

An Investigation of the impact of board of director characteristic on earnings Forecasts Accuracy*Alireza khodadadi¹, habibllah rasouli², mohammad Ramazan Ahmadi³.¹⁻ Persian Gulf International Educational Branch-Islamic Azad University- Khorramshahr-Iran (corresponding Author)³⁻ Department of Accounting, Abadan Branch, Islamic Azad University, Abadan, Iran³⁻ Assistant Professor of Accounting, Shahid Chamran University

ABSTRACT: In the present study, the relationship between board of director characteristics and management earnings Forecast accuracy in 88 firms listed in Tehran stock exchange (TSE) during (2006-2010) was investigated. Board of director characteristics expected to affect earnings forecast by the management, include CEO dominance CEO duality duty, board of director size, and independence of board of director (ROD). The study hypotheses were analyzed using multivariate regression model and ordinary least square (OLS) test in pooled data analysis method. The results suggested that board size and board independence have a negative significant relationship with error percentage of earnings forecast by the management. However, CEO dominance and CEO duality do not have a statistically significant association with the management earnings forecast error.

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KEYWORDS: corporate governance, CEO independence, the management earnings forecast

1-Introduction:

Corporate governance rules (including corporate governance characteristic) are the most important tool for restoring the trust (Ismaeili, 2006). one main duty of corporate governance is to ensure the quality of financial reporting process. In the presence of an appropriate structure, optimal performance of BOD members, and their regulatory role on the quality of financial reports, these violation can be somewhat reduced. in this study, we try to investigate the impact of some corporate governance components on the management earnings forecast accuracy in companies listed in TSE. Final goals of corporate governance are divided into four groups including accountability, transparency justice, and observance of stakeholder rights. Accuracy of financial reporting has been a common concern of standard developers and people working in the profession and over past years, a growing attention has been paid to the significance of different characteristics of corporate governance as the regulatory tools dealing with controlling manager's authorities in financial reporting. According to the study carried out by watts and Zimmerman (1986), corporate governance monitoring is able to improve the reliability of accounting profits, thus improving useful information capability and accounting profits (Aghaei et al, 2009).

2-Literature background

Behat et al (2006) have examined whether or not the transparency of corporate governance is affective on the accuracy of analysts forecast accuracy: the investigation was carried out in 21

countries, based on which they found that corporate governance after applying necessary controls, is associated with the analyst's earnings forecast accuracy. Further, the results illustrated that when financial disclosure is poor, corporate governance would improve the information, and also when the legal requirements are poor, corporate governance would improve analyst's forecast accuracy, yang and Koa (2007) investigated the relationship of the management earnings forecast error with corporate governance structure in companies offering their shares to the public for the first time. The selected sample consisted of 176 companies during the period (2002-2004). Results indicated that BOD size and the management earnings forecast error are negatively associated. There is a positive relationship between CEO duality and the management earnings forecast error. However, they didn't find a significant association of the number of independent directors, independent observers, and executive director ratio with the management earnings forecast error. Monif (2009) investigated corporate governance and the quality of the management earnings forecast and concluded that the quality of the management earnings forecast is associated with some corporate governance standards. According to the results he observed in the companies, when independent directors proportion is larger compared to total directors, and also when there is a higher proportion of shares available to the employees, the accuracy of earning forecast is higher as well. Being insured by reputable insurance companies, these companies would predict their earnings less accurately but more conservatively.

They did not find a significant relationship of CEO duality and audit quality with the management earnings forecast. Namazi and Shamsoddini (2006) investigated the effective structures on the management earnings forecast accuracy in companies listed in TSE. In their study, they examined the impact of nine variables on the accuracy of earnings forecast. The results showed that there is some relationship between earnings growth, sales growth, assets growth, earnings forecasted in the past, financial leverage, stock price, and the accuracy of earnings forecast, while dividend and firm size are not associated with earnings forecast accuracy. Aghaei et al (2009) investigated the characteristics of corporate governance and information content of earnings in TSE focusing on the role of earnings management. Findings show that the relationship of institutional ownership and board independence with information content of earnings in companies with high earnings management incentives is stronger than that of companies with low earnings management incentives. Moreover, according to the shareholders, other corporate governance standard (ownership concentration, CEO influence, CEO duality, board size, reliance on debt, and CEO tenure in board) do not have an effect in improving information content of earnings whether there are high or low earnings management incentives.

3-HYPOTHESES:

*the first hypothesis: CEO dominance has a significant impact on the accuracy of the management earnings forecast.

*the second hypothesis: CEO duality has a significant impact on the accuracy of the management earnings forecast.

* the third hypothesis : board size has a significant impact on the accuracy of the management earnings forecast.

* the fourth hypothesis: board independence has a significant impact on the accuracy of the management earnings forecast.

4-Statistical population and sample

Population of the present study is all companies listed in TSE from the beginning of (2006) to the end of (2011).

The reasons for selecting companies from TSE are as follows:

1-Access to financial data of companies listed in TSE is easier, particularly because some data are available in the form of databases on CDs. 2- given that financial data of companies listed in TSE are under review and monitor, it seems that data contained in financial statements of these companies have higher quality. 3- Since rules, regulations, and standards of financial accounting are binding in preparing financial statements of companies listed in TSE, it seems that data contained in financial reporting of these companies are more homogeneous and they have greater comparability.

5-statistical models and operational definition of variables:

According to their role in the study, variables are divided into two groups, that is, independent and dependent variables. Table (1) shows the variables separately by hypotheses. All data related to the variables will be mined from financial statements of companies listed in TSE.

Table (1): independent and dependent variables

hypotheses	Independent variable	symbol	Dependent variable	Symbol
First hypothesis	CEO dominance	CEOD	Percentage of the management earnings forecast errors	EFE
Second hypothesis	CEO duality	DUAL	Percentage of the management earnings forecast errors	EFE
Third hypothesis	Board size	BRDSIZE	Percentage of the management earnings forecast errors	EFE
Forth hypothesis	Board independence	BRDIND	Percentage of the management earnings forecast errors	EFE

In the present study in multivariate regression Analysis was used for hypothesis testing.

The variables will be measured as follows:

$$\frac{|(ER-EF)|}{|EF|}$$

*independent variables: Among board characteristic, four ones have been considered as independent variables:

1-CEO dominance, $CEO=x$ and $x=\{0,1\}$

2-CEO duality, $DUAL = x$ and $x=$

3-board size, $BRDSIZE = X$

4-board independence, $BRDIND=$

*CONTROL VARIABLES: since other variables may affect earnings forecast accuracy, in this study we have tried to control some including the following : 1-debt reliance : total long term debts divided by total assets 2- firm size:

$$\text{*dependent variable: } |EFE| =$$

natural logarithm of total assets is viewed as duration of time (number of months) from the announcement date of the earnings forecast to the end of the financial period.

6-FINDINGS:

In the table containing descriptive statistics, it can be seen that the mean and standard deviation of the dependent variable, namely EFE (earnings forecast errors), are (2836/0) and (0668/0), respectively. The value obtained for the mean of the dependent variable implies that the average absolute earnings forecast error among all sample companies over the six-year time period of the research is nearly 28 percent.

Also, standard deviation indicates the amount of changes in the dependent variable squared data around the mean, the lower it is, it indicates the normal distribution of the data related to that variable. Mean (and standard deviation) of the independent variables, namely CEO, CEO duality, board size, and board independence were 5941/0 (1904/0), 0318/0(0042/0), 6208/5(4037/5), and 6243/0(3186/0), respectively.

Table (1): descriptive statistics*

variable	Symbol	MEAN	MEDIAN	MAX	MIN	STANDARD DEVIATION
Percentage of earnings forecast error	EFE	0/2836	0/2182	0/6893	0/0634	0/0668
CEO dominance	CEOD	0/5941	0/6257	1/0000	0/0000	0/1904
CEO duality	DUAL	0/0318	0/0301	1/0000	0/0000	0/0042
Board size	BRDSIZE	5/6208	5/4037	9/0000	5/0000	1/2718
Board independence	BRDIND	0/6243	0/6896	0/8977	0/2376	0/3186
Reliance Debt	DEBTRL	0/3894	0/4472	0/7356	0/1176	0/2016
Firm size	FSIZE	5/6831	5/9428	7/3648	4/2873	1/2271
Firm age	AGE	12/2433	11/8428	23/0000	5/0000	2/4866
Forecast	F HORIZON	4/2461	5/0264	12/0000	3/0000	0/8992

TESTING CLASSIC ASSUMPTIONS OF REGRESSION MODEL:

Results of testing the normality of the model residuals are shown in table(3).

Table (3): results of testing the normality of the model residuals*

variable	Residual
Jarque - bera test	4369/2
	p-value
	1208/0

As seen in table (3), the statistic of residual normality test and its significance level indicates the rejection of hypothesis 1(H_1) and the confirmation of null hypothesis (H_0) of the test. In other words, residuals obtained from the first regression model estimation do not have a non-normal distribution of testing the homogeneity of the model residual variance are shown in table(4). As seen, the statistics of variance homogeneity test and their significance level have confirmed the null hypothesis (H_0) of the test that the variance is homogenous. In other words, the residuals from the model estimation have a constant variance.

Table (4): results of testing the variance homogeneity of the regression model residuals*

White test	f-statistic	3246/4
	p-value	1645/0
	Statistic of Lagrange multipliers	7408/182
	p-value	0826/0
Determination coefficient	3461/0	
Number of observations	528	

Regarding non-collinearity of the independent variables, it should be stated that given the correlation coefficients presented in table (2), small values have been obtained for the correlation between explanatory variables of the model. These low coefficients indicate absence of collinearity between explanatory variables of the model (Aflatooni and Nikbakht, 2010).

(6-2) test for determining an appropriate model in pooled data:

In this study, the number of observations for each section is 88 ones in a six-year time period. Total observations in pooled data analysis were 528 ones (year-company). When using pooled data, different models are applied for hypothesis testing. These models include methods such as fixed effect model, random effect model and pooled data model. Further, there are different tests for determining the type of model which fits the data, such as Chow test, and Housman test. The model for hypothesis testing that was described in detail in chapter (3), was developed as follows: in order to investigate the type of model testing in different levels and time period of pooled data, F-limer test (Chow test) and Housman test were used. In Chow test if Chow statistic obtained from the test is significant (H_0) is rejected and fixed effect model is confirmed. In case of insignificance of the statistic, pooled or integrated data are used for hypothesis testing. also in Housman test, if Housman statistic obtained from the test is significant, (H_0) will be rejected and fixed effect model is confirmed. in case of insignificance of the statistic, random effect model is used for hypothesis testing. results of chow test are provided in table (5).

Table (5): results of chow test*

Chow test statistic	p-value	Results
4369/1	3934/0	Pooled data model

As seen in table (5), results of chow test confirmed (H_0) of the test that the intercept is the same in all period, however rejecting (H_1).

(6-3) significance test of the model:

Results of testing the significance of the model for 2006-2011 in pooled data estimation method are described in table (6). as shown in table(6), F-statistic is significant at (99) percent confidence level. Therefore, the research model is on the whole significant and independent and control variables in the model are able to account for the dependent variable. The adjusted determination coefficient obtained from model testing was 0/4134. This value shows that about (41) percent of the dependent variable changes. That is FEF results from dependent and control variables in the model and the other 59 percent change are due to other factors.

Table(6): results of testing the research model at pooled data level

variable	coefficient	t-statistic p-value	R ²	Adjusted R ²	F-statistic	p-value	d-w
constant	1/4167	9/2449	0/4389	0/4134	8/4487	0/0000	1/9682
	-	-					
		0/0283					
CEOD	03804	1/9368					
		0/3144					
Dual	1/2056	2/4763					
		0/0838					
BRDSIZE	0/0698	8/9961					
		-					
		0/0000					
BRDIND	0/0934	4/8904					
DEBTRL	0/4527	4/2883					
		0/0064					
F SIZE	1/4291	4/3648					
		0/0126					
AGE	4/2487	8/1932					
	-	-					
		0/0000					
F HORIZON	0/0645	2/7815					
		0/0904					

(6-3) **Hypothesis testing** : here the results related to hypothesis testing are presented.

(6-3-1) results of the first hypothesis testing : the first hypothesis of the research examines the relationship between CEO dominance and EFE. Statistical assumptions of the hypothesis are as follows: there is no significant relationship between CEO dominance and EFE. In this hypothesis, EFE and CEO dominance are the dependent and independent variables, respectively. Significance test of coefficients, in addition to the significance of the variables, determines the effects of these coefficients on the dependent variable. The associated statistic for determining the significance of coefficients is t-student statistic. Results of the model testing and t-statistics associated with the first hypothesis are shown in table (6). Results of the table indicate that the statistic p-value for the variable CEO dominance is (3144/0). Given that error level intended for this research was (05/0), thus the variable CEO dominance do not have a significant effect on EFE and the first hypothesis of the research is not confirmed.

(6-3-2) results of the second hypothesis testing: the second hypothesis examines the association between CEO duality and EFE: 1- there is no significant relationship between CEO duality and EFE. 2- There is a significant relationship between CEO duality and EFE. In this hypothesis, EFE and CEO duality are the dependent and independent variables, respectively. According to the results in table (6), t-statistic related to the independent variable of the second hypothesis and its significance level (p-value) are (-2/4763) and (0838/0), respectively. Given that the significance level of the variable was greater than (05/0), thus CEO duality in the companies covered did not have a significant relationship with EFE, and the second hypothesis is rejected.

(6-3-3) results of the third hypothesis testing: the third hypothesis investigates the relationship between board size and EFE: 1- there is no significant relationship between board size and EFE. 2- there is a significant relationship between board size and EFE. In the hypothesis, EFE is the dependent variable and board size is the independent variable. Board size means the number of board (board of directors) members, which is at least 5 people in public companies. Given the results in table (6), t-statistic associated with the independent variable of the third hypothesis and its significance level (p-value) are (-8/9961) and (0000/0), respectively. Given that the variables significance level was smaller than (01/0), so board size in the companies covered by the study is significantly associated with EFE and accordingly, the third hypothesis of the research is confirmed. The coefficient of the third independent variable (board

size is negative. Accordingly, there is a negative relationship between board size and EFE. In other words, EFE rate by the management is reduced in sample companies as non-duty board members increase.

(6-3-4) results of the fourth hypothesis testing: the fourth hypothesis examines the relationship between the independence of board members and EFE: 1- there is no significant relationship between board member independence and EFE. 2- there is a significant relationship between board member independence and EFE. In this hypothesis, EFE is the dependent and independence of board members is the independent variable. Independence of board members means the proportion of non-duty board members. According to the results in table (6), t-statistic related to the independent variable of the fourth hypothesis and its significance level (p-value) are (-4/8904) and (0263/0), respectively. Given that the variables significance level was smaller than (05/0), so board member independence among companies covered is not significantly associated with management EFE and accordingly, the fourth hypothesis of the research is confirmed. Fourth independent variable coefficient (board independence) is negative accordingly there is a negative association between board independence and EFE. In other words EFE rate is reduced in sample companies as non-duty board members increase.

7- Conclusion and suggestions

This is an applied study with a descriptive nature. It was carried out using the analysis of the data obtained from financial statement of companies listed in Tehran stock exchange (TSE). The population was all companies in TSE and the sample consisted of (88) companies selected through elimination method. The companies were being studied for a six-year period, beginning from 2006 and ending in 2011. To investigate the relationship between the independent and dependent variables, the following steps were performed: 1- developing four hypothesis according to the literature. CEO duality, board size and independence.

2- selecting (88) sample companies based on the conditions mentioned in chapter (3)- based on investigating the information sources during the research and according to research results and achievements same suggestions have been considered which are divided into two groups: first group consists of suggestions associated with the topic of future research, and second group consists of suggestions regarding the development of optimal reporting standards. Findings help identifying which board characteristic would possibly affect the accuracy or

error in forecasting earnings by the management according to the research results; board size and independence are effective on the EFE rate. Results of the present study were obtained based on existing data and temporal and spatial constraints and it seems that its completion needs carrying out the following research: 1- investigating the impact of other corporate governs components and board characteristics such as ownership concentration, institutional ownership on EFE. 2- Studying the effects of industry on the relationship between board characteristics and EFE. (3)-replication of the present study with respect to a particular event such as initial stock offering or other political –economic issues affecting the opportunistic performance of managers for managing. (4)-carrying out a study with the same topic, however, in order to increase the reliability of the results, the number of observations must be increased in each section (number of companies and time period).

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