer, 2012), and the interpretation of market intelligence from the transmitted information by announcing and proclaiming the profits (Erah & Ibadin, 2017; Cheris & summers, 2005), and also the earnings response coefficient has a positive and significant relationship with certainty about future dividends or future earnings (Chambers, Freeman & Koch, 2005), It can be said that high earnings response coefficient reflects the high quality of earning reported and high sensitivity of earnings, the hypothesis is formulated as follows:

4. ***The Earnings response coefficient has a significant effect on the compensation of the board of directors.***

Chen et al. (2010) have shown that the increasing trend in nonconventional fluctuations in return is attributable to the low quality of information, and this low quality of information is due to fluctuations in accruals. The results of the research by Rajgopal and Venkatachalam (2011), show that quality financial reporting and transparent financial statements can have important economic consequences, such as decreasing the unusual volatility of stock returns. The decline in financial reporting quality is associated with an increase in the unconventional volatility of returns (Rajgopal & Venkatachalam, 2011). Based on the results of the researches, the stock fluctuation is due to the volatility of discretionary accruals and the existing correlation between the profit before applying management opinions and discretionary accruals that reflects the quality of information disclosed by the companies (Bouteska & Regaieg, 2017; Chen et al, 2010), and the transparency of financial statements information is associated with the decline in the unusual volatility of stock returns (Kothari, 2000), and the profitability of companies has also fluctuated due to an increase in the nonconforming volatility of returns (Pastor & Veronesi, 2003), the hypothesis is formulated as follows:

The unconventional Annual Return Fluctuations have a significant effect on the compensation of the board of directors.

3- Methodology

3-1- Sample Selection

Based on the objective, the present study is descriptive and based on the nature and method is correlation type. In order to analyze the information and to accept or reject the hypotheses, the correlation coefficient and linear regression test will be used. Given that this research can be used in the process of pricing Board of Directors compensation, the type of applied research is considered. The statistical population of this study is all companies accepted in Tehran Stock Exchange between 2008 and 2017. In this study, all availables data are used to select the sample. First, all companies that could take part in the sampling were selected, then companies that did not meet any of the following conditions removed from all existing companies, and eventually the companis that remained will be selected for the test: 1-in order to homogenize the statistical sample in the years studied, they were accepted before 2008 in Tehran Stock Exchange,2-in terms of increasing comparability, the company's

financial period will end by the end of march, 3-the statistical sample not includes financial intermediation companies, investment companies, leasing companies, banks and insurance companies due to their specific nature of their activities and the existence of laws and their supervisory bodies,4-companies did not change the activity or financial period during the time period of this research, 5-the companies data are available. Finally, the companies surveyed in this study include selected companies in Tehran Stock Exchange. According to the above conditions, the statistical sample in the given time period includes 121 companies (Table 1).

Table 1. Sample Selection

Sample Construction	
Number of firm-year observations (fiscal year 2008-2017)	4,293
Less:	-
Limitations related to the fiscal year ending March and the change of fiscal year	(675)
Limitations related to the removal of banks, financial institutions and financial investment companies (due to the different nature of their activities from other business units)	(1,125)
Limitations on the incomplete data of some companies in the period 2009-2016(Related to the main variables)	(999)
Final Sample	1.089

3-2- Definition of variables and research models

3-2-1- Positive unusual accruals

To test hypothesis 1, relation No. 1 is used as follows (relation No. 1):

$$BONUS = \beta_0 + \beta_1(INAA) + \beta_3(EPS*INAA) + \beta_4(EPS*INAALarge) + \beta_5(EPS*INNASmall) + \beta_6(RET) + \beta_7(\Delta ROA) + \varepsilon$$

Model (1)

The INAA represents positive unusual accruals (accrual-based earning management) that is an indicator variable that equals 1 for accruals that increase earnings (if abnormal accruals are positive) and otherwise the zero code is given. INAA Large is an indicator variable that equals 1 for large positive unusual accruals and the high values of the average, otherwise the zero code is given, INAA Small is an indicator variable that equals 1 for small positive abnormal accruals for values below the average, otherwise the zero code is given, and as control variables, RET is the annual return on equity and ΔROA is equal to the annual change in return on assets. The following three models have been used to calculate unusual accruals. Abnormal accruals are equal to the remaining amount of the total accruals in below models:

-Modified Jones Model (1995): The following model (1-1) is a modified Jones model, presented by Ducho (1995). That TA is the difference between profits before unusual items and cash flows from operating activities in the current period, At-1 is equivalent to the sum of assets at the beginning of the financial period, ΔREVt is equivalent to changes in sales, ΔRECit is equivalent to changes in receivables, PPEt equals property, equipment and machinery (Matsumoto, 2002; Burgstahler & Eames, 2003; Liang, 2014; Kazan, 2016; Bianchi & Chen, 2015):

$$TA/A_{t-1} = \alpha + \beta_0\, 1/A_{t-1} + \beta_1 (\Delta REV_t - \Delta REC_{it})/A_{t-1} + \beta_2 PPE_t/A_{t-2} + \varepsilon_{t,i}$$

(1-1)

- ***Kothari Model (2005):*** That was similar to the modified Jones model, but also used a return on assets. Kothari, Leone, & Wasley (2005), found in their studies that the model had stronger results than the Jones model. Their model was as follows (1-2), Where α0 is the fixed coefficient and ROAi, t is the return on asset of the previous year:

$$TA_{it}/A_{it-1} = \alpha^0 + \alpha_i[1/A_{it-1}] + \beta^1{}_i\,[\Delta REV_{it}/A_{it-1}] + \beta^2{}_i\,[PPE_{it}/A_{it-2}] + \delta IROA_{i,t-1} + \varepsilon_t$$

(1-2)

-***Yoon model (2012):*** Yoon, Hyo, & Gregg (2012), presented the evidence that the Jones modified model has a false fixation problem. So, in this model, the inverse of the company size as an independent variable causes incorrect changes in the standard coefficients and the transfer of information to the statistical model. Additionally, the Jones modified model has weak explanatory power; therefore, this model is incapable of regression models. Therefore, they presented a new model (1-3) for solving these problems as follows: the intangible asset of the previous period was added as an additional indicator of non-current accruals (Yoon et al., 2012):

$$TA/A_{t-1}= \beta_0 + \beta_1 \Delta REV/A_{t-1} + \beta_2 \Delta NREC/A_{t-1} + \beta_3 PPE_{t-1}/A_{t-1} + \beta_4 INTG_{t-1}/A_{t-1} + \varepsilon$$

(1-3)

3-2-2- Positive real activities manipulating

To test hypothesis number 2, relation No. 5 is used as follows (Relationship No. 2):

$$BONUS= \beta_0 + \beta_1 EPS + \beta_2 (ABCFO+) + \beta_3 (EPS * ABCFO+) + \beta_4 (ABPROD+) + \beta_5 (EPS * ABPROD+) + \beta_6 (ABDISEX+) + \beta_7 (EPS * ABDISEX+) + \beta_8 (RET) + \beta_9 (\Delta ROA) + \varepsilon$$

Model (2)

That AbCfo is abnormal operating cash flows, AbProd is abnormal production costs, AbDisex is abnormal optional costs:

1. Abnormal operating cash flows: In the following model, the $CFO_{i,t}$ is the operating cash flows of period $_{t, 1}$, $TA_{i, t}$ is the total assets of the previous period, Sales i, t is sales of period$_t$, $\Delta Sales_{i,t}$ is Sales changes and ε is Remaining model (2-1) (equivalent to abnormal operating cash flows) (Sonenshine et al, 2016; Gunny, 2010; Roychowdhury, 2006):

$$CFO_{i,t}/TA_{i,t-1} = \beta_1 1/TA_{i,t-1} + \beta_2 Sales_{i,t}/TA_{i,t-1} + \beta_3 \Delta Sales_{i,t}/TA_{i,t-1} + \varepsilon_{i,t}$$

(2-1)

2. Abnormal production costs: In the following model, Prod i, t, is the company's production costs at the end of year t equal to the cost of the sold goods and inventory changes, Δ Sales i, t-1 is The sales changes at the end of the previous year, ε i, t is Remaining model (2-2) (abnormal production costs) (Sonenshine et al, 2016; Gunny, 2010; Roychowdhury, 2006):

$$Prod_{i,t}/TA_{i,t-1} = \beta^1 1/TA_{i,t-1} + \beta^2 Sales_{i,t}/TA_{i,t-1} + \beta^3 \Delta Sales_{i,t}/TA_{i,t-1} + \beta^4 \Delta Sales_{i,t-1}/TA_{i,t-1} + \varepsilon_{i,t}$$

(2-2)

1. Abnormal Optional Expenses: In the following model, Disexp i, t is the cost of the end of the year, which is the sum of distribution and sales, general and administrative costs. Remaining model (2-3) (Abnormal Optional Expenses) (Sonenshine et al, 2016; Gunny, 2010; Roychowdhury, 2006):

$$Disexp_{i,t}/TA_{i,t-1} = \beta^1 1/TA_{i,t-1} + \beta^2 Sales_{i,t}/TA_{i,t-1} + \varepsilon_{i,t}$$

(2-3)

3-2-3- Conditional Conservatism

To test hypothesis 3, the modified Basu model is described in the following model (3) (Shota, 2012; Bianchi & Chen, 2015; Ball & Shivakumar, 2005; Hui et al, 2009):

$$BONUS = \beta_0 + \beta_1 EP + \beta_2 (Con\text{-}Score) + \beta_3 (EPS * Con\text{-}Score) + \beta_4 (RET) + \beta_5 (\Delta ROA) + \varepsilon$$

Model (3)

Con-Score is equivalent to conservative conditional. In this study, three types of models for measurement of the conditional conservatism are used:

1) BC_SCORE: The first measure of conditional conservatism that we use is the Khan and Watts (2009) firm-year accounting conservatism measure (C_score). Following Khan and Watts (2009) we estimate our first firm-year measure of conditional conservatism (BC_SCORE) by estimating Basu's

(1997) regression, as in equation (3-1), allowing the coefficients to vary across firms and over time.

$$EPS_{it} = \beta^0 + \beta^1_{it} DRit + \beta^2_{it} RET_{it} + \beta^3_{it} DR_{it}*RET_{it} + \_it \quad (3\text{-}1)$$

where EPS_{it} is the earnings per share before extraordinary items for firm i in fiscal year t, deflated by prior fiscal year price (Pi_{t-1}), RET_{it} is the return on firm i from 9 months before fiscal year-end t to three months after fiscal year-end t, and DR_{it} is a dummy variable equal to 1 if RET_{it} is negative and 0 otherwise. If bad news is recognized in a more timely fashion than good news, β^3 will be greater than 0 ($\beta^3 > 0$).

To estimate the timeliness of both good news and bad news at the firm-year level, Khan and Watts (2009) specify that both the timeliness of good news (G_score) and the asymmetric timeliness of bad news (C_score) are linear functions of firm-specific characteristics (leverage, size, and the market-to-book ratio (MTB) as follows:

$$G\_Score = \beta^2_{it} = \mu^1_t + \mu^2_t SIZE_{it} + \mu^3_t MTB_{it} + \mu^4_t LEV_{it} \quad (3\text{-}2a)$$

$$C\_Score = \beta^3_{it} = \lambda^1_t + \lambda^2_t SIZE_{it} + \lambda^3_t MTB_{it} + \lambda^4_t LEV_{it} \quad (3\text{-}2b)$$

Where *SIZE* is the natural log of total assets, *MTB* is the market value of equity divided by the book value of equity, and *LEV* is total leverage deflated by total assets. Basu's (1997) regression can be rewritten as below by substituting (3-2a) and (3-2b) into (3-1):

$$EPSit = \beta^0 + \beta^1_{it} DR_{it} + RET_{it} (\mu^1_t + \mu^2_t SIZE_{it} + \mu^3_t MTB_{it} + \mu^4_t LEV_{it}) + DR_{it}*RET_{it} (\lambda^1_t + \lambda^2_t SIZE_{it} + \lambda^3_t MTB_{it} + \lambda^4_t LEV_{it}) + (\delta^1_t SIZE_{it} + \delta^2_t MTB_{it} + \delta^3_t LEV_{it} + \delta^4_t DR_{it}*SIZE_{it} + \delta^5_t DR_{it}* MTB_{it} + \delta^6_t DR_{it}*LEV_{it}) + \_it \quad (3\text{-}3)$$

Recent studies subsequent to Khan and Watts (2009), such as Chen, Huang, &Jha. (2010) have used this modified conservatism measure based on Basu (1997). We estimate annual regressions of equation (3-3) and obtain coefficients of λ^1_t, λ^2_t, λ^3_t, and λ^4_t to estimate C_score (3-2b), which we denote as BC_SCORE. BC_SCORE varies across firms through cross-sectional variation in the firm-year characteristics (SIZE, MTB, and LEV), and over time through inter temporal variation in λ. Conditional conservatism is increasing in BC_Score. Even though the Basu (1997) measure has been used in many published papers (e.g., Zhang 2008 and many others), it has been criticized for having econometric. Ball, Kothari, & Nikolaev (2013) address the conceptual and econometric challenges to the Basu (1997) measure raised in the recent literature and conclude that the Basu measure is a valid representation of the extent of conditional conservatism in accounting income. Also, Ryan, (2006) argues that asymmetric timeliness measured by Basu (1997) is the most direct implication of conditional conservatism.

Nonetheless, we recognize that there is no universally accepted single measure of conditional conservatism (Givoly, Hayn, & Natarajan, 2007) and thus measure conditional conservatism using two other approaches beyond the Khan and Watts (2009) modified conservatism measure based on Basu (1997) to ensure the robustness of our findings.

2) AC_SCORE: The Second firm-year conditional conservatism measure is based on the Ball & Shivakumar (2005) accruals–cash flows–based measure of conditional conservatism. We modify the Ball & Shivakumar (2005) accruals-cash flows-based measure (equation 3-4 below) using the methodology that Khan and Watts (2009) adopt to estimate a firm-year measure of conservatism as in equation (3-4):

$$ACC_{it} = \beta^0 + \beta^1_{it} DC_{it} + \beta^2_{it} CFO_{it} + \beta^3_{it} DC_{it}*CFO_{it} + \_it \quad (3\text{-}4)$$

where *ACCit* is total accruals in year t, deflated by the year t-1 market value of equity, *CFOit* is the cash flow from operations (Compustat Variable: OANCF) in year t, deflated by the year t-1market value of equity (Compustat Variables: CSHO*PRCC_F), and DC_{it} is a dummy variable equal to 1 if CFO_{it} is negative and 0

otherwise. The coefficient on the interaction term between DC and CFO (β^3) measures conditional conservatism. If economic losses are recognized in a more timely fashion than gains, then β3 will be greater than.

To estimate the timeliness of both good news and bad news at the firm-year level, again, we adopt Khan and Watts' (2009) specification that both the timeliness of good news (AG_SCORE) and the asymmetric timeliness of bad news (AC_SCORE) are linear functions of firm-specific characteristics as follows:

$$AG\_Score = \beta^2_{it} = \mu^1_t + \mu^2_t\, SIZE_{it} + \mu^3_t MTB_{it} + \mu^4_t\, LEV_{it} \quad (3\text{-}5a)$$

$$AC\_Score = \beta^3_{it} = \lambda^1_t + \lambda^2_t\, SIZE_{it} + \lambda^3_t\, MTB_{it} + \lambda^4_t\, LEV_{it} \quad (3\text{-}5b)$$

The accruals–cash flows–based regression (Ball & Shivakumar, 2005) can be rewritten as below by substituting (3-5a) and (3-5b) into (3-4):

$$ACC_{it} = \beta^0 + \beta^1_{it}\, DC_{it} + CFO_{it}\,(\mu^1_t + \mu^2_t\, SIZE_{it} + \mu^3_t\, MTB_{it} + \mu^4_t\, LEV_{it}) + DC_{it}{*}CFO_{it}\,(\lambda^1_t + \lambda^2_t\, SIZE_{it} + \lambda^3_t\, MTB_{it} + \lambda^4_t\, LEV_{it}) + (\delta^1_t\, SIZE_{it} + \delta^2_t\, MTB_{it} + \delta^3_t\, LEV_{it} + \delta^4_t\, DC_{it}{*}SIZE_{it} + \delta^5_t\, DC_{it}{*}\, MTB_{it} + \delta^6_t\, DC_{it}{*}LEV_{it}) + \_{it} \quad (3\text{-}6)$$

We estimate the annual regression of equation (3-6) and obtain the coefficients of λ^1_t, λ^2_t, λ^3_t, and λ^4_t to estimate AC_SCORE (3-5b). Conditional conservatism is increasing in AC_SCORE.

3) NC_SCORE: The second alternative firm-year conditional conservatism measure is based on the transitory nature of economic income (current and lagged earnings–changes model), which is the tendency for increases and decreases in accounting income to reverse (Basu 1997; Ball & Shivakumar, 2005). Again, we modify this measure using the methodology that Khan and Watts (2009) adopt to estimate the firm-year measure as in equation (3-7):

$$\Delta NI_{it} = \beta^0 + \beta^1_{it}\, DN_{it} + \beta^2_{it}\, \Delta NI_{it-1} + \beta^3_{it}\, DN_{it}{*}\Delta NI_{it-1} + \_{it} \quad (3\text{-}7)$$

Where ΔNI is the change in earnings before extraordinary items (Compustat Variable: IB) from

Year t-1 to year t, scaled by the beginning market value of equity (Compustat Variables: CSHO*PRCC_F) and DN is a dummy variable equal to 1 if the ΔNI in the prior year is negative and 0 otherwise. The coefficient on the interaction term between DN and ΔNI (β^3) measures the degree of conditional conservatism. Recognizing economic losses in a more timely fashion than gains implies that $\beta^3 < 0$.

To estimate the timeliness of both good news and bad news at the firm-year level, we adopt Khan and Watts' (2009) specification that both the timeliness of good news (NG_SCORE) and the asymmetric timeliness of bad news (NC_SCORE) are linear functions of firm-specific characteristics similar to (3-5a) and (3-5b) equations above, which leads to equation (3-8):

$$\Delta NI_{it} = \beta^0 + \beta^1_{it}\, DN_{it} + \Delta NI_{it-1}\,(\mu^1_t + \mu^2_t\, SIZE_{it} + \mu^3_t\, MTB_{it} + \mu^4_t\, LEV_{it}) + DN_{it}{*}\Delta NI_{it-1}\,(\lambda^1_t + \lambda^2_t\, SIZE_{it} + \lambda^3_t\, MTB_{it} + \lambda^4_t\, LEV_{it}) + (\delta^1_t\, SIZE_{it} + \delta^2_t\, MTB_{it} + \delta^3_t\, LEV_{it} + \delta^4_t\, DN_{it}{*}SIZE_{it} + \delta^5_t\, DN_{it}{*}\, MTB_{it} + \delta^6_t\, DN_{it}{*}LEV_{it}) + \_{it} \quad (3\text{-}8)$$

We estimate the annual regression of equation (3-8) and obtain the coefficients of λ^1_t, λ^2_t, λ^3_t, and λ^4_t to estimate NC_SCORE. Conditional conservatism is decreasing in NC_SCORE. We multiply the resulting measure by negative one to ensure that the measure increases with conditional conservatism.

3- 2- 4- Earnings response coefficient

To test hypothesis 4, we use the following model (4) in which ERC is the earnings response coefficient:

$$BONUS = \beta^0 + \beta^1 EPS + \beta^2\,(ERC) + \beta^3\,(EPS * ERC) + \beta^4\,(RET) + \beta^5\,(\Delta ROA) + \varepsilon \quad (4)$$

To measure the earnings response coefficient, four models have been used as follows: (Behbahaninia &Mashayekhi, 2016; Scott, 2006).

Ohlson(1995) price model: P is equal to earning per share, b is the book value of the stock and X equals the stock price at time t.

$$P_t = \beta^0 + \beta^1 b_t + \beta^2 X_t + \varepsilon \quad (4\text{-}1)$$

1-Return Model:

$$RET_t = \beta^0 + \beta^1 X_t + \varepsilon \quad (4\text{-}2)$$

3-Unusual return model:

$$URET_t = \beta^1 + \beta^2 UX_t + \varepsilon \quad (4\text{-}3)$$

$URET_t$ is the abnormal returns in the period t, UX_t equals to the unexpected profit in the same period, ε is the error, and β^2 is the earnings response coefficient. The unexpected profit is the difference between the actual profit of the end of the period t and expected earnings. Real profits are available at the end of the reviewed period, but expected earnings should be estimated first. This estimate of future profits is made through time series estimates. Both models are called Return models.

4-Modified returns model: Easton and Harris (1991) also arrived at the following model with the introduction of the X_t / P_{t-1} variable to previous models of Return in order to improve these models. According to them, the inclusion of this variable in the relationship of profit- Return or unusual profits-abnormal returns can make it more powerful. This model is called the modified return model (Model 4-4) (Behbahani & Mashayekhi, 2016).

$$RET_t = \beta^0 + \beta^1 X_t/P_{t-1} + \beta^2 \Delta X_t/ P_{t-1} + \varepsilon \quad (4\text{-}4)$$

2-2-5- Fluctuation of Stock return

To test hypothesis number 5, model number (5) is used as follows:

$$BONUS = \beta^0 + \beta^1 EPS + \beta^2 (RVAR) + \beta^3 (EPS * RVAR) + \beta^4 (RET) + \beta^5 (\Delta ROA) + \varepsilon \quad (5)$$

Where RVAR is equivalent to stock return fluctuations and two models are used as follows:

1. **Systematic Return Fluctuations**: In this research, based on the research of Chen et al. (2010), the systematic fluctuation is calculated from the Systematic Variance Squares, which is obtained from the following equation (model 5-

$$SysVolit = \sqrt{\beta_i^2 \, \delta_{mt}^2} \quad (5\text{-}1)$$

2. **Unsystematic Return fluctuations:** Unsystematic variance of stock returns has been used in the same way as Chan, Hameed & Kang (2013), which is Systematic Variance Squares for stock returns. In this method, for the calculation of unsystematic variance, first, the returns variance of each share is calculated and considered as the total variance ($\delta^2 i$), then, the systematic variance is obtained by multiplying the second power of beta of each share ($\beta^2 i$) in the market index variance ($\delta^2 m$). Finally, the unsystematic variance is calculated from the difference between the systematic variance and the total variance in year i. The unsystematic variance of stock i in the fiscal year t is given by the following equation (model 5-3). Model (5-2):

$$IdioVoli, t = \sqrt{\delta_i^2 - (\beta_i^2 \delta_m^2)} \quad (5\text{-}2)$$

4. Empirical Analysis

The statistical sample includes 121 companies during the period from 2008 to 2016. In this section, the central criteria (mean and median) and the scattering criteria (standard deviation, maximum and minimum) were used for calculation, where are shown in Table (2).

Table 2: Descriptive table

Symbol	mean	median	Maximum	Minimum	standard deviation
BONUS	5.035	6.396	1.754	.000	3.161
EPS	.095	.1432	1.856	-3.628	.362
INAA-JO	.431	.000	1.00	.000	.495
INAA-KO	.472	.000	1.00	.000	.499
INAA-UO	.474	.000	1.00	.000	.4996
ABPORD	.006	.013	.688	-.711	.157
ABCFO	.0031	-.014	.978	-.903	.153
ABDISS	-.002	-.004	.204	-.092	.037
BC_SCORE	.015	.013	.811	-1.480	.155
AC_SCORE	-.210	-.225	.312	-.267	.052
NC_SCORE	-.889	-1.028	.919	-1.689	.306
ERC-P	-.107	-.211	44.465	-19.096	3.127
ERC-R	-.905	-.214	33.342	-32.227	6.463
ERC-UR	13.94	57.94	81.48	.350	2.046
ERC-AR	7.212	-43.216	61.75	2.794	4.008
RVAR-S	.525	.000	8.625	.084	.229
RVAR-US	2.316	.000	59.304	.115	.376
ΔROA	.11	-.47	.7	.000	.01
RET	1.07	-.74	8.59	.11	.46

The great difference between the variables minimum and maximum in research is unavoidable due to the difference in the size of the sample companies. Vaus (2002) states that when the sample size is greater than 100 (an approximation criterion for normal distribution), the probability of the normalization of data increases. The standard deviation of 3.161 for compensation indicates that uniformity in remuneration in Iran is low. The highest amount for earning per share is 1.856 and its lowest value is 3.628. The average value for abnormal accruals and earning increasing for the three indexes used is .431, .472, and .474 respectively. The average value for abnormal operating cash flows, abnormal production costs and abnormal voluntary costs is equal to .003, .006 and -.002 which means that companies are using abnormal operating cash flows and abnormal production costs to increase profits, and use unusual voluntary costs to reduce their profits. And the greatest manipulation of profits to increase it relates to abnormal operating cash flows with the amount .978. The average value for conditional conservative indices for earnings asymmetry, accruals, and earnings sustainability is equal to .015, -.210, -.889 which indicates that the highest degree of conservatism is related to the profit asymmetry. Among the indicators of the Earnings Reaction Coefficient, the highest amount is related to the Adjusted return model (.401) and the least amount is related to the return model (-.905). Among the stock fluctuation indices, the systematic fluctuation index of return with average value (.229) has the lowest and the non-systematic fluctuation index of stock returns with the average value (.376) was the highest. The average value for the change in the return on assets is equal to (.01) and the maximum

value is (.7). The average value for the stock return index is (.46) and the maximum value is (8.59).

4 -1- Other results

Before fitting the patterns, it is necessary to test F Limer in order to determine the choice between the panel data method and the combined data method, followed by the Hausman test for choosing between a constant effect pattern and the pattern of random effects for the pattern, the above should be done. The results of the F limer test for research patterns indicate the use of panel data and the results of the Hausman test indicate the acceptance of the fixed effect pattern for patterns 1, 2, 3and accepting the pattern of random effects for other patterns. Table 3 shows the results of the estimation of the parameters of the positive accrual model and its effect on the compensation of the board of directors.

Table 3: Testing the first hypothesis

		1.Modified Jones Model(1995)		**2.Kotari Model(2005)**		**3.Yoon model (2012)**	
Variables	Pre-SIGN	Coeff	Prob.	Coeff	Prob.	Coeff	Prob.
EPS	+	2.750	.000**	2.422	.000**	2.462	.000**
		(9.1748)*		(7.770)*		(7.546)*	
INAA	-	.607	.0021**	.398	.043**	.504	.0102**
		(3.0829)*		(2.019)*		(2.574)*	
EPS*INAA	-	-.358	.5321**	.379	.546**	1.744	.0478**
		(-.624)*		(.602)*		(1.981)*	
LARG*INAA*EPS	-	-2.881	.0013**	-1.171	.189**	-.928	.367**
		(-3.223)*		(-1.31)*		(-.901)*	
SMAL*INAA*EPS	-	1.129	.291**	3.076	.028**	-2.577	.007**
		(1.055)*		(2.190)*		(-2.698)*	
RET	+	.206	.0715**	.216	.056**	.225	.043**
		(1.804)*		(1.906)*		(2.024)*	
ΔROA	+	1.457	.2063**	1.292	.261**	.679	.550**
		(1.264)*		(1.123)*		(.597)*	
c	?	4.487	.0000**	4.453	.000**	4.391	.000**
		(35.24)*		(12.56)*		(17.160)*	
R-squared		.1563		.1195		.122	
Adjusted R-squared		.145		.114		.117	
Durbin-Watson stat		1.627		1.615		1.625	
F-statistic		13.245		2.951		21.556	
Prob(F-statistic)		.000		.000		.000	

** Note: SIG represent significant at 5% level. T-statistics are shown in parentheses below the coefficient loading.

The coefficient for the earnings per share variable indicates its positive effect on board of directors' compensation. Coefficients of positive abnormal accruals are indicative of their significant and positive effect on compensation. However, the interaction between positive abnormal accruals (Jones model and Kothari model) with the earnings per share is not significant and is only significant using the third model (Yoon model). The interaction of abnormal and large positive accruals with earnings per share is significant only for the first model (Jones model). And this relation is significant for abnormal and small positive accruals, only for the second and third models (Kothari model and Yoon model). The coefficients of control variables indicate that the changes in return on assets and stock returns on compensation of the board of directors are not significantly affected.

Table 4: Testing the second hypothesis

Variable	PREDICTED SIGN	Coefficient	Prob.
EPS	+	1.033	.012**
		(2.332)*	
CFO	-	-1.672	.039**
		(-2.064)*	
CFOEPS	-	5.968	.001**
		(3.267)*	
PORD	-	-3.136	.007**
		(-2.6874)*	
PORDEPS	-	5.270	.026**
		(2.228)*	
DISS	-	-8.715	.013**
		(-2.4772)*	
DISSEPS	-	24.340	.000**
		(3.523)*	
DROA	+	2.752	.0059**
		(2.759)*	
RET	+	.256	.024**
		(2.255)*	
C	?	2.554	.000**
		(15.813)*	
R-squared		.156	
Adjusted R-squared		.141	
Durbin-Watson stat		1.832	
F-statistic		1.300	
Prob(F-statistic)		.000	

** Note: SIG represent significant at 5% level. T-statistics are shown in parentheses below the coefficient loading

Table 4 shows the results of estimating the parameters of the model of manipulation of real activities and its effect on compensation of the board of directors. The coefficient for the earnings per share

variable indicates its positive effect on the compensation of the board of directors. The coefficients of abnormal operating cash flows, abnormal production costs, and abnormal arbitrary costs indicate their significant and negative effect on board of directors' compensations. In other words, for any kind of manipulation of real activities, that profit will increase the compensation of the board of directors. Also, the above mentioned indices and their interaction with the earning per share indicate their significant and positive effect on board of directors' compensations. That is, if the increase in the earning per share is accompanied by manipulation of the real activities in increasing form, the compensation of the board of directors will increase which indicates a lack of attention to them in compensation programs. The coefficients of control variables indicate a significant effect of changes in asset returns and stock returns on compensation of the board of directors. Table 5 shows the results of estimating the parameters of a conditional conservative model and its effect on compensation of the board of directors. The coefficient for the earnings per share variable indicates its positive effect on the compensation of the board of directors. Based on the first two models, the coefficients of conditional conservatism variables indicate a positive and significant effect on the compensation of the board of directors, but based on the third model, this relationship is not significant. Based on the first two models of conservatism, conditional conservatism and its interaction with earnings, they show their positive and significant effect on compensation. But this relationship is not meaningful according to the second model of conservatism. The variable coefficient of changes in return on assets, only in the first model, indicates its significant effect on conservatism, but the coefficients of stock return variables in these models are not significant.

Table 5: Testing the third hypothesis of the research

		1-BCSCORE		**2-ACSCORE**		**3-NCSCORE**	
Variables	**PRE- SIGN**	**Coeff**	**Prob**	**Coeff**	**Prob**	**Coeff**	**Prob**
EPS	+	1.063	.000**	5.481	.007**	5.761	.000**
		(4.325)*		(3.409)*		(6.723)*	
G-SCORE	+	2.233	.013**	5.009	.005**	-.494	.103**
		(2.495)*		(2.812)*		(-1.632)*	
EPS*G-SCORE	+	1.303	.004**	13.266	.062**	3.244	.000**
		(3.585)*		(1.868)*		(3.885)*	
RET	+	.1305	.366**	.223	.041**	.285	.013**
		(.904)*		(2.044)*		(2.494)*	
ΔROA	+	4.649	.000**	1.490	.181**	.669	.551**
		(4.957)*		(1.337)*		(.596)*	
C	?	2.220	.000**	5.723	.000**	4.184	.000**
		(9.228)*		(13.36)*		(14.32)*	
R-squared		.095		.119		.150	
Adjusted R-squared		.091		.115		.139	
Durbin-Watson stat		1.8341		1.607		1.628	
F-statistic		2.272		29.142		14.583	
Prob(F-statistic)		0.000		0.000		0.000	

** Note: SIG represent significant at 5% level. T-statistics are shown in parentheses below the coefficient loading

Table 6 shows the results of estimating the parameters of the models of the Earnings response coefficient and its effect on compensation of the board of directors. Earnings per share variable for all four models indicates its positive effect on compensation of the board of directors. Based on the first, third and fourth models, the earnings response coefficient has a positive and significant effect on compensation. But according to the second model, this relationship is not meaningful. Based on the third and fourth model, Earnings response coefficient and its interaction with Earnings per share, indicate their positive and significant effect on compensation. But this relationship is not meaningful on the basis of the first and second models of the Earnings response coefficient. Variable coefficients of changes in asset returns and stock return variables other than the first model of Earnings Reaction coefficient are not significant in these models.

Table 6: Test of the fourth hypothesis of the research

		1-ohlson price model		**2- Return Model**		**3- Unusual return model**		**4-Modified returns model**	
Variables	PRE-SIGN	Coefficients	Prob	Coefficients	Prob	Coefficients	Prob	Coefficients	Prob
EPS	+	2.496	0.000**	2.714	0.000**	2.387	0.000**	2.199	0.000**
		(9.009)*		(9.881)*		(8.945)*		(8.111)*	
ERC	+	.1086	0.004**	0.028	0.110**	0.017	0.042**	0.069	0.000**
		(2.822)*		(1.598)*		(2.026)*		(4.676)*	
EPS*ERC	+	.129	0.279**	0.067	0.274**	0.119	0.003**	0.143	0.023**
		(1.081)*		(1.093)*		(2.910)*		(2.266)*	
RET	+	.252	0.021**	0.199	0.072**	0.182	0.097**	0.213	0.050**
		(2.300)*		(1.799)*		(1.659)*		(1.962)*	
ΔROA	+	1.027	0.356**	1.172	0.295**	1.657	0.135**	1.237	0.259**
		(.923)*		(1.045)*		(1.494)*		(1.128)*	
C	?	4.700	0.000**	4.698	0.000**	4.651	0.000**	4.352	0.000**
		(21.106)*		(2.48)*		(21.068)*		(8.111)*	
R-squared		.125		0.125		0.132		0.147	
Adjusted R-squared		.121		.121		0.128		0.139	
Durbin-Watson stat		1.591		1.569		1.619		1.644	
F-statistic		3.985		3.844		33.020		36.304	
Prob(F-statistic)		.000		0.000		0.000		0.000	

Table 7 shows the results of estimating the parameters of the model of stock returns fluctuations and its effect on compensation of the board of directors. Earnings per share variable for all four models indicates its positive effect on compensation of the board of directors. The variable coefficients of stock return volatility in all three models, as well as the coefficients of the interaction of fluctuations in

stock returns and earnings per share for all three models, indicate their negative and significant effect on compensation. Among the control variables, stock returns have a significant positive effect on r compensation and changes in asset returns based on the second and third models, have a significant positive effect on compensation.

Table 7: Test of the fifth hypothesis of the research

	1- Systematic returns volatility		2- unsystematic returns volatility	
Variables	Coefficients	Prob	Coefficients	Prob
EPS	2.149	.000**	1.666	.000**
	(7.119)*		(6.034)*	
RVAR	-.847	.000**	-.112	.048**
	(-4.399)*		(-1.98)*	
EPS* RVAR	-1.749	.004**	-.293	.017**
	(-3.569)*		(-2.386)*	
RET	.322	.006**	.258	.029**
	(2.78)*		(2.183)*	
ΔROA	2.583	.019**	3.226	.004**
	(2.351)*		(2.889)*	
C	4.872	.000**	4.744	.000**
	(43.17)*		(42.982)*	
R-squared	.135		.096	
Adjusted R-squared	.125		.085	
Durbin-Watson stat	1.585		1.485	
F-statistic	12.895		8.776	
Prob(F-statistic)	.000		.000	

** Note: SIG represent significant at 5% level. T-statistics are shown in parentheses below the coefficient loading

5. Conclusion

The task of accounting and financial reporting in reducing moral hazard is to provide an accurate and sensitive performance evaluation index. Performance measurement index for real motivation of board of directors in order to maximize company value and therefore the value of all stakeholders, should be carefully measured and sensitized to influence the market value of the company. In this research, the effect of the dimensions of profit accuracy and sensitivity on board of director's compensation has been studied. The results of the research indicate that the compensation for earning increasing unusual accruals increased as a reciprocal indicator of profit accuracy and these items in rewarding don't receive enough attention. This conclusion is not consistent with the results of research (Matsumoto, 2002; Burgstahler & Eames, 2003; DeFond & Park, 2001; Liang, 2014) for example. However, directors' compensation for any increase in large positive unusually accruals, and its reciprocity with earnings

per share, only decreases based on the modified Jones model (1995) Which is in line with the results of Liang (2014), Kazan (2016), and Bianchi and Chen (2015). As well as directors' compensation for any increase in small positive abnormal accruals and their reciprocal with earnings per share, increases based on the Kothari (2006), and decreases according to the model of Yoon et al (2012). Based on the Kothari (2005)it is opposite of, and according to the model of Yoon et al(2012), it is in agreement with the results of previous research (Burgstahler & Eames, 2003; Liang, 2014; Kazan, 2016; Bianchi & Chen, 2015). While, if the objective of the incentive system and the compensation is to maximize the value of the company and, as a consequence, the interests of all interest groups, accruals, especially earning increased accruals, must be paid more attention. Otherwise, accruals would be one of the things that would allow them to achieve the individual goals of the board of directors. Meaningful and negative effect of any manipulation of the real activities as a factor reducing the accuracy of reported earnings, on the compensation indicates that these items are sufficiently appreciated in determining the compensation of the board of directors. These results are in line with the results of previous studies (Gunny, 2010; Roychowdhury, 2006; Bartov et al; 2002; Bianchi & Chen, 2015). Therefore, a negative response by reducing compensation must be made against the board of director's manipulated profits to prevent the unjust transfer of wealth, and also to be a driving force for board of directors in pursuing their activities in line with accounting principles and standards. Since conditional conservatism represents the asymmetric function of good and bad news and thus reduces the accuracy of profit, it expects its negative effect on compensation of the board of directors. But the result could be due to the role of conditional conservatism in preventing opportunistic behavior of board of directors. This means paying more attention to the preventing role of conditional conservatism and limiting the board of director's actions. According to Ruch and Taylor (2011), conservatism reduces information asymmetry and improves the transparency of disclosure in financial information. That is, it increases the accuracy of profit. These results are due to decreasing of opportunistic behavior, in line with research by (Bianchi & Chen, 2015; Watts, 2003; Ruch & Taylor, 2011) and from the point of view of asymmetric encounter with news, in line with research by (Peak et al, 2007). The earnings response coefficient, based on price models, abnormal returns and adjusted returns, has a significant and positive effect on the compensation of the board of directors in the current period, that is in line with the results of Evert and Wagenhofer (2011), Mostafa (2017) based on the use of earnings response coefficient Index as a Profit Quality Index, and is in line with the results of Tucker and Paul(2006), based on the use of earnings response coefficient as an indicator of lowering the cost of capital and thus increasing the value of the company, and opposes the results of Hosseini et al. (2017). Therefore, the results of the research indicate that, in the existing rewarding system, earnings reaction coefficients have been reported as a direct indicator of earnings sensitivity and enough attention is paid (Ettredge, Kwon, Smith, & Zarowin, 2005, Evert & Wagenhofer, 2011; Tucker & Paul, 2006; and Warfield & Wild, 1992). The results of the research indicate the negative and significant effect of stock returns fluctuation index and its interaction with earnings per share is on compensation of the board of directors, which is in line with the results of previous research on the fluctuation of stock return volatility as the signal of accruals volatility (Perotti & Wagenhofer, 2011), as well as the low quality of financial reporting (Chen et al., 2010). Therefore, in the rewarding system in Iran, stock return fluctuations are a reciprocal indicator of profit sensitivity (Perotti & Wagenhofer, 2011; Chen et al., 2010), which is a factor in reducing directors' compensation. However, due to the systematic risk fluctuations, the compensation of the director should not be reduced, so the stock fluctuations aren't paid enough attention. Only remuneration based on the reported net income by board of directors will not necessarily motivate board of directors and increase company value. But

because of the flexibility contained in the accounting standards and the discretion of board of directors in choosing accounting procedures, this may lead to the transfer of wealth from the owners to the board of directors and reduce the value of the company. It is suggested that in the system of board of directors rewarding, the characteristics of profits, including the profit precision dimensions (profit Increase accruals, the profit Increase manipulation of real activities as well as Conditional conservatism), and profit sensitivity (earnings response coefficient and stock return fluctuations) are considered and paid enough attention and these indicators to be central to performance indicators so that compensations are tailored to the true and correct performance of board of directors. In this regard, the revision of the trade law is necessary for how the compensation is paid. Limitations of current research are related to measuring the research variables because for example there are several models for measuring earnings management and conservatism and maybe some models are more compatible than other ones based on the conditions of the interior of Iran. Considering the small number of companies accepted in Tehran Stock Exchange, in comparison to developed stock exchanges, and considering the sample conditions for this research. The final sample size seems to be relatively lower than similar studies in developed countries (small and shallow markets). Few researches have focused on the subject of compensation and how to optimize them in companies. Perhaps one of the reasons for this is the lack of willingness of major shareholders and their directors to provide information. On the other hand, the lack of information exchange between parent companies or industrial institutions and organizations that consists of a number of industrial units. For future researches, it is suggested that consideration should be given to other earnings characteristics that are relevant to the market value of the company. So to provide the necessary foundation in terms of theoretical foundations to define a coherent rewarding system based on the true and correct performance of board of directors.

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Appendix

Variable Definitions

Variable	Definition
BONUS	Natural logarithm of the Board of Directors compensation
EPS	Natural logarithm of operating earnings per share
INAA+	Represents Positive unusual accruals (accrual-based earning management) that is an indicator variable that equals 1 for accruals that increase earnings (if abnormal accruals are positive) and otherwise the zero code is given. Abnormal accruals are equal to the remaining amount of the total accruals in models(Modified Jones Model-INAAJO- (1995), Kothari et al-INAAKO- (2005), yoon-INAAYO- (2012))(1-1),(1-2),(1-3)models.
INAALarge+	is an indicator variable that equals 1 for large positive unusual accruals (for the high values from the average), otherwise is zero
INAASmall+	is an indicator variable that equals 1 for small positive abnormal accruals (for values below the average) , otherwise is zero
ABCFO+	Positive real activities manipulating by Abnormal operating cash flows, equal to the remaining amount of The model (2-1).
ABPROD+	Positive real activities manipulating by Abnormal production costs, equal to the remaining amount of The model (2-2).
ABDISEX+	Positive real activities manipulating by Abnormal Optional Expenses, equal to the remaining amount of The model (2-3).
BC_SCORE	Firm-year conditional conservatism measure 1
AC_SCORE	Firm-year conditional conservatism measure 2
NC_SCORE	Firm-year conditional conservatism measure 3
ERC	Earnings response coefficient; The values obtained from four models of earnings reaction coefficients (Ohlson price model-P-, Return Model-R-, Unusual return model-UR, Modified returns model-AR-) (4-1),(4-2),(4-3),(4-4)models.
RVAR	Stock return Fluctuation; The values obtained from four models of Fluctuation of Stock return (Systematic Return Fluctuations-S- and Unsystematic Return fluctuations-US-) (5-1) ,(5-2)models.
RET	Annual Return on Equity
ΔROA	Equal to annual changes in asset Return rates.