

## Investigating the Effect of Corporate Governance Mechanisms on the Quality of Accounting Profit

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**Abstract** Considerable attention given to the issues of corporate governance in recent years shows that the when corporate governance mechanisms are strong, managers find less time to deceive and this consequently increases the quality and reliability of their financial reporting. This research ultimately helps investors to maintain and increase their trust in the capital markets. The current investigation is aimed at investigating the effect of corporate governance mechanisms on the quality of financial reporting through the connection between companies operating ratios and accounting income quality. Centralization of power, the ownership percentage of institutional shareholders and board independence are among the corporate governance mechanisms which have been taken into account in this study. Earnings quality was measured in two ways. Sixty companies were selected as the sample among listed companies in Tehran Stock Exchange during 2006 to 2010. Multiple regressions were used to test the research hypotheses. This study showed that a strong corporate governance system creates a broad vision of the accounting process and it is associated with reported earnings.

**Key words** Corporate governance, earnings quality, centralization of power, institutional ownership, board independence

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### 1. Introduction

One of the main pillars of accounting systems is financial reporting which among its main aims is providing the necessary information to evaluate the performance and profitability of the enterprise. For this purpose, the information must be made in such a way that enables managers to evaluate the past performance; it must also be effective in measuring the profitability and anticipating the future business activities. One of the accounting items presented in the income statement is net profit. Net profit reported in financial statements is considered as one of the most important criteria for evaluating the performance of an enterprise and determining its value; this is always utilized by a wide range of users, such as stock market analysts and financial managers. Since the net profit calculation is done using the accrual basis, it is affected by accounting methods and estimates. Therefore, there is a possibility to manipulate profit. Therefore earnings quality is among the most important research areas.

On the other hand, optimal resource allocation in capital markets requires that the reported earnings quality to these markets be of proper quality. This is so because at making decisions and evaluating the company's shares, small and large investors as well as analysts rely on having good earnings quality. Profit is used by capital markets participants as an indicator of performance, valuing stock, expected returns and expected future performance of the enterprise. Separation of ownership and management, information asymmetry and its moral hazard cause the owners to be worried about the inappropriate allocation of resources by the management that takes the control of their assets. To decrease the information asymmetry and moral hazard that

threatens the owners, they try to develop and establish appropriate governance structures for administrators to control and monitor their behaviors. So it may be argued that one of the functions of corporate governance mechanisms is to ensure the good quality of financial reporting as a management behavior (task) [1].

This study investigates the effect of corporate governance mechanisms on the quality of the financial reporting process by using the relationship between mechanism ratio and quality of accounting profit. Board independence and concentration of power can be named as corporate governance mechanisms. Since a firm's performance is measured by the quality of its profitability, this is used as the variable in this study. The following methods were used to measure earnings quality.

1. Measurement based on profit management
2. Measurement based on value of profits [2].

The current study address the question that how corporate governance mechanisms affects earnings quality.

## **2. Literature review**

### ***Corporate governance mechanisms and earnings quality***

Because of the importance of mechanisms necessary to achieve the desired earnings quality, most countries have made efforts to gain it. Among these mechanisms, there is a governance system for companies and enterprises [3]. Corporate governance system is a mechanism for managing, directing and supervising the activities of the company with the aim of creating value for shareholders [4]. One of the most important applications of corporate governance mechanism is that it assures the quality of the financial reporting process. Corporate governance mechanism is the result of financial reporting fraud at companies such as Enron, Worldcom, Adolphia and Parmalat, and particularly high levels of manipulation in profit [5]. The existence of a corporate governance mechanism in companies restricts managers' self-seeking and opportunistic behaviors. So the quality of and reliance on financial reporting (especially accounting profit) will be improved. Consequently investors will better trust capital market [6].

Academic researches show that the weaker the corporate governance mechanism, the higher the profit management; and this ultimately indicate low earnings quality. Researches also revealed that weak corporate governance mechanism is connected with weak financial managements and high cheating levels. In general, empirical research suggests that there is a direct relationship between the mechanisms of corporate governance and trustable financial reporting system [5]. The studied conducted by Cohen et al. (2005) and Bedard (2006) indicated that the quality of accounting profit reported to capital markets has increased after Sarbanes-Axley legislation. However it should be mentioned that some factors such as special conditions prevailing on the capital market, companies' management by state administrators and business laws being old all provide the situation to have opportunistic profit management and this reduces earnings quality. These conditions can hinder the effective functioning of corporate governance system and improvement of the quality of financial reporting [1].

Corporate governance mechanisms generally include shareholders and their ownership structure, board members and their composition, and management of the company which is driven by the managing director or chief executive and other stakeholders that may affect the company's movement [7].

### ***Concentration of power and earnings quality***

Among the central issues of corporate governance is the way firms are controlled and governed and the most important factor affecting firms' control and governance is combining ownership, especially the concentration of the ownership of companies with major shareholders. Ownership concentration is also referred to as the concentration of power which includes the way shares are distributed among shareholders of various companies. The less the number of shareholders, the more concentrated the ownership will be [8]. In recent years, concentrated ownership structure and its impact on various aspects of corporate such as earnings quality has been raised as one of the important issues in the literature on corporate governance since it is common in most countries and especially among developing enterprises and new markets in Europe and Asia. By increasing supervision and eliminating the problem of free riding, ownership concentration may cause positive changes in the company; however, other mechanisms may act in the opposite direction. One of the issues that have been dealt with a lot is that major shareholder and ownership of the director may use their control-

ling rights and authorities for personal gains and it causes the exploitation of other shareholders. These possibilities and lack of clear impact of ownership concentration on different aspects of the company have led to the presentation of different ideas about the behavior of shareholders; thus, researchers have come to contrastive conclusions [9].

Therefore, the first hypothesis is proposed as below.

Hypothesis 1: *There is a significant relationship between concentration of power and quality of profit.*

#### ***Institutional shareholders and earnings quality***

According to paragraph 27 of the Securities Market Law (Volume 1010) institutional investors include:

1. Banks and insurances
2. Holdings, investment companies, pension funds, financing institutions and investment funds registered in the Securities and Exchange Organization
3. Any natural or legal person who buys more than 5 percent or more than 5 billion Rials of the nominal value of available securities.
4. Public and government organizations
5. State companies
6. Members of the board and directors or individuals with similar responsibilities [26].

Lang and Nickels (1997) defined institutional shareholders as below:

Institutional investors are large shareholders other than those imposed on investments of the others.

Institutional shareholders can act as a corporate governance mechanism for a supplement company in reducing profit management; this can be done only when their ownership level is high [11]. Having certain abilities to monitor and control the management of companies, institutional shareholders have changed to one of the most important mechanisms of corporate governance and they highly influence financial and operating policies of companies. Institutional shareholders look at corporate governance system completely different from the real shareholders since institutions primarily have more valuable criteria than individuals and they, as experts, are better motivated to promote, develop and monitor the investments. Thus they must take a more active role in directing the company than shareholders. Having greater access to information and also having the authority and power in decision makings, they are able to more actively participate in monitoring the company's performance. This way, when they feel the performance is declining, they change composition of the board. In the early 1990s, institutional shareholders increasingly dominated the markets in America; they undertook a more active role in corporate governance system compared with previous periods. But in other markets, as some researchers showed, even the most active institutional shareholders made no efforts in implementing corporate governance mechanism. Remuneration policy provides the opportunity for managers to seek personal information in order to improve their performance. Searching personal information by institutional investors is considered an important issue since there are potential benefits about this in enterprises. Besides, managers of firms with institutional shareholders have to reveal more information in order to satisfy the owners [11].

According to Gilan and Starex (2003), institutional shareholders have a major role in shaping the many changes in corporate governance systems. Due to the ownership of a considerable share of the company, this group of shareholders has a considerable influence in these companies. They can influence their procedures (including accounting and financial reporting practices). Also as institutional shareholders constitute the largest group of the owners; their role is of significant importance for procedures adopted by managers. It is expected that the attendance of these owners among shareholders is effective on company's procedures [12]. Therefore the second hypothesis is proposed as below.

Hypothesis 2: *There is a significant relationship between the percentage of institutional ownership and earnings quality.*

#### ***Independence of the board (the ratio of non-responsible directors to the whole) and earnings quality***

One of the most important factors that influences the accuracy of financial accounting process is the composition of board members whose responsibility is to create a view independent from managers' performance and force managers to be responsive to the stakeholders about what they do [2].

In terms of agent theory, presence of non-bound (non-executive) and independent directors in companies' board and their supervision performance as independent individuals remarkably help to reduce conflicts of available interests between shareholders and companies' managers in board meetings. Non-bound directors (non-executive) professionally and unbiased judge about decisions made by mentioned managers. Therefore, the board of the company is considered a potential and powerful mechanism having expertise, independence and the necessary legal powers [13].

The presence of non-executive directors prevents responsible managers from abusing their position [14]. The presence of non-executive directors has a positive impact on the regulatory mechanisms [15].

Also, non-executive directors of the board are better motivated than other members to monitor the work of executives and the financial reporting process. Better supervision of the work of the executives helps to maintain and enhance the reputation of non-executive members of the board. Empirical evidence of scholars in line with theoretical predictions (e.g. agency theory) supports a significant decrease in agency costs by increasing non-executive directors in the board. When more non-executive directors are among board members, investors and shareholders are more likely to rely on information presented in financial statements; this way there is less chance to manipulate or distort profit through accruals management [1].

Evidence shows that firms with independent board members have higher earnings quality.

Thus, the third hypothesis is proposed as below:

Hypothesis 3: *There is a significant relationship between board independence and earnings quality.*

#### ***Firm size and earnings quality***

Earnings quality and firm size are directly correlated, so that large companies have better earnings quality. Since large firms enjoy more predictable and more stable operations, their profit is also more stable in the long run. In addition, since large firms are more diversified in their capital structure, their profits are also more stable in order to attract investors [16].

#### ***Auditor specialization and earnings quality***

Auditor industry specialization include creating constructive ideas to help (creating value added) employers, as well as providing new insights and solutions for some of the issues that employers in related industries are dealt with [17].

Since various states of auditor industry expertise are not directly observable, previous researches have used different indicators to measure auditor industry specialization. For instance, to examine the relationship between auditor industry specialization and earnings quality, Etemadi et al. have used market share as an index for measuring it. Having large market share refers to the point that auditor successfully distinguishes himself from other competitors in terms of audit quality.

Goal et al. [20] investigated the effect of auditor specialization in industry on the relationship between profit retention period and earnings quality. They observed that the relationship between short period of auditor survival and lower quality of profits is weaker for employers who employ expert auditors compared with others.

Krishnan [21] studied the relation between auditor expertise in industry and absolute level of optional items of employer and he concluded that the employers who do not use expert auditors have more discretionary accruals than those who use them.

Bolsom et al. (2003) compared and examined discretionary accruals and profit response coefficients of the firms that were audited by experts of this industry compared with those which were not audited by experts. In this study, the employers of six large audit institutions were used to control the variable "auditor reputation". Results of this study showed that employers with industry expert auditors have lower discretionary accruals, and greater profit response coefficient than those employers with non-expert auditors. Don et al. (2000) found that higher regarding the quality of disclosure employers of auditing institutions are ranked by financial analysts [19].

In addition, a company with auditor industry expertise helps clients to increase exposure and reduce profit management [2].

### ***Financial leverage and earnings quality***

Financial research has defined leverage as the amount of debt needed to supply financial resources required to gain desired assets [18].

Since firms with high financial leverage try to show good profitability status in order to satisfy creditors and thereby they attempt to manipulate the profits; by increasing financial leverage, the quality of the company's profit will also decrease [16].

### ***Operating cash flow and earnings quality***

By showing strong operating cash flows, companies are less likely to apply income increasing discretionary accruals in order to raise profitability. In contrast, firms with weak operating cash flow are very likely to apply income increasing discretionary accruals in order to show a green light to investors. Similar to the studies conducted by Lobu, Zhang and Baker, we also used OCF as control variable [19].

## **3. Methodology of research**

The current study is a descriptive-survey and it follows a practical application. It is also considered a correlation study as it examines the relationship between variables. The method used here is of regression type. The general stages followed in this investigation were that at first, structures were identified based on review of the literature and operational definition of constructs and research model were established. Variables used in this study are defined as follows:

### **Independent variables**

Corporate governance variables are the dependent variables in this study; the information related to them was extracted from explanatory notes of financial statements and reports of the Board. They include the followings:

#### **Ownership concentration (OWNCON)**

In this study, ownership concentration is referred to major shareholders that they own shares of 5% or above. The same variable was used in Mashayekhi and Abdollahi's study [22].

#### **The percentage of institutional ownership (INSOWN)**

Percentage of institutional ownership is the percentage of company's shares that is held by banks, insurance companies, pension funds, investment companies, and so on. The following formula is used to calculate it.

$$\frac{\text{Number of shares held by institutional shareholders}}{\text{Total shares at the beginning of the period}} \quad (1)$$

This formula was also used in Jalali's [23] research.

#### **Board independence (BRDIND)**

This variable is calculated through dividing the number of non-executive members by the total number of board members; the greater this ratio, the more independent the board member will be. Esmail Zade Mogherri et al. [24] also used this ratio in order to measure the board independence.

### **Dependent variables**

Variables related to measuring earnings quality are considered independent variables in this study. The information about these variables was obtained through some software such as Rahavard Novin, Tadbir Pardaz and also the explanatory notes of financial statements. Two models were also used in order to measure the earnings quality.

### Control variables

When measuring the effect of independent variables on the dependent variable, sometimes there are some other effective factors that in case they are not taken into consideration they may lead to wrong conclusions. By control variable we mean the variable that controls some other variables. In this study, in addition to the main factors which were considered as independent variables, there were also some other peripheral factors affecting the presented earnings quality of companies. The study conducted by Neu [2] is among the studies in which besides investigating the effect of corporate governance system on accounting quality, some peripheral factors affecting the companies' earnings quality were also presented. Auditor expertise, firm size, operational leverage and Tobin Q are among these peripheral factors. . The information about these variables was obtained through some software such as Rahavard Novin, Tadbir Pardaz and also the explanatory notes of financial statements.

### High operating level

This variable was calculated using the following formula:

$$ocf = \frac{\text{Current operating cash flow}}{\text{Total assets at beginning of financial year}} \quad (2)$$

Similar to the studies by Lobu, Zhang and Baker, OCF was used here as control variable [19].

### Auditor specialization (Audit S)

Using expert auditors in their particular industry, companies help customers by raising the disclosed level and this leads to reduce profit management. The method used in measuring the variable "auditor specialization" (Audit\_S) is that if an auditor deals with at least 20% of industry revenue, he/she is considered an expert and the value given to him/her is 1; otherwise the value is 0.

### Firm size (SIZE)

In Model 3, it equals the natural logarithm of total assets and in Model 4 it equals the logarithm of sales revenue.

Salehi and Ziaee [3] also used logarithm of total assets in their study in order to measure the firm size.

### Leverage (LEVE)

$$[25] \quad \text{LEVE} = \frac{\text{Total debts}}{\text{Total assets}} \quad (3)$$

### Tobin's Q (GWTH)

$$[25] \quad \text{GWTH} = \frac{\text{The market value of owners' revenue}}{\text{The book value of owners' revenue}} \quad (4)$$

### Population, sample size, and data collection

The population of this study included listed companies in Tehran Stock Exchange that were active in Stock Exchange from the beginning of the year 2006 to 2010. Elimination sampling method was used to select an appropriate sample that was a good representative of the population. For this purpose, six criteria were taken into account; in case a company had met all the criteria, it was selected as one of the sample companies. The desired criteria included the following:

1. They must be accepted in Tehran Stock Exchange before 2006.
2. They must not be among investing companies and financial intermediations. (Since their special accounting procedures make the prudential commitment estimations problematic).
3. In order to enhance the comparability of results, the end of their fiscal year must be March.
4. They must be listed in Tehran Stock Exchange for the entire period under investigation.
5. They must not change their financial year during the period under study.

6. The information necessary to conduct this study must be available.

7. Sample companies must not have losses during the period under investigation [24].

After considering all the above criteria, the number of samples was 60; the observations also included 300 companies.

### Research Models

As mentioned before, two methods were used to measure earnings quality.

#### 1. Measuring earnings quality through accruals

Many studies have contributed earnings quality to accounting and computing powers of management and also the power to choose different accounting methods and principles. In this regard, accruals reflected lower earnings quality. As managers tended to show high or low profit, in this study the total value of uncommon commitments was used as a proxy for earnings quality. The better the process of financial reporting is shown, the higher the financial transparency would be; it is expected that company enjoys lower profit management as the consequence of fewer uncommon commitments. Therefore it is expected to have a reverse correlation between earnings quality and total value of uncommon commitments.

Uncommon commitments were calculated using Jones' model.

$$TA = a_0 \left( \frac{1}{A_{t-1}} \right) + a_1 (\Delta REV - \Delta REC) + a_2 PPE + a_3 BM + a_4 OCF + \epsilon. \quad (5)$$

Where TA is the total commitments. In this study, the obtained TA from Jones' model was compared through the following formula.

$$TA = \frac{\text{operational cash flow} - \text{net profit before extraordinary items}}{\text{total assets at the beginning of fiscal year}} \quad (6)$$

Other variables consist of the following:

$A_{t-1}$ : assets in the first period

$\Delta REV$ : the change in income which is calculated through the following formula:

$$\Delta RE = \frac{\text{the change in sales from the year } t - 1 \text{ to the year } t}{\text{total assets at the beginning of fiscal year}} \quad (7)$$

$\Delta REC$  is the changes in accounts receivable and it is calculated using the formula below:

$$\Delta REC = \frac{\text{the change in accounts receivable from the year } t - 1 \text{ to the year } t}{\text{total assets at the beginning of fiscal year}} \quad (8)$$

PPE is the gross fixed assets and is calculated through the following formula:

$$PPE = \frac{\text{gross fixed assets}}{\text{total assets at the beginning of fiscal year}} \quad (9)$$

BM is the growth agent and is calculated through the following formula:

$$BM = \frac{\text{book value of share owners' income}}{\text{market value of share owners' income}} \quad (10)$$

OCF indicates the operation level and is calculated through the following formula:

$$OCF = \frac{\text{operational cash flow}}{\text{total assets at the beginning of the fiscal year}} \quad (11)$$

Jones' model is based on the assumption that the usual commitments is directly correlated with the change in deducted income from accounts receivable and is negatively correlated with the level of company's capital.

BM is used here as the growth agent and it is expected that this is directly correlated with total commitments. Larker and Richardson [27] also used this variable as growth agent.



OCF was also used as extra variable to control high operation level and this is expected to be negatively related to total commitments. Dichew [28] also used this variable.

Zhiang and Lee [5] also used the same method and model to measure earnings quality.

Discretionary commitments equal the difference between total commitments (TA) and DA which is calculated by formula 1:

$$DA = (TA/A_1(t-1)) - [a_0(1/A_1(t-1)) + a_1(\Delta REV - \Delta REC) + a_2 PPE + a_3 BM + a_4 OCF] \quad (12)$$

According to Kutari's findings [29], discretionary commitments are associated with firm operation. To eliminate its influence in this study, formula (3) is used for controlling functions.

$$PMDA = a_0 + a_1 OWNCON + a_2 DUAL + a_3 INSOWN + a_4 BRDIND + a_5 Audit\_S + a_6 SIZE + a_7 LEV + \epsilon, \quad (13)$$

PMDA equals the met discretionary commitments from formula 1 subtracted from DA of desired companies

The variables used in formula 3 include:

OWNCONS (ownership concentration)

INSOWN (the percentage of ownership by institutional shareholders)

BRDIND (Board independence)

Since corporate governance is not the only factor affecting discretionary commitments, several control variables have been introduced that include:

Audit\_S (auditor specification)

The information related to these variables was obtained from Rahavard Novin software.

Don and Mihi [30] and Myer [31] found that companies that employ auditors who are specialists at industry have assisted clients in increasing disclosure and decreasing profit management.

SIZE (firm size) equals natural logarithm of total assets

LEVE (financial leverage) equals the ratio of total debts to total assets

Pers and Intrup [32] showed that firm size and financial leverage may affect managers' discretionary commitments and it is expected that financial leverage has positive coefficient. But in relation to the size of the firm, nothing can be predicted due to different findings from previous studies

## 2. Measuring earnings quality using stock return

To provide evidence for market perception of the impact of governance on financial statements, stock return was used as the second method to measure earnings quality. Strong governance systems are able to coordinate the interests of executives with shareholders and this way they can make financial reports clearer and more trustable. Consequently this will result in valuable profits. Therefore, it is expected that there is a positive relationship between corporate governance mechanism and stock return.

The following model was used to measure the relationship between earnings quality and corporate governance mechanism.

$$R_{it} = a_0 + (a_1 E_{it})/P_{it}(it-1) + (a_2 E_{it})/P_{it}(it-1) * OWNCON + (a_3 E_{it})/P_{it}(it-1) * DUAL + (a_4 E_{it})/P_{it}(it-1) * INSOWN + (a_5 E_{it})/P_{it}(it-1) * BR$$

Warfiled [33] also used the same model.

In this model:

$R_{it}$  is the stock return

$E_{it}$  is the return of each share before extraordinary items

$P_{it}$  is the price for each share.

Variables corresponding to corporate governance mechanism are the same as the previous model. In order to control the other factors that might influence stock return, like the previous method, variables below were used:

SIZE (firm size) equals the logarithm of total sale income

LEVE (financial leverage): since companies with high financial leverage deal with high risks, their stock returns are low (calculation method is the same as the previous one.)



GWTH (Tobin's Q): this variable was used as an agent to show the growth; according to the findings of Neu [2] it is expected that stock return has a direct relationship with this variable.

#### 4. Data analysis

For conducting a scientific research, the right tools were used and sufficient information and evidence was provided for measuring and evaluating them. Also, using certain methods the collected data was summarized and categorized and was presented in tables and graphs. In other words, the collected data were analyzed in order to derive accurate statistical evidence. In the data analysis stage, the data were compared with each other and were tested with external factors and they have been accepted or rejected.

##### Results of hypotheses testing based on model 1

Research hypotheses were tested in two stages based on this model. Initially the relationship between regression model variables was examined using Pearson correlation coefficient. Then the estimated regression coefficients and type of relationships were analyzed conducting the regression model in the corresponding software. According to Table (1), it can be stated that the tested regression model in the error level smaller than 5% is significant (0.000) acceptable (F statistics obtained was 32.466. According to the Durbin - Watson obtained (1.585) it can be stated that there is no correlation between independent variables. Also, according to the obtained adjusted  $R^2$ , it can be said that the defined independent variables in this model are able to explain 38.7% of the changes in dependent variables.

Table 1. Results of conducting first regression model for testing hypotheses

First regression model			Variable
Sig.	Obtained t	Variable coefficient	
0.319	0.998	0.068	Fixed number
0.029	2.116	**0.000059	Power centralization
0.000	10.382-	*0.000114-	Ownership percentage of institutional shareholders
0.041	2.076-	**0.000245-	Board independence
0.003	2.954-	*0.032-	Auditor specialization
0.049	1.958	**0.008	Firm size
0.000	7.404-	*0.259-	Financial leverage
Adjusted $R^2$ : 0.387			
F: 32.466			
Sig.: 0.000			
* $P < 0.01$ , ** $P < 0.05$ , *** $P < 0.10$			

##### Testing hypothesis 1

As can be seen in Table (1), Concentration of power has a direct and significant relationship with unusual accruals. According to t (2.116), estimated regression coefficient for this variable is significant at the error level below 5%. Therefore,  $H_0$  is rejected and the claim stated at  $H_1$  is confirmed. According to the results of the first hypothesis, thus, the first hypothesis which states that there is a significant relationship between the concentration of power and the quality of profit is confirmed at the confidence level greater than 95%.

##### Testing hypothesis 2

As can be seen in table (1), the variable percentage of institutional ownership has also a negative and significant relationship with abnormal accruals. This means that as the percentage of institutional ownership increases, the manipulation and abnormal accruals decrease. Therefore earnings quality will improve. According to the obtained results thus, it can be said that hypothesis 3 which states that there is a significant relationship between the ownership percentage of institutional shareholders and the quality of profit is confirmed at the error level smaller than 5%.

**Hypothesis 3**

According to Table (1), the independence of board members has a significant negative relationship with abnormal accruals. According to the obtained coefficient, it can be stated that the higher the ratio of non-executive members of the board to the total number of board members, the abnormal accruals that indicates the manipulation of optional items will decrease which will result in improvement of earnings quality. According to the results, thus, hypothesis 4 which states that there is a significant relationship between board independence and earnings quality is confirmed at the confidence level greater than 95%.

**Results of control variables**

Results of linear regression of control variables (Table 1) indicates that the variable "auditor specialization is inversely and significantly correlated with abnormal accruals. This means that the as the specialization of the auditor on that specific industry increase, the number of abnormal accruals decreases. The variable "firm size" has also a significant and direct relationship with abnormal accruals; this indicates that the bigger the firm size, the higher the number of abnormal accruals and manipulation of accruals may be. In addition, the variable "financial leverage" of the company has a reverse and significant relationship with abnormal accruals. It is in a way that as the company' debts and leverage increases, abnormal accruals and managers' power in manipulating these accruals will be limited; therefore the earnings quality increases. Overall, the results of control variables show an appropriate control of effective factors on the dependent variable except the defined independent variables.

Generally, results of conducting regression model for this index of earnings quality indicate a significant relationship between some of corporate governance mechanisms with earnings quality. In the forthcoming sections, model 2 and its results will be discussed.

**Results of testing hypotheses based on model 2**

The same procedures as the previous model were taken to test research hypotheses based on this model. Initially the relationship between regression model variables was examined using Pearson correlation coefficient. Then the estimated regression coefficients and type of relationships were analyzed conducting the regression model in the corresponding software.

Table 2. Results of conducting second regression model for testing research hypotheses after omitting non-significant variables

Second regression model			Variable
Sig.	Obtained t	Variable coefficient	
0.046	2.008	**88.166	Fixed number
0.769	0.293-	26.514-	Cost-benefit ratio
0.001	3.421	*2.286	Power centralization
0.024	2.177-	**0.014-	Ownership percentage of institutional shareholders
0.041	2.076-	**0.000245-	Board independence
0.000	3.919	*4.485	Growth prospects of the company
0.050	1.903-	**6.334-	Firm size
0.712	0.370-	9.957-	Financial leverage
Adjusted R2: 0.089 Durbin-Watson: 1.959 F: 5.155 Sig.: 0.000			
* P < 0.01, ** P < 0.05, *** P < 0.10			

As can be seen in Table (2), the tested regression model variable is significant (0.000) at the error level below 5% (obtained F was 5.155). According to the value of Durbin-Watson obtained (1.959), it can be stated that there is no correlation between independent variables. Also according to the value of obtained adjusted R<sup>2</sup> it can be said that the defined independent variables in this model can explain about 8.9 percent of the changes in dependent variables. Now based on the fact that the variables of profit ratio to the price

and financial leverage were not significant, these variables were omitted from the model and the regression model was conducted again. The results obtained after omitting these variables are presented in Table (3). In the forthcoming sections, each hypothesis is interpreted based on the obtained results.

Table 3. Results of conducting the second regression model

Second regression model			Variable
Sig.	Obtained t	Variable coefficient	
0.047	1.996	**84.461	Fixed number
0.000	3.785	*2.219	Power centralization
0.025	2.131-	**0.013-	Ownership percentage of institutional shareholders
0.021	2.341-	**0.638-	Board independence
0.000	3.922	*4.418	Growth prospects of the company
0.049	1.977-	**6.505-	Firm size
Adjusted R2: 0.094 Durbin-Watson: 1.964 F: 7.217 Sig.: 0.000			
* P < 0.01, ** P < 0.05, *** P < 0.10			

Generally, it can be stated from the above table that the fitting of tested regression model is significant (0,000) at the error level below 5% (obtained F was 7.217). According to the obtained value for Durbin-Watson (1.964), it can be said that there is no correlation between independent variables. Also based on the value of obtained adjusted R<sup>2</sup>, it can be stated that the defined independent variable in this model can explain 9.4 percent of the changes in dependent variables.

**Testing hypothesis 1**

According to table 1 and regarding obtained t (2.119), the calculated regression coefficient for this variable is significant at the error level below 5%; therefore, the research claim is confirmed. According to the obtained results, thus, hypothesis one which states that there is a relationship between power centralization and earnings quality is confirmed at the confidence level greater than 95%.

**Testing hypothesis 2**

According to the table of multiple regression model (Table 3), the variable "percentage of institutional ownership" has also a negative and significant relationship with firm performance. This means that as the ownership percentage of institutional shareholders increases, the earnings quality will improve. According to the obtained results, thus, hypothesis 3 which states that there is a relationship between percentage of institutional ownership and earnings quality is confirmed at the error level smaller than 5%.

**Testing hypothesis 3**

As can be seen in table (3), board independence has a reverse and significant relationship with company's returns. According to the obtained coefficient, it can be stated that the greater the ratio of non-executive members to total number of board members, the better earnings quality will be. Therefore it can be said according to the obtained results that hypothesis 4 referring to the significant relationship between board independence and earnings quality is confirmed in confidence level greater than 95%.

**Results of control variables**

Results of conducting linear regression model corresponding to control variable s(Table 3) showed that the variable company's growth prospect has a direct and significant relationship with company's performance. This means that the better the company's growth prospect the higher the company's performance would be. The variable "firm size" has also a significant and reverse relationship with company's performance; this means that the bigger the company, the lower the performance may be. Besides these cases, the variables "profit ration to price and the ration of company's financial leverage" have no relationship with company's performance. Therefore they were omitted from regression model. Totally, results of control variables indicate proper control of effective factors except defined independent variables on dependent variable.

Overall, results of conducting regression model for this index of earnings quality showed a significant relationship between some of corporate governance mechanisms with earnings quality.

## 5. Conclusions

In this study, regression model was used to examine the impact of corporate governance mechanisms on earnings quality. The most important findings of the study include the following:

1. Using model 2, it can be seen that there is a significant relationship between centralization of power and earnings quality; this is consistent with studies by Kolay and Omri [34], Neu [2] and Esmaealzade Mogheri et al. [24].

2. Using model 2, it can be seen that there is a significant relationship between the board independence and earnings quality; this is consistent with the studies by Jung and Kan [35], Esmaealzade Mogheri et al. [3], Nikoumaram and Mohammadzade Saletah [36], Nasrollahi [37] and Moradi [38]. Also, investigating the effect of institutional ownership type on performance, Ebrahimi Kord Lor et al. [39] concluded that type of ownership is effective in improving companies' performance.

3. Using model 2, it can be seen that there is a significant relationship between the ownership of institutional stakeholders and earnings quality; this is consistent with the studies by Siagian and Tusnaning Sieh [40], Kolay and Omri [34], Chung and Sung [41], Dimetro, Polus and Asterio [42], Neu [2], Petra [43], Mashayekhi and Mohammadabadi [1], Esmaealzade Mogheri et al. [24], Nikoumaram and Mohammadzade Saletah [36], and Arabsalehi and Ziaee [3].

## Limitations of the study

1. Companies listed in stock exchange were selected due to their easily accessible information; this may lead to not including all companies in the population. In addition, this investigation has been conducted on just 60 companies listed in Tehran Stock Exchange and care must be taken in its generalization to the whole stock exchange and all the companies working in Iran's economy.

2. The effects of the type of industry have not been taken into account in the regression models for testing the hypotheses in this study. Regarding the possibility of different industries being different in terms of their weakness and strengths, this should be considered in the interpretation of the results.

3. One of the major problems of this study was lack of accessing the exact information about the ownership combination of the companies. Notes associated with financial statements include the combination of stakeholders which is usually presented by arbitrary and inconsistent information. Other stakeholders are just the group or general entities that some individuals are disparately located in them. Companies, pension funds and individuals are located in the group of other shareholders that are very diverse in their nature and function. If access to more accurate information was available, it was possible to achieve different results.

4. Due to the calculations done to achieve the last digit of a variable, possible errors made in calculation can also be considered as one of the limitation of the study.

## Suggestions for further research

1. Increasing the sample size will result in more homogeneous results.

2. In addition to regression, some non-linear models such as neural networks can be used for investigating the effects of corporate governance mechanism on earnings quality.

3. This study can be conducted for long-term periods.

4. The effects of other demographic characteristics of the board such as age, education and specialization in the field, the number of board meetings, gender, etc. on earnings quality can be investigated.

5. This study can also be conducted by distinguishing different industries.

6. Some other criteria can be used to measure power centralization and its relationship with earnings quality.

## References

1. Mashayekhi, B. and Mohammadabadi, M. (2011). "The relationship between corporate governance mechanisms and earnings quality", *Journal of Financial Accounting Research*, Vol. 3 No 8. pp. 17-32.
2. Niu, Flora F. (2006). "Corporate Governance And The Quality Of Accounting Earnings : A Canadian Perspective ". *International Journal Of Managerial Finance*, 2, 4, pp. 302-327.
3. Arabsalehi, M. and Ziaee, M. (2010). "The relationship between corporate governance mechanism and earnings quality of listed companies in Tehran Stock Exchange", *Financial Accounting*, Vol. 2 No 5. pp. 39-56.
4. Zain-aldini Maymand, L. (2011). "The impact of corporate governance on the relationship between capital structure and firm value". MA Thesis; Yazd Islamic Azad University.
5. Jiang, Wei., Lee, Picheng., and Anandarajan, Asokan. (2008). "The Association Between Corporate Governance And Earnings Quality : Further Evidence Using The GOV-Score ". *Advances In Accounting Incorporating Advances In International Accounting*, 24, pp. 191-201.
6. Mehrani, K and Safarzade. M. (2011). "Explaining the relationship between corporate governance and earnings quality with local approach", *Accounting science*, Vol. 2 No. 7. pp. 69-98.
7. Moradzade Fard, M., Banimahd, B., and Dindar Yazdi, M. (2011). "The relationship between accounting conservatism and corporate governance", *Management accounting*. Vol. 4 No. 8. pp. 89-102.
8. Namazi, M., Heidarpour, F. and Mohammadi, K. (2009). "The effect of shareholders of companies on trading volume and liquidity of their shares". *Journal of Financial Accounting and Audit*, Vol. 1 No. 3. pp. 1-22.
9. Ebrahimi Kord Lor, A. and E'rabi, M. (2010). "Ownership concentration and earnings quality in listed companies in Tehran Stock Exchange", *Journal of Financial Accounting Research*, Vol. 2 No 2. pp. 95-110.
10. Koh, Ping-sheng.(2003) . "On The Association Between Institutional Ownership And Aggressive Corporate Earnings Management In Australia", *The British Accounting Review*, 35, pp. 105-128.
11. Malakian, A. and Daryayi, A. (2011). "Explaining the relationship between ownership characteristics and corporate governance structure (of listed companies in Tehran Stock Exchange)", *Journal of accounting advancements of Shiraz University*. Vol. 3 No 60. pp. 121-143.
12. Mehrani, S., Moradi, M. and Eskandar, H. (2010). "The relationship between institutional ownership and accounting conservatism". *Financial accounting researches*, Vol. 2 No. 1. pp. 47-62.
13. Setayesh, M., Dehdari, A. and Namazi, N. (2011). "The effect of corporate governance mechanisms on the performance of intellectual capital components listed companies in Tehran Stock Exchange", *Journal of Financial Accounting*. Vol. 3 No. 10. pp. 62-86.
14. Morck, R., Schleifer, A., And Vishney, R.W. (1988) . "Management Ownership And Market Valuation: An Empirical Analysis", *Journal Of Financial Economics*, 20, pp. 293-315.
15. Agrawal, A. And Knoebler, C.R. (1996)." Firm Performance and Mechanisms To Control Agency Problems Between Managers And Shareholders ". *Journal of Financial and Quantitative Analysis* 31, pp. 377-397.
16. Namazi, M. and Mohammadi, M. (2010). "Investigating the earnings quality and efficiency of family and non-family firms listed in Tehran Stock Exchange", *Journal of Accounting advancements of Shiraz University*. Vol. 2 No. 59, pp. 159-194.
17. Etemadi, H., Mohammadi, A. and Nazemi Ardakani, M. (2009). "The relationship between auditor industry specialization and earnings quality of listed companies in Tehran Stock Exchange", *Journal of Financial Accounting Research*, Vol. 1 No 2. pp. 17-32.
18. Sinayee, H. and Rezaeean, A. (2005). "The effect of firm characteristics on capital structure (financial leverage)", *Journal of Human and Social Sciences*, Vol. 3 No. 19. pp. 123-148.
19. Lobo, G.J.,& Zhou , J.(2006)."Did Conservatism In Financial Reporting Increase After The Sarbanes Oxly Act? Initial Evidence", *Accounting Horizons*, 20, 1, pp. 57-73.
20. Gul, Ferdinand A., Fung , Simon Yu Kit & Bikki Jaggi .(2009). "Earnings Quality: Some Evidence On The Role Of Auditor Tenure And Auditors Industry Expertise", *Journal Of Accounting and Economics* 47, pp. 265-287.
21. Krishnan, Gopal V. (2003). "Does Big-6 Auditor Industry Experience Constrain Earnings Management ? ", *Accounting Horizons* 17, pp. 1-16.

22. Mashayekh, Sh., and Abdollahi, M. (2012). "The relationship between concentration of ownership, corporate performance and dividend policy of listed companies in Tehran Stock Exchange", *Journal of Financial Accounting Researches*, Vol. 3 No. 4, pp. 71-86.
23. Jalali, F. (2011). "Investigating the relationship between cultural values and corporate governance". MA Thesis of Tehran University.
24. Esmaeelzade Mogherri, A., Jalili, M. and Zand Abbasabadi, A. (2010). "The effect of corporate governance on earnings quality in Tehran Stock Exchange", *Management accounting*, Vol. 3 No. 7. pp. 79-91.
25. Vakilifard, H. and Bavandpour, L. (2010). "The impact of corporate governance on the performance of listed companies in Tehran Stock Exchange", *Journal of Financial studies*. No. 8, pp. 119-140.
26. Informing corporate of Stock Exchange (2008). "Rules and Regulations of the Capital Market".
27. Larcher, D.F., Richardson, S.A. (2004). "Fees Paid To Audit Firms, Accrual Choices, and Corporate Governance", *Journal of Accounting Research* 42, 3, pp. 652-658.
28. Dechow, P., Sloan, R., & Sweeney, A. (1995). "Detecting Earnings Management", *The Accounting Review* 70, 2, pp. 193-225.
29. Kothari, S. P., Leone, A. & Wasley, C. E. (2005). "Performance Matched Discretionary Accrual Measures", *Journal of Accounting and Economics*. 39, 1, pp. 97-163.
30. Dunn, K., Mayhew, B.W. (2004). "Audit Firm Industry Specialization and Client Disclosure Quality", *Review of Accounting Studies* 9, 1, pp. 193-235.
31. Myers, J. N., Myers, L.A., & Omer, T.C. (2003). "Exploring The Term Of The Auditor –Client Relationship And The Quality Of Earnings: A Case For Mandatory Auditor Rotation". *The Accounting Review*. 78, 3, pp. 779-799.
32. Press, E., Weintrop, J. (1990). "Accounting-Based Constraints in Public And Private Debt Agreements", *Journal of Accounting and Economics* 12, 1-3, pp. 65-95.
33. Warfield, T., Wild, J., & Wild, K. (1995). "Managerial Ownership, Accounting Choice, and Informativeness of Earnings", *Journal of Accounting and Economics* 20, 1, pp. 61-91.
34. Klai, Nesrine, Omri, Abdelwahed. (2011). "Corporate Governance and Financial Reporting Quality: The Case of Tunisian Firms", *International Business Research* 4, 1, pp. 158-166.
35. Jung, K And Kwon, S.Y. (2002). "Ownership Structure and Earnings Informativeness: Evidence From Korea", *The International Journal of Accounting* 37, 3, pp. 301-325.
36. Nikoumaram, H. and Mohammadzade Salete, H. (2010). "The relationship between corporate governance and earnings management", *Journal of Farasuye Modiriati (Beyond Management)*, Vol. 4 No. 15, pp. 187-210.
37. Nasrollahi, Z. and Arefmanesh, Z. (2010). "The relationship between ownership and earnings quality of listed companies in Tehran Stock Exchange", *Accounting Science*. Vol. 1. No. 3, pp. 117-138.
38. Moradi, M. (2006). "The relationship between institutional investors and earnings quality", MA Thesis of accounting, Tehran University.
39. Ebrahimi Kord Lor, A., Moradi A., and Eskandar, H. (2010). "The effect of institutional ownership on the performance of listed companies in Tehran Stock Exchange", *Journal of Accounting and Audit*, pp. 104-119.
40. Siagian, Ferdinand T., Tresnaningsih, Elock. (2011). "The Impact of Independent Directors and Independent Audit Committees on Earnings Quality Reported by Indonesian Firms", *Asian Review Of Accounting* 19, 3, pp. 192-207.
41. Chang, Jui-Chin., Sun, Hevy-lian. (2010). "Does The Disdouse of Corporate Governance Structure Affect Firms Earnings Quality?", *Review of Accounting and Finance*. 9, 3, pp. 212-243.
42. Dimitropoulous, Panagiotis E., Asteriou, Dimitrios (2010). "The Effect Of Board Composition On The Informativeness and Quality of Annual Earnings: Empirical Evidence from Greece", *Research In International Business And Finance* 24, pp. 190-205.
43. Petra, Steven T. (2007). "The Effects of Corporate Governance on the Informativeness of Earnings". *Economics of Governance*, 8, pp. 129-152.