

# The Effect of Board Characteristics on Iraqi Banks Performance

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**Abstract** This article presents evidence on the association between board characteristics and operating performance in banks using unbalanced panel data of 20 banks in Iraq over a ten-year period from 2005–2014. This relationship is estimated by using pooled OLS approach. The empirical results provide evidence supporting a positive board composition, board size and bank performance. Nevertheless, it is also noted that banks with high percentage of female in the board of director is one of the reasons to make down the bank performance in Iraq. Taken together, findings of this study recommend that banks seeking some improvement in their financial performance should constitute more non-executive directors, big-sized boards of directors, and consisted of few female directors in the board.

**Key words** Bank performance, board characteristics, panel data, agency theory

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## 1. Introduction

In the course of recent decades, the world has encountered prominent instances of corporate disappointment. Consequently, there has been expanding attention being paid to corporate governance and to the viability of board, disclosures, internal controls, and the independence of directors and auditors. Undoubtedly, the Basel Committee on Banking Supervision has pointed out the need to ponder, comprehend, and enhance the corporate governance of financial entities. The Committee upheld a governance structure made out of a board of director and senior administration (Basel Committee, 1999, 2006). The core of the Committee's message is the conviction that good corporate governance builds monitoring productivity and that corporate governance is important to ensure a sound monetary framework, and consequently, a nation's economic improvement (De Andres and Vallelado, 2008).

The main purpose of corporate governance is to establish ownership structure and management structure for the confirmation of managers, whether managers are working for the benefits of shareholders or not. According to agency theory by Jensen and Meckling (1976), there is a conflict between the owner (principal) and management (agent) which create agency problem, this conflict can be related to extra consumption or make an investment in low-risk assets rather than focus on shareholder wealth maximization. Similarly, Fama and Jensen (1983) proposed that boards of director could reduce agency conflict by looking some decision and separate the management from those decisions. For example, US Sarbanes-Oxley Act presented to increase the transparency and reduce the agency cost by legislative listed firms' governance requirements.

There is the significant role of the board of directors by managers monitoring or controlling strategies decisions in the governance of banking industry (De Andres and Vallelado, 2008). Abdullah (2004) stated that the main function of the board is to take care of the shareholders' wealth. The responsibilities of the board of directors are developing business strategies, opined that the principal objective of a board is to keep the interests of stakeholders. They are responsible for organizing corporate objectives, developing

strategic business plans, evaluating and monitoring the efficient implementation of business approaches and management activities (Nekhili and Gatfaoui, 2013; Wang and Hsu, 2013; Abdullah, 2004).

The board operates under the mechanism of corporate governance to appoint, supervise, and remunerate the senior managers while monitoring the influence on firm's overall strategy (Campbell and Mínguez-Vera, 2008). In banks, the board has a more significant role as compared to non-financial institutions due to extended responsibilities of regulators and depositors along with stakeholders (Macey and O'Hara, 2003). Thus, the board of a bank plays a significant role in the execution of governance mechanism effectively (Kilic, 2015; Pathan *et al.*, 2013).

This paper is likely to expand research by its contribution towards a better understanding of the board characteristics and performance of banks in Iraq. The key focus of the study is in the composition of the board of directors, the size of the board and board gender. In banks, these measures of corporate governance play a major role. Furthermore, this study uses Return on Equity (ROE) to measure bank performance. Moreover, it also identifies that corporate governance factors which influence the performance of banks in Iraq are similar to those in western businesses. Since corporate governance was unable to attract the attention of researchers in Iraq, the study provides a better understanding of corporate governance with the performance of banks, similar to that of global markets.

## **2. Board characteristics and bank performance hypotheses**

This segment includes the understanding of board characteristics, bank performance and hypothesis development. Board characteristics are explained along three dimensions of composition, size, and gender of the board. Firstly, the association between the composition of board and performance of the bank is discussed. Next, the discussion includes the relationship of board size and gender with the performance of the bank.

### **2.1. Board composition**

Currently, the key issue faced by the management of the firms is the board of director's composition (Carter *et al.*, 2003). Therefore, it is of significance importance for researchers to examine the influence of the composition of the board on the performance of banks. Several studies have agreed that high ratio of outside directors establishes the effective board (Lorsch and MacIver, 1989; Mizruchi, 1983; Zahra and Pearce, 1989). Furthermore, Shungu *et al.* (2014); Bektas and Kaymak (2009) and Pathan, *et al.* (2007) identifies a positive relationship between independence of board and performance of Thai and Turkish banks. However, Adams and Mehran (2008) and Stančić *et al.* (2012) does not found any evidence of a relationship between board composition and performance of the bank. Firms with non-executive directors are independent, works in stakeholder's best interest, have better control over management and have a positive influence on performance (Borokhovich *et al.*, 1996; Hermalin and Weisbach, 1988). Recently, the composition of the board has become a key area of interest among governments, researchers, academicians, and debates in public forums because of the benefits associated with the availability of diversified board members in the organizations Kilic (2015). Agency theory argues that outside directors in the board hold the advantage of monitoring the management to keep their reputation as independent and efficient decision makers (Fama and Jensen, 1983). The statement supports that increase in non-executive directors reduces the agency problem, as non-executive directors tend to be more vigilant in overall management and enhance the performance of banks. Consequently, we empirically test the below hypothesis:

*H<sub>1</sub>: There is a positive association between board composition and the financial performance of the banks.*

### **2.2. Board size**

Board size denotes the aggregated number of directors in a board who have the voting rights (Ongore *et al.*, 2015; Pugliese and Wenstop, 2007). Board of Directors represents the mechanism of internal governance which controls the agency problems in any corporate system (Li *et al.*, 2008; Cerbioni and Parbonetti, 2007). Numerous scholars articulate board size and banks' performance as opposing ways. In the first place, some researchers argued that increase in the size of the board be directly related to rising

in coordination and communication problems between the members of the board (Cerbioni and Parbonetti, 2007; Bushman *et al.*, 2004). Arguably, as the board size increases, monitoring capacity of directors also increase. This statement supported by Klein (2002), who emphasized on large board size as compared to the small size and was related to specialized advisory and monitoring management. Likewise, Lipton and Lorsch, (1992) recommend that increasing size of the board make it difficult for the organization to call upon regular meetings. Furthermore, the decision-making process of the large board is slow which affect their ability to capture the new business opportunities (Bantel and Jackson, 1989).

On the other hand, researchers proposed that boards with small size enhance the monitoring abilities of management (Khanchel, 2007; Yermack, 1996). They found that monitoring ability has a negative association to the size of the board. Studies have found different results when examined board size. Jensen (1993) supports the small size of the board and found its positive relationship with performance. He also argued that when board size increase above seven or eight the efficiency of board decreases and CEO of the company lose control on the board. Similarly, Lipton and Lorsch (1992) found that it becomes difficult for board members to express opinions and give ideas when some board members are above ten. Furthermore, overcrowded board results in job loss for employees, money loss for stakeholders and competitive market position for the corporation. In another scenario, a study by De Andres and Vallelado (2008) found that board size has inverted U-shaped relationship with performance, challenging the belief that efficiency increases with small board size. The study was based on commercial banks from U.S, U.K, Canada, Italy, France and Spain holding 69 boards for the year 1995-2005.

According to Agency theory, firms with the large size of the board usually have more value. The theory suggests that management of companies whose size of the board is large have less CEO domination, have more efficient monitoring which increases the overall firm performance (Fitriya and Locke, 2012; Singh and Harianto, 1989). Since the influence of the size of the board on the performance of the bank show inconsistent results. This study assumed that firms with the large board have a broad range of access to the resources and have effective management monitoring and expertise. Consequently, the study will empirically test the hypothesis below:

*H<sub>2</sub>: There is a positive association amongst the size of the board and financial banks' performance.*

### **2.3. Board gender**

Board diversity contributes better problem-solving capacity, creativity, and knowledge to manage banks. Carter *et al.* (2003) support the significance of diversity in a board because diversity provides new and multiple outlooks for solving any problem. Erhardt *et al.* (2003) and Ramly *et al.* (2015) also states that board diversity has a positive association with firm value and performance due to unique and diversified attributes associated with board members which are helpful for high-quality decisions.

Several benefits related to female board member includes educational background, communication style, personality, career expertise, and experiences. According to Liao *et al.* (2015), female directors make a major and broader contribution in any decision-making. However, female members are usually less oriented towards power but are more concerned and compassionate than male board directors (Ramly *et al.*, 2015). Additionally, commitment and involvement level of women are high which enhance the process of decision making. Furthermore, they have less self-interest concern and are harder working which increases effectiveness and performance of the corporates (Liao *et al.*, 2015; Lucas- Pérez *et al.*, 2015). Additionally, the attendance for female board members is high as compared to male board members and diversity also increases the monitoring ability of the board (Adams and Ferreira 2009).

Concerning the association amongst gender variety and banks' performance, the scarce prevailing experiential finding indicates conflicting results. Ongore *et al.* (2015), Shungu *et al.* (2014), and Pathan *et al.* (2013) found a positive relationship amongst the proportion of women directors and banks' performance. Conversely, Kilic (2015) found an adverse association between gender diversity and bank performance. Meanwhile, Liang *et al.* (2013) show no significant association amongst the proportion of women on the board of directors and banks' performance. Agency theory opines that better monitoring of managers is linked with the diverse board because diversity enhances the independence of board (Carter *et al.*, 2007). Board independence provides enhanced monitoring which has a positive association with the financial performance of the firm. Therefore, board diversity represented by gender diversity improves the board

mechanism of management monitoring and control and may enhance board independence (Campbell and Minguez-Vera, 2008). Consequently, the hypothesis concerning board gender which is to be tested empirically is stated as:

*H<sub>3</sub>: There is a positive association amongst board gender and banks' performance.*

### 3. Control variables

This study also includes additional variables to control for the other potential factors that may affect bank performance. The bank size is linked with economies of scale and has a probability of improving the financial performance of the organizations. Similar to previous researchers, this study has employed bank size as a control variable (Al-Saidi and Al-Shammari, 2013). The second control variable is non-performing loans (NPL). According to Hu *et al.* (2004) controlling NPL is essential for the bank performance. Also, El-Chaarani (2014) and Zhang and Yang (2011) assert that NPL has been widely used to control the effects of corporate governance to bank performance, and have been found to be significant. The third control variable is capital adequacy ratio (CAR). CAR is widely used as control variable is corporate governance and bank performance (such as, Al-Saidi and Al-Shammari, 2013; Tomar and Bino, 2012). The fourth control variable is GDP growth. GDP growth is widely used as a control variable to control the relationship amongst corporate governance and bank performance (such as, Ben Slama Zouari and Boulila Taktak, 2014; Jiang *et al.*, 2012).

### 4. Methodology of research

This section describes the sample, sources of data, and econometric model.

#### 4.1. Data and model specification

To measure bank performance, this study use ROE, which defined as net income of the bank after deduction of tax by employing its total equity (Liang *et al.*, 2013). Board characteristics are in three dimensions: Board composition (BODC), board size (BODS) and board gender (BODG). In line with the studies of Lefort and Urzúa (2008) board composition is calculated by the number of non-executive directors in bank's board. The size of the board is the representation of a total number of board directors (Fanta *et al.*, 2013). Board gender is the proportion of directors on board which is female (Liang *et al.*, 2013). The bank size (BANKZ) is measured by taking the natural log of banks assets. (Al-Saidi and Al-Shammari, 2013). Non-performing loans represent the ratio of loans which are not performing to total loans in each bank at year end (Zhang and Yang, 2011). Capital adequacy ratio is measured as the total capital to total risk weighted assets (Almekhlafi *et al.*, 2015). As far as this work is concerned, an unbalanced panel data was used for a sample of 20 commercial banks in Iraq. Data is obtained from annual financial reports of the 20 commercial banks in Iraq for the period of 2005-2014. Total observations in the sample are 196. The study uses panel data regression to investigate the impact of characteristics of the board on the financial performance of banks. By using panel data analysis, estimation biases can be reduced to the maximum extent, overcoming the issues of multicollinearity. This provides time-variant relationship while analyzing the relationship among independent and dependent (Baltagi, 2001). The suggested model for this study is:

$$ROE_{it} = \beta_0 + \beta_1 BODC_{it} + \beta_2 BODS_{it} + \beta_3 BODG_{it} + \beta_4 BANKZ_{it} + \beta_5 NPL_{it} + \beta_6 CAR_{it} + \beta_7 GDP_t + e_{it} \quad (1)$$

Where:

ROE = Return on Equity, BODC= Board Composition, BODS = Board Size, BODG = Board Gender, BANKZ = Bank Size, NPL = Non-Performing Loan, CAR= capital adequacy ratio, GDP = gross domestic product growth,  $e_{it}$  = Error term.

### 5. Empirical results

This section describes the results of the study. This section consists descriptive, correlation analysis, panel data regressions.

### 5.1. Descriptive Statistics

Table 1. Descriptive statistics

Variables	Unit.	Mean	St. Dev.	Min	Max
ROE	Ratio	0.139	0.121	-0.128	0.280
BODC	Ratio	0.313	0.196	0.111	0.688
BODS	Number	6.060	1.275	5	9
BODG	Ratio	0.434	0.184	0.012	0.8
TA	USD	236537538	2.71E+08	2439427	1.64E+09
NPL	Ratio	0.210	0.095	0.023	0.439
CAR	Ratio	0.550	0.234	0.086	0.980
GDP	Ratio	6.458	4.580	-2.100	13.90

**Source:** Annual reports of the commercial local banks (for the Board characteristics and bank specific control variables) and World Bank indicators (for GDP growth).

Note: ROE, profit after tax/total equity; BODC, proportion of non-executives in the board of directors ;BODS, Board size; BODG, the percentage of female in the board of directors; TA, total assets; NPL, the percentage of non-performing loan; CAR, capital adequacy ratio; GDP, GDP growth.

Table 1 illustrates the descriptive statistics on the board structure, the performance measure (ROE) and the control variables for the sample of Iraqi banks for the period 2005–2014. Average of board composition is 31% and with a minimum of 11% and maximum of 68%. Average board size was approximately 6 with a minimum of 5 and a maximum of 9. The board gender ranged from a minimum of 0.01 to a maximum of 0.8 with an average of 0.43. The average of total assets of the Iraqi banks was approximately million \$ 236.537538 with a minimum of million \$ 2.439427 and maximum of billion \$1.64. The non-performing loan ranged from a minimum of 2.35% to a maximum of 43.79% with an average of 21%. The capital adequacy ratio ranged from a minimum of 8% and maximum of 98% with a mean of 55%. The nominal GDP growth ranged from a minimum of (-2.1) and maximum of 13.9 with a main of 6.45.

### 5.2. Correlation analysis

This section describes the results of correlation analysis. Correlation analysis is useful in describing the strength and sign of the linear relationship amongst two variables. More specifically, the Pearson correlation analysis is employed to assess and clarify the strengths of the linear relationship among the study variables as provided in Table 2. The correlation coefficient (r) values given in Table 2 shows the strength of the relationship among variables. Correlation coefficient value of 0 shows no linear relationship, while the correlation coefficient value of  $\pm 1.0$  shows perfect linear relationship. On the other hand, interpreted the correlation coefficient value between 0 and 1.0 as follows; the degree of correlation (r) i: between  $\pm 0.1$  and  $\pm 0.29$  shows weak relationship, between  $\pm 0.30$  and  $\pm 0.49$  shows medium relationship. Overall, the results shows that all correlations between independent variables are less than 0.80. This indicates that there is no multicollinearity problem. Gujarati (2004) says that the correlation between independent variables should not exceed 0.80 to ensure that there is no multicollinearity.

Table 2. Pearson correlation matrix

Variables	ROE	BODC	BODS	BODG	BANKZ	NPL	CAR	GDP
ROE	1							
BODC	0.322***	1						
BODS	0.357***	0.272***	1					
BODG	-0.260***	-0.052	-0.101	1				
BANKZ	0.132**	0.092	0.206***	-0.028	1			
NPL	-0.210***	-0.167***	-0.188***	0.106*	0.014	1		
CAR	-0.055	-0.023	-0.003	-0.047	-0.037	0.025	1	
GDP	0.171	0.018	0.072	-0.107*	0.062	-0.097	-0.042	1

**Source:** Annual reports of the commercial local banks (for the Board characteristics and bank specific control variables) and World Bank indicators (for GDP growth)

Notes: \*\*\*, \*\* and \*. Correlation is significant at the 0.1 level, 0.05 level, 0.10 respectively.

ROE, profit after tax/ total equity; BODC, proportion of non-executives in the board of directors ;BODS, Board size; BODG, the percentage of female in the board of directors; BANKZ, natural log of total assets; NPL, the percentage of non-performing loan; CAR, capital adequacy ratio; GDP, GDP growth.

### 5.3. Regression analysis

Before estimating equation (1), we run Hausman specification test (Hausman, 1978) to know which model (fixed or random effects model) is more appropriate to use. Table 3 illustrates the Hausman Test for the model ROE as bellow:

Table 3. Hausman Test

Model	Test Statistic (Chi2)	d.f.	Prob.
ROE	11.37	7	0.1230

The result from Hausman’s Test for the model ROE finds insignificant result ( $p\text{-value} < 0.05$ ), meaning that random effects model is not rejected. Thus, the output of Hausman’s Test suggests that random effects model is appropriate for ROE. The next step is running the Breusch-Pagan Lagrange Multiplier specification test (Breusch and Pagan, 1980) to compare between random effects and pooled OLS. The Breusch-Pagan LM Test results are given in Table 4;

Table 4. Breusch and Pagan Lagrangian Multiplier Test for Panel Data

Model	Test Statistic (Chi <sup>2</sup> )	Prob.
ROE	0.06	0.4052

As shown in Table 4 the probability values for the redundant Breusch-Pagan LM Test failed to reject the null hypothesis of Random effects model as the p-values are higher than 0.05 for model ROE. This is, no evidence of significant differences across banks, therefore pooled OLS is better than random effects estimator for model ROE. The test also fail to reject the null hypothesis of random effects model therefore, results unanimously indicate that the pooled OLS is more preferred compared to the random effects model.

The empirical examination of the effect of board characteristics on the performance of the bank is presented and discussed in Table 5 as below.

Table 5. Board characteristics and banks’ performance (ROE)

Variable	Coefficient	t-Statistic	Prob.	VIF
Constant	0.1077	0.8137	0.0001	
BODC	0.1558***	3.9088	0.0001	1.1121
BODS	0.0242**	2.4470	0.0151	1.1574
BODG	-0.2556***	-3.6823	0.0003	1.0311
BANKZ	0.0142	0.8863	0.3762	1.0543
NPL	-0.1351*	-1.6828	0.0936	1.7146
CAR	-0.0339	-0.9120	0.3626	1.7278
GDP	0.0039**	2.0703	0.0394	1.2893
R-squared	0.2589			
Adjusted R-squared	0.2383			
F-statistic	12.578			
Prob(F-statistic)	0.0000			
Diagnostic Tests	P-value	Conclusion		
Normality	0.4395	The residuals are normally distributed		
Serial Correlation	0.2395	There is no serial correlation problem		
Heteroscedasticity	0.0845	The residuals are homoscedasticity		

Note: \*\*\*, \*\* and \*. Correlation is significant at the 0.1 level, 0.05 level, 0.10 respectively.

As shown from Table 5, all the VIF values for dependent variables below 10 indicating no multicollinearity problem (Pallant, 2007). Moreover, the residuals are normally distributed, there is no

serial correlation, and the residuals are homoscedasticity due to the p-value for Jarque- Bera Test, Breusch-Godfrey Serial Correlation LM Test and Heteroskedasticity ARCH Test are not significant (p-value > 0.05).

The regression results are shown in Table 5, the regression equation employed ROE as its dependent variable and board composition, board size, and board gender as independent variables. Bank size, non-performing loan, capital adequacy ratio, and GDP growth are control variables. Table 5 demonstrates that board composition (ratio of non-executive directors) is positively related with the performance of banks, implying that an increased in the non-executive directors of a bank increase its performance. These results support agency theory, which claims that the board with a high percentage of outside director results in better firm performance. Additionally, this finding is consistent with El-Chaarani (2014), Shungu *et al.* (2014), Zhang and Yang (2011), Bektas and Kaymak (2009) and Pathan *et al.* (2007) findings. Based on the results, the hypotheses of a significant positive relationship between board composition and performance of the bank are supported. Table 5 illustrates that size of the board has a positive relationship with bank performance. These results support agency theory, which claims that the board with large size results in better firm performance. Additionally, this finding is consistent with Nodeh (2016); Stepanova and Ivantsova (2012); Adams and Mehran (2012); Belkhir (2009). Based on the results, the hypotheses of a significant positive relationship between board size and performance of the bank are supported. Furthermore, De Andres and Vallelado (2008) and Klein (2002) emphasized that large board size have effective monitoring of the management as compared to the small size. Thus, banks in Iraq with a large number of board directors have the advantage of more efficiency and accountability of their operations.

The results of Table 5 suggesting that the women directors on the board lead to lower performance in the Iraqi banking industry. Findings of the study are similar to Kilic, 2015 for banks in Turkey but the opposite of Pathan *et al.* (2013) for banks in the USA. However, this study shows that the testable hypothesis (H3) is rejected. This implies that banks in Iraq find a negative significant relationship amongst female member of the board and the performance of banks. The conceivable explanations behind the reported negative relationship are different. First, gender diversity in meeting rooms can be a burden, particularly as far as gathering execution. Distinctive styles, states of mind, and viewpoints may build strife, decrease attachment, and ruin correspondence and coordination inside the group (Jhunjunwala and Mishra, 2012). Such clashes may moderate the decision-making process, which could have a negative impact in focused situations (Gallego-Álvarez *et al.*, 2010). Second, gender diversity may involve costs in processing distinctive perspectives and determining contradictions (Adams and Ferreira, 2009). Third, board diversity may expand the likelihood of ambiguities, false impressions, and decision mistakes (Randøy *et al.*, 2006). Further, findings show that the percentage of non-performing loan has a significant negative influence on performance as measured by ROE, which is according to the notion that non-performing loan in the financial sector increases the possibility to lead establishment to difficulty and worse bank performance (Messai and Jouini, 2013). Nonetheless, GDP growth has a significant positive influence on banks financial performance. However, bank size and capital adequacy ratio does not have significant impact on banks financial performance. In sum, findings indicate that practices of governance in Iraq banks are good, including board characteristics (the number of directors, composition, and gender of the board). These variables are significantly linked with banks' performance across financial measure ROE.

## 6. Concluding remarks

In this study, the authors use the unbalance pooled OLS approach to examine the relationship amongst board characteristics and bank performance. The authors draw from the agency theory to examine the issue. Using unbalance panel data for 20 banks for the period 2005–2014 inclusive. Results show that board composition has a positive relationship with the performance of commercial banks in Iraq. While examining the board size, this study found that large board size has effective monitoring of the management as compared to the small size. Thus, banks in Iraq with a large number of board directors have the advantage of more efficiency and accountability of their operations and positively improve the performance of banks. As for board gender, the findings suggest that the gender diversity of the board members worsen the performance of banks in Iraq. This paper, therefore, recommends that banks committed toward the enhancement of performance should establish more non-executive directors, big-sized boards of directors, comprised of few female directors in the board.

Like other study, this study has limitations. This study focus on the private local commercial banks, we did not include other type of banks in this study like Islamic banks and foreign banks. Moreover, this study did not include other sectors like manufacture, tourism, agriculture and investment companies. Notwithstanding the limitations, taken mostly, these results have suggestions for both nearby and global investors. They are additionally pertinent to policy-makers and banks in MENA countries (and other developing countries), as they endeavor to enhance corporate governance. Future researchs could employ banks drawn from a number of MENA stock exchanges and examine different organizational outcomes, such as disclosure and earnings management as well as, bank performance internal and external determinants. Moreover, future research is encouraged to empirically examine the moderating impact of external environment on the association between corporate governance and financial bank performance.

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