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### Board of Director Characteristics and Earnings Management after Bahraini Corporate Governance Code 2011

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**Abstract:** This study examines the association between board of director characteristics and earnings management of Bahraini listed firms. Board characteristics examined in the study include board independence, board size and board meetings. By using data for two years after implementing the Bahraini corporate governance code (BCGC) 2011, the results of the regression model show that board independence has no significant association with earnings management. However, the results show that board size and the frequency of board meetings have a significant positive association with earnings management. The results of this study are important to the regulators and policy-makers in the determination of whether to develop more board rules and guidelines in Bahrain. This study may contribute to the corporate governance and earnings management literature on emerging markets. Future research might attempt to examine the relation between board characteristics and earnings management by using data before and after BCGC 2011.

**Keywords:** Board of Director Characteristics, Earnings Management, Bahrain

#### 1. INTRODUCTION

The credibility and transparency of financial statement of a company depends on the effectiveness of the monitoring mechanism of the company (Fama and Jensen, 1983). Board of directors is one of the most important mechanisms of corporate governance. The role of the board of directors is to monitor and discipline a firm's management, thereby ensuring that managers pursue the interests of shareholders (Jensen and Meckling, 1976). Therefore, the board of directors plays an important oversight role in controlling the quality and reliability of financial reporting (Beasley, 1996; Dechow, *et al.*, 1996).

Agency theory states that managers pursue self-interested strategies and will not act to maximize shareholders' wealth unless an appropriate governance structure is implemented to safeguard the latter's interests (Jensen & Meckling, 1976). Managers are using earnings management to maximize company's interest or to maximize their own interest. Managers can opportunistically manipulate accounting reports

by managing accruals. Monitoring mechanisms should be established to increase the reliability and quality of accounting earnings and to reduce opportunistic behavior of managers. The main mechanism of corporate governance is board of directors which have the responsibility to monitor opportunistic behavior of managers. Jiang *et al.* (2008) argued that corporate governance is critical to better financial reporting, and suggest that higher levels of corporate governance are associated with lower discretionary accruals and higher-quality earnings. Cornett *et al.* (2009) found that institutional ownership of shares, institutional investor representation on the board of directors, and the presence of independent outside directors on the board all reduce the use of discretionary accruals.

In any firm, the board of directors is the main decision-making body and its composition has an important impact on the quality of reported earnings. There has been growing recognition in recent years of the relationship between board characteristics and earnings management. However, there is a shortage of studies that target the Gulf Cooperation Council (GCC) countries. This study focuses on one of the GCC countries, namely Bahrain, and it contributes geographically to the corporate governance and earnings management literatures by analyzing data from an emerging market and providing useful feedback to the policy-makers and regulators on the effectiveness of board of director.

To curb earnings management practices, regulators have improved the philosophy of corporate governance and given importance to independent external auditors (Xie *et al.*, 2003). The Government of Bahrain is keen to promote good corporate governance principles in Bahrain in order to enhance investor confidence and foster economic development. In this regards, the first Bahrain Corporate Governance Code (CGC) has been effective on 1<sup>st</sup> January 2011. All Bahraini companies to which this Code applies should be in full compliance by the end of 2011. The BCGC 2011 stated that, the board shall have rigorous controls for financial audit and reporting, internal control, and compliance with law. The Code goes beyond the Company Law's requirements on several points. Examples are this Code's recommendations that the chairman of the board and the CEO should not be the same person, and that at least 50% of the board of directors should be non-executive directors.

## 2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Prior studies found a relation between board characteristics and discretionary accruals as a proxy for earnings management. In particular, studies have found that independent boards reduce the occurrences and extent of earnings management practices and it is thus associated with better quality of financial reporting (e.g., Xie *et al.*, 2003; Cornett *et al.*, 2009; Linck *et al.*, 2009). Klein (2002) found that firms with boards composed of independent directors are less likely to have large abnormal accruals, and they suggested that, boards structured to be more independent of the CEO may be more effective in monitoring the corporate financial accounting process. Xie *et al.* (2003) in the US found that earnings management is less likely to occur in the companies whose boards include greater proportion of independent non-executive directors.

Davidson, *et al.* (2005) in Australia found that a majority of non-executive directors on the board is significantly associated with a lower likelihood of earnings management. Cornett *et al.* (2009) in the US by examining whether corporate governance mechanisms affect earnings and earnings management at the largest publicly traded bank holding companies, they provided evidence suggesting that board independence is associated with higher earnings quality, indicating that more independent boards appear to constrain the earnings management. Gulzar and Wang (2011) in china found a significantly positive association between

earning management and different corporate governance characteristics such as CEO duality, board meetings, females directors and concentrated ownership. However, they found no relationship between board size, board independence and earnings management.

## **2.1. Hypotheses**

### **2.1.1. Board Independence**

The independent directors are introduced to the board with the main objective of preventing insiders (controlling shareholders as well as the management) from using their advantageous positions to the detriment of both the corporation and of minority shareholders (Chen *et al.*, 2007; Lo *et al.*, 2010). Fama and Jensen (1983) argued that independent non-executive directors are motivated to work in the best interests of shareholders, as they bear substantial reputation costs if they fail in their duties. Klein (2002) suggested that boards structured to be more independent of the CEO are more effective in monitoring the corporate financial accounting process. Beasley (1996) argued that firms with high percentage of independent non-executive directors on board have less chance to committing fraud, and Peasnell *et al.*, (2005) argued that a higher percentage of outside directors on board can better prevent income-increasing discretionary accruals to prevent earnings management.

The literature suggested that firms with stronger board independence are less prone to accounting violations and frauds and are related to less earnings management practices. However, the literature provides mixed results on the association between board independence and earnings management. For example, Peasnell *et al.* (2000) in the UK, Klein (2002) in the US, Xie *et al.* (2003) in the US, Davidson, *et al.* (2005), Cornett *et al.* (2009) in the US, Rajpal (2012) in India, Waweru and Riro (2013) in Kenya, Metawee (2013) in Egypt, and González and García-Meca (2014) found a negative significant relationship between board independence and earnings management. Liu *et al.* (2013) in China and Sukeecheep, *et al.* (2013) in Thai found that the independence of the board is positively associated with earnings management. However, Peasnell *et al.* (2000) in the UK found no evidence that non-execute directors in the board would reduce earnings management in the post-Cadbury period, and Park and Shin (2004) in Canada, Abdul Rahman and Ali, (2006) in Malaysia and Gulzar and Wang (2011) in china found no significant relationship between board independence and earnings management.

Despite the inconsistent findings in the literature reported above, this study suggests a negative association between the independence of the board and earnings management.

H1: Earnings management of Bahraini listed firms is negatively associated with the independence of the board.

### **2.1.2. Board Size**

Larger size of board are claimed to have information and expertise advantage over small boards and a better supervision of the management team and a higher quality of corporate decisions then better at preventing earnings management (Pearce and Zahra, 1992). In contrast, Jensen (1993) and Yermack (1996) argued that small boards are more effective in monitoring managerial behavior as the smaller group forces members to be more engaged, and Beasley (1996) argued that, fraud more easy to occur in firms with larger board size compare to firm with small board size. Kouki, *et al.* ( 2001) stated that board size that

should be neither too large nor too small in order to avoid diverting opinions that profit on the manager and allow earnings management. They reported a positive relationship between the size of the board and earnings management.

The literature provides mixed opinions and mixed results on the association between board size and earnings management. For example, Xie *et al.* (2003) , Peasnell *et al.* (2005) , Chen *et al.* (2006), Ebrahim (2007) and González and García-Meca (2014) found that board size has a significant negative relation with earnings management. Kouki, *et al.*, (2001) in the US, Kao and Chen (2004) in Taiwan, Abdul Rahman and Ali (2006) in Malaysia, and Jaggi, *et al.* (2009) in China found a positive relation between the size of the board and earnings management. However, Tang and Xu (2007) in China and Gulzar and Wang (2011) found no relationship between board size and earnings management.

Therefore, and despite the inconsistent findings in the literature reported above, this study proposes a positive association between the size of the board and earnings management.

H2: Earnings management of Bahraini listed firms is positively associated with the size of the board.

### **2.1.3. Board Meetings**

The literature suggested that boards that meet frequently are more effective in monitoring firm's function. (Conger *et al.*, 1998; Vafeas, 1999) suggested that, the higher the number of board meetings, the more effective will be the board's monitoring function, and they found that if companies have fewer board meetings than necessary, the firm's value will decline. Xie *et al.* (2003) argued that, boards that meet infrequently are not likely to be effective monitors of management, and are likely to skim over management plans without questioning the motives behind them, and boards that meet frequently should have more time to focus on issues such as earnings management. Chen *et al.* (2006) observed that the potential for fraud is reduced when the board meets frequently because this allows the directors to identify and resolve any potential problems.

The literature suggested that boards meet frequently are related to less earnings management practices. However, the literature provides mixed results on the association between the frequency of board meetings and earnings management. For example, Xie *et al.* (2003) in the US found a negative significant association between number of board meetings and earnings management. Sarkar, *et al.* (2008) in India found that board diligence (number of meetings) attended by the independent directors has a significant negative association with earnings management. However, Gulzar and Wang (2011) in China and Metawee (2013) in Egypt found a significant positive association between board meetings and earning management.

Despite the inconsistent findings in the literature reported above, this study proposes a negative association between the frequency of board meetings and earnings management.

H3: Earnings management of Bahraini listed firms is negatively associated with the frequency of board meetings.

## **3. RESEARCH METHODOLOGY**

### **3.1. Study Sample, Data Collection and Data Analysis**

Bahrain Bourse (BB) is emerging market with small number of listed companies, therefore, all companies listed on BB are considered for inclusion in the survey. The initial study sample includes all Bahraini listed

companies for the two years 2012 and 2013. This selection takes into account the two years data available after implementing the first CGC in Bahrain. The total number of Bahraini companies listed in BB in 2012 is 43 companies make up the initial sample for this study. However, due to suspension and incomplete financial data, 11 companies were excluded from the analyses. Therefore, the final number of companies included in the analyses is 32 Bahraini companies and 64 firm-year observations.

The data are collected from the sampled companies' annual reports that were downloaded from the official website of the BB and websites of the Bahraini companies. The data is analyzed through the use of bivariate correlation and linear regression analysis. The ordinary least-squares regression is used to examine the association between board characteristics and earnings management.

### 3.2. Measurement of the dependent variable

The dependent variable in this study is earnings management. Since earnings management is inherently unobservable, most studies used measures of discretionary accruals as proxies for earnings management. The most popular measures to calculate discretionary accruals are the Jones and modified-Jones models. However, based on prior literatures, it was observed that the modified-Jones model is the most famous and most frequently used model to detecting discretionary accruals, thus it was adopted in this study to estimate discretionary accruals, which is specified as follows,

$$TAC_{it}/A_{it-1} = \beta_1 \left( 1/A_{it-1} \right) + \beta_2 [(\Delta REV_{it} - \Delta REC_{it}) / A_{it-1}] + \beta_3 (PPE_{it} / A_{it-1}) + \varepsilon_{it} \quad (1)$$

where:

- TAC<sub>it</sub> = total accruals for firm *i* in the current year *t*;
- A<sub>it-1</sub> = total assets for firm *i* at the end of the previous year;
- ΔREV<sub>it</sub> = change in revenue for firm *i* between the current year and previous year;
- ΔREC<sub>it</sub> = the change in receivables for firm *i* between the current year and previous year;
- PPE<sub>it</sub> = gross property, plant and equipment for firm *i* in the current year;

Using the cash flow approach (Hribar and Collins, 2002), total accruals (TAC) are calculated as the difference between operating income (OI) obtained from the income statement and operating cash flows (OCFO) obtained from the statement of cash flows.

$$TAC_{it} = OI_{it} - OCFO_{it} \quad (2)$$

The predicted values from equation (1) are non-discretionary accruals (NDAC), and the difference between actual total accruals (TAC) and (NDAC) is discretionary accruals (DAC) (Kothari *et al.*, 2005).

$$DAC_{it} = TAC_{it} - NDAC_{it} \quad (3)$$

### 3.3. Measurement of the Independent Variables

The independent variables used in this research are board characteristics, namely, board independence, board size, board frequency of meetings. Consistent with prior researches, the three board variables are identified and measured as shown in Table 1.

### 3.4. Measurement of the control variables

Variables other than board characteristics may also contribute to earnings management which have been used in previous studies and have been associated with earnings management. Therefore, in order to test the association between earnings management and board characteristics, and to mitigate the potential bias resulting from firm's operation on earnings management and to capture firm's operational characters, three control variables are added to the regression model namely, company size, leverage, and current ratio. The control variables were measured as shown in Table 1.

### 3.5. Regression Model Development

In order to examine the effect of each independent variable (i.e. board characteristics) and each control variable on the dependent variable (i.e. earnings management) the following multivariate regression model is executed in this study.

$$EM = \beta_0 + \beta_1 BDIND + \beta_2 BDSIZE + \beta_3 BDMEET + \beta_4 COSIZE + \beta_5 LEV + \beta_6 CURR + \epsilon$$

where:

- EM* = Earnings management;
- BDIND* = Board independence;
- BDSIZE* = Board size;
- BDMEET* = Board meetings;
- COSIZE* = Company size;
- LEV* = Leverage;
- CURR* = Current ratio;
- $\epsilon$  = error term.

**Table 1**  
**Variables Definitions and Measurements**

<i>Variables</i>	<i>Definitions and Measurements</i>
<b>Dependent variable:</b>	
EM	Earnings management, measured by discretionary accruals as a proxy.
<b>Independent variable:</b>	
BDIND	Board independence, the percentage of independent (non-executive) directors on the board;
BDSIZE	Board size, the number of directors on the board;
BDMEET	Board meetings, number of board meetings held during the fiscal year;
<b>Control variable:</b>	
COSIZE	Company size, the companies' natural log of total assets;
LEV	Leverage, measured as the ratio of the companies' total liabilities to the companies' total assets.
CURR	Current ratio, measured as the ratio of the companies' total current assets to the companies' total current liabilities.



#### **4. RESEARCH RESULTS**

Table 2 provides the descriptive statistical test results of all variables for the final sample of companies, including the minimum, maximum, mean, and standard deviation for dependent and independent variables and control variables in the regression model. The results in Table 2 show that, the average earnings management (EM) is 0.897. The average percentage of independent directors on the board (BDIND) is 44.4%. The average number of members on the board (BDSIZE) is 8.39 with a minimum of 5 and maximum of 13 members. The average number of board meetings held during the fiscal year (BDMEET) is 5.43 with a minimum of 3 and maximum of 11 meetings. Also, the descriptive statistical test results in Table 2 show that, the average leverage ratio (LEV) is 0.44, and the company size (COSIZE) on average is 19.32 of it is natural logarithm value.

The Pearson correlation coefficients are presented in Table 3. The results show that there is a moderately high correlation between some variables. However, it has been suggested that correlation coefficients should not be considered harmful until they exceed 0.80. The coefficients in the correlation matrix in Table 3 reveal that the highest correlation is (.468) between earnings management and current ratio, which support the lack of multicollinearity in the regression model. In addition, another more formal method for detecting multicollinearity involves the calculation of the variance inflation factor (VIF). VIF measures the degree to which each explanatory variable is explained by the other explanatory variables and very large VIF values indicate high collinearity and a common cutoff threshold is VIF values above 10 (Hair, *et al.* 1995). The VIF values of all independent variables are calculated and presented in Table 4, all VIF values are below 10, which support the lack of multicollinearity in the regression model. The R-Square and the adjusted R-Square and F-values for the regression model are presented in table 4. The results indicate that, the amount of explained variation in the dependent variable is 35.7% and the multiple regression model is highly significant, which statistically supports the significance of the model. Table 4 also presents the results of the regression model, standardized beta coefficients and t-values are given for each independent and control variable.

The empirical evidence derived from the regression model indicates that there is a significant positive association at the 10% level between discretionary accruals as a proxy for earnings management and board size. This finding supports Hypothesis 2, and suggests that, higher board size is associated with a significant increase in earnings management among Bahraini listed companies. Therefore, this result suggests that, a smaller board size is better able to ensure the quality and integrity of reported earnings, and it supports the view that larger boards appear to be ineffective in their oversight duties relative to smaller boards. Also, this result supports the argument that a small board can monitor the CEO's actions more effectively because a larger board might be more likely to concern itself with etiquette at the expense of monitoring (Jensen, 1993), and supports the argument that fraud more easy to occur in firms with larger board size compare to firm with small board size (Beasley, 1996), and small boards are more effective in monitoring managerial behavior as the smaller group forces members to be more engaged (Jensen, 1993; Yermack, 1996).

Also, the empirical evidence indicates that there is a significant positive association at the 10% level between discretionary accruals and board meetings. This finding is inconsistent with Hypothesis 3, and suggests that, higher frequency of board meetings is associated with a significant increase in earnings management among Bahraini listed companies. Therefore, this result suggests that, the lower frequency of board meetings increases the likelihood of detecting material misstatements thus reducing the likelihood

of earnings management. This finding is consistent with Gulzar and Wang (2011) and Metawee (2013) who found a significant positive association between board meetings and earnings management.

Board independence can play active role in curbing earnings management. However, the results of the regression model show no significant association between board independence and earnings management among Bahraini listed companies. Accordingly, the first hypothesis is rejected. This result is consistent with Peasnell *et al.* (2000), Park and Shin (2004), Abdul Rahman and Ali (2006) and Gulzar and Wang (2011) who found no significant relationship between board independence and earnings management. A possible explanation for the insignificant relationship between independence of board and earnings management is that the board of directors is seen as ineffective in discharging their monitoring duties due to management dominance over board matters. The apparent reason for this phenomenon is attributed to the board of directors' relative lack of knowledge in company's affairs (Abdul Rahman and Ali, 2006).

In regards of the control variables, the results of the regression model reveal that, company size is not associated with earnings management. However, the results show that there is a strong significant positive association at the 1% level between earnings management and leverage. This finding suggests that Bahraini companies with high leverage associated with high earnings management practices. Also, the results show that there is a strong significant positive association at the 1% level between earnings management and current ratio, which suggests that that Bahraini companies with good financial health associated with high earnings management practices.

## 5. CONCLUSIONS

The effectiveness of the board of directors has been a subject of increasing interests due to increased concerns about the quality of corporate financial reporting process caused by accounting scandals. This study provides the first evidence on the relation between board of director characteristics and earnings management after implementing the BCGC 2011. Specifically, the study examines the association between earnings management and the following board characteristics: board independence, board size, and board meetings. As a small emerging market, Bahrain's unique business environment and context offer a good opportunity and provides a useful setting for examining the effectiveness of board characteristics in detecting and curbing earnings management practices.

To achieve the objectives of this study, the annual reports of all Bahraini listed companies for years 2012 and 2013 were analyzed. The data is analyzed through the use of bivariate correlation and linear regression analysis. The ordinary least-squares regression is used to examine the association between board characteristics and earnings management. The empirical evidence derived from the regression model indicates that earnings management is positively associated with board size and board meetings. These findings suggest that, large board size can be an obstacle for quick and efficient decision-making, due to problems of coordination and communication, thus a smaller board size is better able to ensure the quality and integrity of reported earnings. Accordingly, these results may suggest that, a smaller board size is better able to curb earnings management practices than large board size. Also, these results may suggest that, the lower frequency of board meetings increases the likelihood of detecting material misstatements thus reducing the likelihood of earnings management.

Board independence can play active role in reducing earnings management. However, the results of the regression model show no significant association between board independence and earnings management.



Also, the empirical evidence of the regression model indicates that earnings management is positively associated with leverage and current ratio as control variables. This finding suggests that Bahraini listed companies with high leverage and high current ratio associated with high earnings management practices.

The results of this study are important to the Bahrain Bourse and policy-makers in Bahrain, in the determination of whether to develop more board rules and guidelines so as to improve the quality of information reported by Bahraini companies. This study may help in studying other stock markets in the GCC countries, which may contribute to the corporate governance and earnings management literature on emerging markets. This study used data for two years after implementing the first corporate governance code (CGC) in Bahrain, future research might attempt to examine the relation between board characteristics and earnings management by using data before and after implementing the BCGC 2011.

**Table 2**  
**Descriptive Statistics**

<i>Variables</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Std. Deviation</i>
EM	0.004	5.079	0.897	1.185
BDIND	0.20	0.83	0.4440	0.208
BDSIZE	5.00	13.00	8.3906	2.120
BDMEET	3.00	11.00	5.4375	1.401
COSIZE	16.55	23.23	19.32	2.013
LEV	0.0019	1.705	0.440	0.339
CURR	0.586	50.79	19.31	5.559

The variables are defined in Table 1.

**Table 3**  
**Pearson Correlations**

	<i>EM</i>	<i>BDIND</i>	<i>BDSIZE</i>	<i>BDMEET</i>	<i>COSIZE</i>	<i>LEV</i>	<i>CURRT</i>
EM	1						
BDIND	.029	1					
	.817						
BDSIZE	.223	.168	1				
	.077	.183					
BDMEET	.178	.194	.134	1			
	.160	.125	.292				
COSIZE	.263*	.015	.104	.010	1		
	.036	.908	.413	.935			
LEV	.165	.138	-.277*	-.211-	.410**	1	
	.194	.277	.027	.095	.001		
CURR	.468**	-.139-	.151	.128	.282*	-.297*	1
	.000	.274	.233	.313	.024	.017	

\*. Correlation is significant at the 0.05 level (2-tailed).

\*\*.. Correlation is significant at the 0.01 level (2-tailed).

**Table 4**  
**The Results of the Regression Model and VIF Values**

<i>Dependent Variable</i>			
<i>Earnings Management (EM)</i>			
<i>Independent Variables</i>		<i>Model</i>	<i>VIF</i>
Constant		(-.432)	
<b><i>Board variables</i></b>			
BDIND		-.040 (-.370)	1.152
BDSIZE		.275 (2.465)*	1.222
BDMEET		.184 (1.719)*	1.123
<b><i>Control variables</i></b>			
COSIZE		-.149 (-1.148)	1.642
LEV		.523 (3.785)***	1.869
CURR		.594 (4.947)***	1.414
<i>R-Square</i>	.418	Prob ( <i>F</i> -statistic)	0.000
<i>Adjusted R-Square</i>	.357	Obs	64
<i>F</i> -statistic	6.821		

The variables are defined in Table 1. *t*-values in parentheses.

\* Significant at the 0.10 level (2-tailed).

\*\* Significant at the 0.05 level (2-tailed).

\*\*\* Significant at the 0.01 level (2-tailed).

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