

# INVESTIGATING THE RELATIONSHIP BETWEEN CORPORATE GOVERNANCE AND BANKS' FINANCIAL PERFORMANCE: EGYPT CASE

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## Abstract

In the last few decades, policy makers around the world have focused on corporate governance reform since the Asian financial crisis and scandals in the United States such as the Enron debacle. In addition, there is no doubt that banks have significant position in the welfare of any economy. Corporate governance involves in how banks' businesses and affairs are governed by its board of directors that raises a fundamental question of how this could affect banks' financial performance. The focus of this research is to investigate the relationships between some of the corporate governance variables that are related to the board of directors on the financial performance of these banks working in the Egyptian market. Thirteen banks that are listed in the Egyptian Stock Exchange were selected with data collected for the period from 2011 till 2013 which is the post Egyptian revolution era. Research analyses adopted in this study are descriptive, correlation and regression analyses to test the research hypotheses. Findings of this research provide evidence that some of these variables such as board independence, foreign board members ratio, women board members ratio and board educational ratio have significant effect on the financial performance of these banks; however, board size and CEO qualities do not have any significant effect on banks' performance. The research reaches some implications that are important to different stakeholders on practical and academic levels.

**Key Words:** Corporate Governance, Performance Measurement, Agency Theory, Conventional Banks, Developing Countries, Egypt

**Jel Classification:** G3, G2

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## 1. Introduction

In the 20th century the management was the focus, however; corporate governance is the focal point for the 21st century (Tricker, 2012). The term corporate governance drives from an analogy between the governance of corporations and the government of nations (Becht *et al.*, 2002). The word governance is ancient and it comes from the Greek word steering (Carrol and Bucholtz, 2009). However, the phrase corporate governance is young. Recent corporate governance scandals make the corporate governance field receives a lot of attention from all interest groups and an increase in media coverage which turned terms like transparency, governance failure and weak board of directors as house hold phrases (Tirole, 2006).

From the banking industry perspective, corporate governance involves the manner in which how the banks' businesses and affairs are governed by its board of directors and its senior management. The board of directors is elected by the shareholders as the

decision making body of the bank which has as one of its responsibilities to formulate bank loan strategy (Sumner and Webb, 2005). And since the higher cost of capital will hurt the overall economic development, so the governance of banks is different from unregulated non-financial companies for several reasons, for one is that the number of parties with a stake complicate the governance of banks, in addition to investors, depositors and regulators have a direct interest in banks performance. One more reason is that regulators are more concerned with the effect that governance has on the performance of banks because the health of the overall economy depends upon banks performance (Adams and Mehran, 2003).

The international financial landscape is changing rapidly; acquisitions and mergers wave has changed the banking industry shape. All things changed in that new global banking industry except for one thing remains unchanged which is the need to have a strong banking system with good corporate governance practices which will help any bank to survive in that

increasingly open environment (Kaheeru, 2001). Banking supervision functions are affected if the corporate governance system reliability has been affected (Heidi and Marleen, 2003). Between 1990 and 2000 the rapid changes in the banks ownership globally affected the governance systems of banks (Mayes *et al.*, 2001). These changes in the corporate governance of banks have raised a very important question and fundamentally that question is how these changes in banks governance systems will affect banks' performance?

Hence, there is no globally accepted set of corporate governance principles, which could be applied to the board structures as they depend on business, legal and political environment which varies from one country to another. However, board structure is considered as an important corporate governance mechanism which would result in an improved performance, also the board composition, CEO qualities and board size all addressed due to their importance as components of the board structure and in affecting banks performance (Cadbury, 1992).

## 2. Literature Review

Better corporate governance should lead to higher stock prices or better long-term performance, because when managers are better supervised, agency costs are decreased (Albanese *et al.*, 1997). However, it's suggested that, the evidence of a positive association between corporate governance and firm performance may be traced to the agency explanation, so in connection with the relationship between corporate governance and firm performance, the most studied governance practices include board composition and board size as elements of the board structure (Gompers *et al.*, 2003).

### 2.1 Board Composition Effect on Performance

The composition of board members has been proposed to help reduce the agency problem (Weisbach, 1988). Empirical studies on the effect of board membership and structure on performance generally show results either mixed or opposite to reduce agency problem. While some studies find better performance for firms with boards of directors dominated by outsiders (Pfeffer and Salancik, 1978; Ogus, 1994; Pearce and Zahra, 1992; Vafeas, 1999), others find no such relationship in terms of accounting profits or firm's value (Weisbach, 1988; Daily and Dalton, 1992; Mehran 1995; Daily and Ellstrand, 1996; Rosenstein and Wyatt, 1997; Klein, 1998; Weir *et al.*, 2001; Bhagat and Bolton, 2005). The analysis of 54 empirical studies of board composition and 31 empirical studies of board leadership structure and their relationships to firm financial performance resulted in a little evidence of a relationship between board composition or leadership

and firm financial performance (Daily and Dalton, 1992). This is also evident in the studies of Hermalin and Weisbach (1999) and Bhagat and Black (1999).

There is also a study showed that the cost of debt, as determined by bond yield spreads, is inversely related to board independence (Anderson *et al.*, 2004). However, Hermalin and Weisbach (1999) observed no association between the proportion of outside directors and Tobin's Q; and Bhagat and Black (1999) find no linkage between the proportion of outside directors and Tobin's Q, return on assets, asset turnover and stock returns. Attiya and Robina (2007) in Pakistan analyzed the relationship between firm value using Tobin's Q and governance sub-indices "board ownership and shareholdings". The result indicates that corporate governance does matter in Pakistan and that board composition has significant effects on firm performance.

Thus, the relationship between the proportions of outside directors, as a substitute for board independence, and firm performance is mixed. Studies using financial statement data and Tobin's Q have found no link between board independence and firm performance, while those using stock returns data or bond yield data find a positive link.

### 2.2 Board Size Effect on Performance

Unlike in board composition, a fairly clear negative relationship appears to exist between board size and firm performance (Yermack, 1996). A similar pattern has been documented for a sample of small and midsize firms. The study also revealed that board size and firm value are negatively correlated (Eisenberg *et al.*, 1998). Other studies also confirmed that; limiting board size is believed to improve firm performance because the benefits by larger boards of increased monitoring are outweighed by the poorer communication and decision-making of larger groups (Lipton and Lorsch, 1992; Jensen, 1993). A large board is likely to be less effective in substantive discussion of major issues and to suffer from free-rider problems among directors in their supervision of management (Hermalin and Weisbach, 2002).

Harris and Raviv (2005) and Bennedson *et al.* (2006) quoted the study of Yermack (1996) as a first ever-empirical study conducted on board size effect. Yermack has conducted his study on 452 US firms between 1984 and 1991. He took Tobin's Q as an approximation of market valuation. He documented an inverse association between board size and firm value. He further asserted that the fraction of lost value occurs more when size of firm is increasing from small to medium for example from 6-12 as compare to the firm whose board size is increasing from medium to big from 12-24. In Ghana, it has been identified that small board sizes enhances the performance of firms (Kyereboah-Coleman and Nicholas-Biekpe, 2006).

While in a study conducted in Nigeria, Sanda *et al.* (2005) found that firm performance is positively related with small size as opposed to large boards. In their studies, Klein (1998); Booth and Deli (1999) and Anderson *et al.* (2004) tried to find out the relation between board size and ratio of debt to assets. They presented a different result that firms with bigger boards have lower cost of debt. On contrary to the theory that larger boards are ineffective monitors, they stated that board plays an important advisory role that enables firms to gain access to low-cost debt. They observed that the board will be larger in firms with high leverage.

### 2.3 Theoretical Framework for Corporate Governance

Corporate governance importance is growing, particularly with regards to the monitoring role of the board of directors. As a result, the theoretical perspective that's relevant to this study is based on the governance structures that affect the value of the firms (Sanda *et al.*, 2005). This section reviews agency theory as the relevant theoretical perspective of a board's accountability to this study.

Agency theory has its roots in economic theory and it dominates the corporate governance literature. It's been pointed to two factors that influence the prominence of agency theory. Firstly, the theory is a conceptually simple one that reduces the corporation to two participants, managers and shareholders. Secondly, the notion of human beings as self-interested is a generally accepted idea (Daily *et al.*, 2003).

In its simplest form, agency theory explains the agency problem arising from the separation of ownership and control. It provides a useful way of explaining relationships where the parties' interests are at odds and can be brought more into alignment through proper monitoring and a well-planned compensation system (Davis *et al.*, 1997). Eisenhardt (1989) explains that the agency problem arises when the desires or goals of the principal and agent conflict and it is difficult or expensive for the principal to verify what the agent is actually doing. The problem is that the principal is unable to verify that the agent is behaving inappropriately. Shleifer and Vishny (1997) further explained that the agency problem in this context refers to the difficulties financiers have in assuring that managers do not expropriate funds or waste them on unattractive projects.

Agency theory set that the control function of an organization is primarily exercised by the board of directors. With regard to the board as a governance mechanism, the issues that appear most prominent in the literature is board structure, more specifically board size, inside versus outside directors, board

composition and CEO characteristics, and the role and responsibilities of the board (Biserka, 2007).

In relation to the research objectives, this study will adopt the agency theory because it focuses on the board of directors as a mechanism, which dominates the corporate governance literature.

### 3. Research Methodology

This study made use of the secondary data of the annual reports of the 13 listed banks in the Egyptian Stock exchange to find out the relationship that exists between corporate governance variables and financial performance of banks. Therefore, this study is based on a positivist paradigm used deductive reasoning and quantitative techniques. Besides, this study adopted a positivist approach, because a positivist approach seeks facts or causes of social phenomena. The reasoning is deductive because the hypotheses were derived first and the data were collected later to confirm or negate the propositions.

#### 3.1 Research Problem

It's been stated before that the financial crises made it necessary to measure the role of corporate governance on the banks' performance (Ermina and Patsi, 2010). And since a lot of researches have analyzed the bank stability, accounting performance and the structure of ownership, but there is a few that examine the relationship between corporate governance and banks' performance. Even most of the previous empirical literatures that analyses the connection between governance and firm performance using board size, board composition and CEO qualities are mostly focused on financial firms in general or the industrial firms in particular.

This study will then address the questions emerging within the domain of study problems as follows:

- To what extent (if any) does board size affects the financial performance of the listed banks in Egypt?
- Is there any significant relationship between board composition and the financial performance of the listed banks in Egypt?
- Is the relationship significant between the CEO qualities and the financial performance of the listed banks in Egypt?

#### 3.2 Variables Development

The research is going to define the variables that will be used to investigate the relationship between governance and banks' financial performance as seen in table (1).

**Table 1.** Definition of Variables

Variable	Definition	Previous Studies	
<b>Measures of Bank Performance (Dependent Variables)</b>			
Return on Assets (ROA)	Net Income After Taxes + Interest Expense / Total Assets.	Finkelstein and D'Aveni, 1994; Kiel and Nicholson, 2003; Weir <i>et al.</i> , 2001; Bonn <i>et al.</i> , 2004; Epps and Cereola, 2008; Baysinger and Butler, 1985; Dehaene <i>et al.</i> , 2001.	
Return on Equity (ROE)	Net Income After Taxes / Total Equity.		
<b>Measures of Board Structure (Independent Variables)</b>			
<b>Board size:</b>			
Board Size (BSIZE)	A natural logarithm of the total number of board members.	Hanrahan <i>et al.</i> , 2001; Tomasic <i>et al.</i> , 2003; Bhagat and Jefferis, 2002; Defond and Hung, 2004; Morin and Jarrell, 2001; Holmstrom and Milgrom, 1994; Monks and Minow, 2001; Yermack, 1996; Heinrich, 2002; Zahra and Pearce, 1989; Bhagat and Bolton, 2005; Weir <i>et al.</i> , 2001; Sang-Woo and Lum, 2004; Bhagat and Black, 2002; Lipton and Lorsch, 1992; Jensen, 1993; Hermalin and Weisbach, 2002; Mak and Li, 2001; Healey, 2003; Beiner <i>et al.</i> 2003; Mak and Yuanto, 2003; Bennedsen <i>et al.</i> 2006; Harris and Raviv, 2005; Kyereboah-Coleman and Nicholas-Biekpe, 2006; Coles <i>et al.</i> 2004; Anderson and Reeb, 2003; De Andres <i>et al.</i> , 2005; Jackling and Johl, 2009.	
<b>Board composition:</b>			
Board Independence (BIND)	A proportion of independent non-executive members in the board.		
Foreign members of Board Ratio (FBRATIO)	A proportion of foreign members in the board.		
Women members of Board Ratio (WBRATIO)	A proportion of women members in the board.		
Board Educational Ratio (EDURATIO)	A proportion of members in the Supervisory board holding PhD.		
<b>CEO qualities:</b>			
Dummy for CEO (CEO)	(1): if the CEO is foreign citizen; (0): if otherwise.		
Dummy for CEO Power (CEOPOWER)	(1): if the CEO serves longer than one-term "3 years"; (0): if otherwise.		
<b>Control Variables</b>			
Bank's age (BAGE)	A natural logarithm of the difference between the principle year of analysis and the year of bank's foundation.		
Dummy for Bank's nature (BNATURE)	(1): if a bank is subsidiary of a multinational bank; (0): if otherwise.		

### 3.3 Research Hypotheses

A business exists for the profit of shareholders, and the board of directors should focus on that objective (Ferrel *et al.*, 2013). Board serves as a bridge between shareholders and managers, playing a major governing role in the corporate governance framework (Cadbury, 2002). The study of corporate governance is complicated by the fact that the structure, role and impact of boards have been studied

from a variety of theoretical and practical perspectives. Numerous studies are dedicated on detection a link between corporate governance and bank performance (Jensen and Meckling, 1976; Hovey *et al.*, 2003). By including the board of directors' characteristics such as director's shareholding, gender, director size, director's race and directors' independence, it brings the new avenue for the researcher and regulators of the importance of

board of directors' characteristics on the performance (Shukeri *et al.*, 2012).

### 3.3.1 Board Size

The following are the hypotheses that will be tested empirically with regard to the impact of the Board size:

- H<sub>1a</sub>: There is significant relationship between board size and banks financial performance measured by ROA.
- H<sub>1b</sub>: There is significant relationship between board size and banks financial performance measured by ROE.

### 3.3.2 Board Composition

The hypotheses to test the significance of the impact of Board composition are defined with the following statements:

- H<sub>2a</sub>: There is significant relationship between board independence and banks financial performance measured by ROA.
- H<sub>2b</sub>: There is significant relationship between board independence and banks financial performance measured by ROE.
- H<sub>2c</sub>: There is significant relationship between foreign board members ratio and banks financial performance measured by ROA.
- H<sub>2d</sub>: There is significant relationship between foreign board members ratio and banks financial performance measured by ROE.

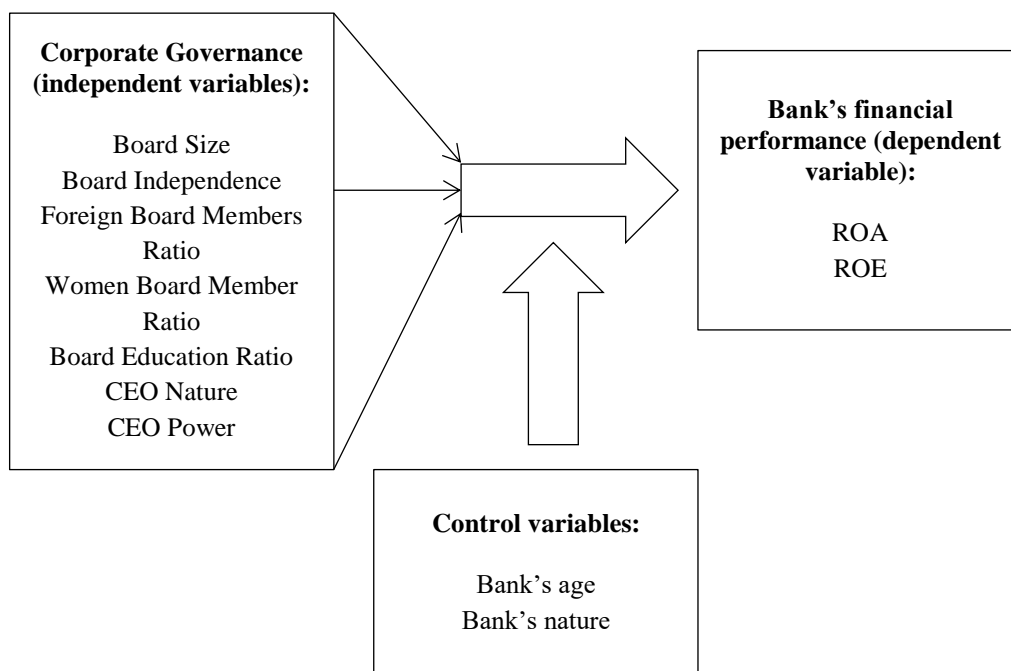
- H<sub>2e</sub>: There is significant relationship between women board members ratio and banks financial performance measured by ROA.
- H<sub>2f</sub>: There is significant relationship between women board members ratio and banks financial performance measured by ROE.
- H<sub>2g</sub>: There is significant relationship between educational board ratio and banks financial performance measured by ROA.
- H<sub>2h</sub>: There is significant relationship between educational board ratio and banks financial performance measured by ROE.

### 3.3.3 Chief Executive Officer Qualities

The significance of the impact of CEO qualities will be tested though the following hypotheses:

- H<sub>3a</sub>: There is significant relationship between CEO nature and banks financial performance measured by ROA.
- H<sub>3b</sub>: There is significant relationship between CEO nature and banks financial performance measured by ROE.
- H<sub>3c</sub>: There is significant relationship between CEO power and banks financial performance measured by ROA.
- H<sub>3d</sub>: There is significant relationship between CEO power and banks financial performance measured by ROE.

**Figure 1.** Research Framework of the Relationships between Corporate Governance and Banks' Financial Performance



### 3.4 Research Model

As shown in figure (1), the large number of independent variables used in the study forced researchers to develop two multiple regression analyses with limited variables in order to assess the relationships between corporate governance variables and banks' financial performance in Egypt as follows:

Equation 1 defined as:

$$\text{Financial Performance} = f(\text{Corporate Governance}) \quad (1)$$

With replacing the measures of the financial performance within the equation, the resulted equations will be as follows:

$$ROE = f(\text{Board Size} + \text{Board Composition} + \text{CEO Qualities} + \text{Control Variables}) \quad (2a)$$

$$ROA = f(\text{Board Size} + \text{Board Composition} + \text{CEO Qualities} + \text{Control Variables}) \quad (2b)$$

Then the research reaches to the final regression equations:

$$ROE = \beta_0 + \beta_1 \text{BSIZE}_{it} + \beta_2 \text{BIND}_{it} + \beta_3 \text{FBRATIO}_{it} + \beta_4 \text{WBRATIO}_{it} + \beta_5 \text{EDURATIO}_{it} + \beta_6 \text{CEO}_{it} + \beta_7 \text{CEOPOWER}_{it} + \beta_8 \text{BAGE}_{it} + \beta_9 \text{BNATURE}_{it} + \varepsilon \quad (3a)$$

$$ROA = \beta_0 + \beta_1 \text{BSIZE}_{it} + \beta_2 \text{BIND}_{it} + \beta_3 \text{FBRATIO}_{it} + \beta_4 \text{WBRATIO}_{it} + \beta_5 \text{EDURATIO}_{it} + \beta_6 \text{CEO}_{it} + \beta_7 \text{CEOPOWER}_{it} + \beta_8 \text{BAGE}_{it} + \beta_9 \text{BNATURE}_{it} + \varepsilon \quad (3b)$$

Where:

( $\beta_0$ ): constant.

( $i$ ): represents the cross sectional dimensions of the data (it refers to a specific bank).

( $t$ ): represents time.

( $\beta$ ): represents the coefficients of the independent and control variables.

( $\varepsilon$ ): represents the error term (the difference between expected and observed performance of the sample of banks used in this study).

### 3.5 Data Sampling

The population for this study consists of 41 registered Commercial banks at the Central Bank of Egypt (CBE) in 2013. The time frame considered for this study is from 2011 to 2013. This 3-year period, although shorter than most studies of this nature, it will help sharpen a deep understanding of the relation between governance and banks' financial performance in the post Egypt 25<sup>th</sup> of January revolution era. Thus, it's noted that the banking sector performance hasn't been affected during this mentioned period.

The research sample size is the 13 listed banks in the Egyptian Stock Exchange (EGX); which represents about 31.7% of the total population. Therefore, this sampling technique enabled us to have easy accessibility to their annual reports which is the major source of our secondary data. The data used for this study were secondary data derived from the audited financial statements of the banks listed in the Egyptian Stock Exchange (EGX) for the three years period from 2011 till 2013.

## 4. Statistical Results and Analysis

The analysis uses descriptive statistics and t-tests to report the significance of the change. Spearman's correlation analysis assesses the association between variables, and an analysis of variance assesses the suggested relationships of the research hypotheses. The results from the statistical analysis discuss the integrated results to find out if the hypotheses are supported.

The study is presenting the results of the analysis performed on the data collected to test the propositions made in the study and answer the research questions. Analyses were carried out with the aid of SPSS software package.

The following table (2) provides descriptive statistics of the mean and standard deviation of the dependent, independent variables and control variables regarding the sample used in this study:

**Table 2.** Descriptive statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
ROA	39	-0.0587	0.0264	0.0088	0.0157
ROE	39	-1.3684	0.2504	0.0558	0.2859
BSIZE	39	6	15	10.72	2.470
BIND	39	.0769	1	0.8005	0.1557
FBRATIO	39	0	0.7143	0.3189	0.2501
WBRATIO	39	0	0.2500	0.0540	0.0719
EDURATIO	39	0	0.4444	0.1060	0.1163
CEO	39	0	1	0.33	0.478
CEOPOWER	39	0	1	0.82	0.389
BAGE	39	5	38	29	10.180
BNATURE	39	0	1	0.62	0.493

Generally, from the 39 observations as seen in table (2), the table revealed that on average, the banks included in the research sample generates Return on Equity (ROE) of about 5.58% and a standard deviation of 28.59%. The average board size from the 39 observations is about 11 suggesting that banks in Egypt have relatively moderate board sizes as suggested by Kyereboah-Coleman and Biekpe (2006) with a maximum board size of fifteen (15) and deviation of 247%. The implication is clear that banks in Egypt have relatively similar board sizes. In addition, the average of the CEO Nature from the 39 observations shows that about 33% of the sample banks' CEOs are not Egyptian citizens, and about 82% of them spend more than one term as the bank

CEO. Also, the study shows on average that about 62% of the banks within the sample are subsidiaries of foreign multinational banks.

The research measured the degree of association between the governance variables and profitability variables i.e. if the governance proxies (board size, board composition and CEO qualities) will increase profitability. From the prior, a positive relationship is expected between the variables of corporate governance and profitability measures (ROE and ROA). The next table (3) presents the Pearson's correlations matrix between the dependent and independent variables; the correlation analysis supports some expectation.

**Table 3.** Pearson's Correlation Coefficients Matrix

Pearson's Correlation	ROA	ROE	BSIZE	BIND	FBRATIO	WB RATIO	EDU RATIO	CEO	CEO POWER
<b>ROA</b>	1								
<b>ROE</b>	0.959	1							
<b>BSIZE</b>	0.302	0.332	1						
<b>BIND</b>	-0.079	-0.007	0.171	1					
<b>FBRATIO</b>	-0.225	-0.305	-0.402	-0.653	1				
<b>WBRATIO</b>	-0.258	-0.312	-0.331	-0.098	0.013	1			
<b>EDURATIO</b>	0.317	0.286	0.047	0.201	-0.217	0.052	1		
<b>CEO</b>	0.124	0.205	0.081	-0.157	0.038	-0.395	0.359	1	
<b>CEOPOWER</b>	0.159	0.093	0.064	-0.348	0.246	-0.314	0.198	0.172	1

From the correlation results, board size (BSIZE) has a positive correlation of (0.332) with return on equity (ROE) which is significant. Similar trend was observed from the correlation result that board size also have a positive correlation of (0.302) with return on asset (ROA). The outcome for board size is consistent with the earlier study of Arslan *et al.* (2010) as they argued that large board size improves corporate performance through enhancing the ability of the company to establish external connection with the environment. But however, this result is not consistent with Bennedsen *et al.* (2006) as they argued that larger board is ineffective as compared to smaller boards.

The proportion of outside independent directors (BIND) is another governance variable that recorded a negative but weak correlation of (-0.079) and (-0.007) with both (ROA) and (ROE) respectively. This is consistent with Yermack (1996) and Bhagat and Black (1999) in their studies, where they found a negative correlation between the proportion of outside directors and corporate performance. Furthermore, another study conducted in UK, Weir and Laing (1999) did not find any correlation between the proportion of non-executive directors and corporate performance.

As for the foreign board members ratio (FBRATIO), there is a negative correlation of (-0.225) and (-0.305) with both (ROA) and (ROE) respectively. Similar trend was observed from the

correlation result with respect to women board members ratio (WBRATIO) that had a negative correlation of (-0.258) and (-0.312) with both (ROA) and (ROE) respectively, this is consistent with Forbes and Milliken (1999) as they argued that board diversity also generates various costs associated with coordination problems and decision making times. Further, board diversity may lead to a less cooperative and conflicts within the board (Lau and Murnighan, 2005).

However, in contrary it's been observed that there is positive correlation of (0.317) and (0.286) between board education ratio (EDURATIO) and both (ROA) and (ROE) respectively.

Thus, it's been analyzed that there is positive correlation of (0.124) and (0.205) between CEO nature (CEO) and both (ROA) and (ROE) respectively. Similar trend was observed from the correlation of (0.159) and (0.93) between CEO power (CEOPOWER) and both (ROA) and (ROE) respectively. However, Berger *et al.* (2012) argued that the effect of a powerful CEO can be counterbalanced by other executives.

The research used the panel data regression analysis to investigate the impact of corporate governance on banks' financial performance measured by both return on equity and return on assets. In doing this, two simple definitional models were developed to guide the analyses as shown in table (4).

**Table 4.** Model Summary

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	0.636	0.405	0.220	0.0138872
2	0.630	0.397	0.210	0.2541442

- Model (1): ROA as Dependent Variable.
- Model (2): ROE as Dependent Variable.
- Predictors: (Constant), BSIZE, BIND, FBRATIO, WBRATIO, EDURATIO, CEO, CEOPOWER, BAGE and BNATURE.

The results show the explanatory power of the model as measured by the R Square and adjusted R Square. The adjusted R Square provides a better estimation of the true population value, especially with a small sample (Tabachnick and Fidell, 2001).

From model (1), the coefficient of determination (R Square) indicates that about 40.5% of change in ROA is accounted for by the explanatory variables while the adjusted R-squared of 22% which is

powerful. Also for model (2), 39.7% of change in ROE is accounted for by the independent variables while the adjusted R-squared of 21% which is further justified as having powerful effect of the independent variables over the financial performance of the sampled banks.

Std. Error of the Estimate, also called the root mean square error, is the standard deviation of the error term, and is the square root of the Mean Square Residual (or Error). The value of Std. Error of the Estimate in the current study is (0.0139) for model (1) and (0.2541) for model (2); this result is relatively small and indicates to the quality of the model.

**Table 5.** Regression Results of the Variables (Coefficients)

Model (1,2)	Unstandardized Coefficients				Standardized Coefficients		t		Sig.	
	B		Std. Error		Beta		1	2	1	2
	1	2	1	2	1	2				
(Constant)	0.095	1.511	0.038	0.705			2.469	2.144	0.020	0.041
BSIZE	0.001	0.010	0.001	0.021	0.088	0.083	0.495	0.461	0.624	0.648
BIND	-0.067	-1.034	0.024	0.438	-0.668	-0.563	-2.820	-2.362	0.009	0.025
FBRATIO	-0.032	-0.639	0.016	0.290	-0.513	-0.559	-2.036	-2.204	0.049	0.036
WBRATIO	-0.111	-1.967	0.045	0.831	-0.508	-0.495	-2.447	-2.366	0.021	0.025
EDURATIO	0.079	1.131	0.028	0.515	0.583	0.460	2.804	2.197	0.009	0.036
CEO	-0.011	-0.109	0.007	0.120	-0.335	-0.182	-1.678	-0.906	0.104	0.372
CEOPOWER	-0.008	-0.157	0.009	0.156	-0.189	-0.213	-0.900	-1.008	0.375	0.322
BAGE	-0.001	-0.015	0	0.007	-0.551	-0.523	-2.380	-2.246	0.024	0.032
BNATURE	0.007	0.084	0.007	0.124	0.221	0.145	1.040	0.675	0.307	0.505

- Model (1): ROA as Dependent Variable.
- Model (2): ROE as Dependent Variable.
- 95.0% Confidence Interval for B.

Table (5) shows that P-values (Sig.) whenever they're lower than or equal to (0.05) are significant. Table (5) also shows that board size, board independence, foreign board ratio, women board ratio, educational ratio and bank age all have significant effect with financial performance of banks. Meanwhile, board size, CEO nature, CEO power and bank nature all have non-significant effect with financial performance of banks in Egypt.

#### 4.1 Hypotheses Testing

As mentioned earlier the final regression models were as followed:

$$ROA = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 FBRATIO_{it} + \beta_4 WBRATIO_{it} + \beta_5 EDURATIO_{it} + \beta_6 CEO_{it} + \beta_7 CEOPOWER_{it} + \beta_8 BAGE_{it} + \beta_9 BNATURE_{it} + \varepsilon \quad (1)$$

$$ROE = \beta_0 + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 FBRATIO_{it} + \beta_4 WBRATIO_{it} + \beta_5 EDURATIO_{it} + \beta_6 CEO_{it} + \beta_7 CEOPOWER_{it} + \beta_8 BAGE_{it} + \beta_9 BNATURE_{it} + \varepsilon \quad (2)$$

After the substitution with (B) values for both models (1) and (2) from table (5), the regression models will be read as follows:

$$ROA = 0.095 + 0.001 BSIZE - 0.067 BIND - 0.032 FBRATIO - 0.111 WBRATIO + 0.079 EDURATIO - 0.011 CEO - 0.008 CEOPOWER - 0.001 BAGE + 0.007 BNATURE \quad (1)$$

$$ROE = 1.511 + 0.010 BSIZE - 1.034 BIND - 0.639 FBRATIO - 1.967 WBRATIO + 1.131 EDURATIO - 0.109 CEO - 0.157 CEOPOWER - 0.015 BAGE + 0.084 BNATURE \quad (2)$$



#### 4.1.1 Hypothesis (1)

From the analysis, the correlation between board size and both ROE and ROA have coefficients of (0.332, 0.302) respectively, indicating the positive correlation between the two variables. Also, the regression coefficients of the model are positive (0.001, 0.010) for both ROA and ROE respectively, with a p-value of (0.624, 0.648) respectively (significant when  $p \leq 0.05$ ). This indicates a non-significant effect of board size on the financial performance of the listed banks. On the premise of these results, since the effect is non-significant, the research therefore reject the null hypothesis and accept the alternate hypothesis which states that there is no significant relationship between board size and the financial performance of the listed banks in Egypt. However, this result is different from other results reported by Kyereboah-Coleman and Biekpe (2006) which concluded that a positive relationship between a firms' value and board size exists. The result of the hypothesis also differs from Pathan *et al.* (2007) as it's been stated that the board members tend to become involved in dysfunctional conflicts where the board is not cohesive which results in deteriorating the value of a firm.

#### 4.1.2 Hypothesis (2)

From the hypotheses (H2a, H2b), the research assume that there is a significant relationship between the proportion of outside independent directors sitting on a board and the financial performance of banks. The correlation result shows a negative correlation with both ROA and ROE of (-0.079, -0.007) respectively which entails that the more the number of outside directors, the lower the financial performance of banks in Egypt.

However, the regression coefficients of the model are negative (-0.067, -1.034) for both ROA and ROE respectively. The regression result shows that the negative association observed between the variables is significant only when  $p \leq 0.05$  with a p-value of (0.009, 0.025). This also confirms that outside directors does have significant but negative impact on bank performance as measured by both ROA and ROE. Based on the fact that the association is significant, the research therefore accepts the null hypothesis.

The negative effect noticed is likely to be because non-executive independent directors are likely not to have a hands-on approach or are not necessarily well versed in the business; hence do not necessarily make the best decisions. This is in tune with the studies of Pi and Timme (1993); Bosch (1995); Belkhir (2006); Staikouras *et al.* (2007) and Adams and Mehran (2008) which found a negative but significant relation between the tested variables. However, the research findings disagree with

Bebchuk *et al.* (2009) and Pathan *et al.* (2007) who found a positive relationship between these variables.

From hypotheses (H2c, H2d), a negative correlation of (-0.225, -0.305) is observed between the foreign board members ratio and both ROA and ROE respectively; the regression coefficients of the model are negative (-0.032, -0.639) for both ROA and ROE respectively. The regression result further reveals that a significant negative relationship with a p-value of (0.049, 0.036) significant when  $p \leq 0.05$ . However, based on these findings, the research therefore accepts the null hypothesis and rejects the alternate hypothesis. This result is consistent with Forbes and Milliken (1999) as they argued that board diversity generates various costs associated with coordination problems and decision making times.

From hypotheses (H2e, H2f), a negative correlation of (-0.258, -0.312) is observed between the women board members ratio and both ROA and ROE respectively; the regression coefficients of the model are negative (-0.111, -1.967) for both ROA and ROE respectively. The regression result further reveals that a significant negative relationship with a p-value of (0.021, 0.025) significant when  $p \leq 0.05$ . However, based on these findings, the research therefore accepts the null hypothesis and rejects the alternate hypothesis. This result is consistent with Lau and Murnighan (2005) as they argued that board diversity may lead to a less cooperative and conflicts within the board.

From hypotheses (H2g, H2h), a positive correlation of (0.317, 0.286) is observed between the educational board ratio and both ROA and ROE respectively; the regression coefficients of the model are positive (0.079, 1.131) for both ROA and ROE respectively. The regression result further reveals that a significant positive relationship with a p-value of (0.009, 0.036) significant when  $p \leq 0.05$ . However, based on these findings, the research therefore accepts the null hypothesis and rejects the alternate hypothesis. This result may support the research point of view to this particular relation as it's been stated before that the PhD holders of the board put their hands on the proper knowledge which enables them to guide the rest of the board members through markets uncertainty.

#### 4.1.3 Hypothesis (3)

From hypotheses (H3a, H3b), assumed that there is a relationship between CEO nature and financial performance of banks in Egypt. From the analysis, the correlation between CEO nature and both ROE and ROA have correlation of (0.124, 0.205) respectively, indicating the positive correlation between the two variables. Also, the regression coefficients of the model are negative (-0.011, -0.109) for both ROA and ROE respectively, with a p-value of (0.104, 0.372) respectively significant when  $p \leq 0.05$ . Therefore, the research rejects the null hypothesis which states that

the profitability of the banks with foreign directors is significantly different from the profitability of banks without foreign directors and accepts the alternate hypothesis. This is in line with Hoschi et al. (1991) and Fich (2005) but however not in agreement with Chibber and Majumdar (1999) and Djankov and Hoekman (2000) in their studies in which they stated that firms with foreign directors tend to perform better than those without foreign directors.

Finally, hypotheses (H3c, H3d), assumed that there is significant relationship between CEO power and financial performance of banks in Egypt. From the analysis, the correlation between CEO power and both ROE and ROA have correlation of (0.159, 0.093) respectively, indicating the positive correlation

between the two variables. Also, the regression coefficients of the model are negative (-0.008, -0.157) for both ROA and ROE respectively, with a p-value of (0.375, 0.322) respectively significant when  $p \leq 0.05$ . Therefore, the research rejects the null hypothesis which states that the profitability of the banks with powerful directors is significantly different from the profitability of banks without powerful directors and accepts the alternate hypothesis. This result is consistent with Berger et al. (2012) as they stated that the effect of a powerful CEO can be counterbalanced by other executives.

A summary of these results is provided in the following table (6):

**Table 6.** Summary of Hypotheses Results

H	Hypothesis	Results
H <sub>1</sub>	There is significant relationship between <b>board size</b> and banks financial performance measured by both ROA and ROE.	Non-Significant and Positive.
H <sub>2</sub>	There is significant relationship between <b>board independence</b> and banks financial performance measured by both ROA and ROE.	Significant and Negative.
	There is significant relationship between <b>foreign board members ratio</b> and banks financial performance measured by both ROA and ROE.	Significant and Negative.
	There is significant relationship between <b>women board members ratio</b> and banks financial performance measured by both ROA and ROE.	Significant and Negative.
	There is significant relationship between <b>board educational ratio</b> and banks financial performance measured by both ROA and ROE.	Significant and Positive.
H <sub>3</sub>	There is significant relationship between <b>CEO nature</b> and banks financial performance measured by ROA and ROE.	Non-Significant and Positive.
	There is significant relationship between <b>CEO power</b> and banks financial performance measured by ROA and ROE.	Non-Significant and Positive.

## 5. Summary, Conclusion and Recommendations

The study concludes that negative and significant relationships exist between bank performance from a side and board independence, foreign board members ratio and women board members ratio from the other side. Also, a positive and significant relationship exists between board educational ratio and financial performance. While there are non-significant and positive relationships between bank performance and board size, CEO nature and CEO power.

## 5.1 Recommendations and Implications of the Study

Based on the findings of this research, the following recommendations are presented which should be useful to different stakeholders:

1. Efforts to improve corporate governance shouldn't focus on the board size as a mechanism of corporate governance of banks operating in Egypt, since it isn't significantly related to the financial performance of banks in Egypt.
2. Proponents of board independence should note with caution the negative relationship between board independence and future operating performance. Hence, if the purpose of board independence is to improve performance, then

such efforts might be misguided. However, if the purpose of board independence is to discipline management of the Egyptian banks or otherwise monitor, then board independence has merit. In other words, to have proper monitoring by independent directors, bank regulatory bodies should require additional disclosure of financial or personal ties between directors (or the organizations they work for as independent board member) and the bank or its CEO. By so doing, they will be more completely independent. Also, banks should be allowed to experiment with modest departures from the current norm of a "supermajority independent" board with only one or two inside directors.

3. Steps should also be taken for monitoring and ensuring that the Egyptian banks have already taken steps in compliance with the code of corporate governance set by the Central Bank of Egypt (CBE). As this code will ensure the rights and obligations of a bank, its directors, shareholders, specific disclosure requirements and provide for effective enforcement of the law.
4. Thus, efforts to improve corporate governance in the Egyptian banking sector has to put into consideration to analyze the proportion of both foreign and women members within banks boards, since both are significant and negatively related to the financial performance of banks in Egypt.
5. Also, the significant and positive relationship between the proportion of board members who hold PhD degree and the financial performance of banks in Egypt, should be analyzed further, as to encourage current board members and the future leaders in the Egyptian banks to pursue further graduate academic studies and not to pay all their attention towards obtaining professional internationally recognized certificates only.
6. Finally, there is a need to set up a unified corporate body which would be responsible for collecting corporate governance related data and constructing the relevant indices to facilitate corporate governance research in general and in the Egyptian banking sector in particular.

## 5.2 Limitations of the Research

The scope of the study was limited to only the 13 listed banks in the Egyptian Stock Exchange (EGX), because these listed banks were more likely to have the resources and motivation to take the opportunity to adopt good corporate governance practices as to increase the investors trust in the value of their listed stocks. Although the sample was small, it represented different local and multinational subsidiary banks. The small size of the sample may have affected the relationships between the variables. Therefore, the findings may have been different if a larger sample was included and the study period was extended,

however unfortunately it couldn't be extended due to different political and socioeconomic circumstances that were existing after year 2011, besides the financial statements and the annual reports of the banks represented in the sample were not yet ready to be published for the year ended 2014, till the date when the research had been conducted.

Although, most research in the area of corporate governance has been conducted in the developed economies, there is a very limited research on corporate governance practices and performance of companies in developing countries like Egypt, which operate in different, difficult and turbulent political and economic environment.

Furthermore, institutional legal frameworks in emerging economies are not well developed compared to developed countries, which limits the benefits of their corporate governance efforts. Besides these emerging economies show significant differences in terms of economic growth, business environments, income levels and management practices.

Moreover, a lot of researches have analyzed the bank stability, accounting performance or the structure of ownership, but there is a few that examine the relationship between corporate governance and banks performance. Even most of the previous empirical literatures that analyze the connection between governance and firms' performance are mostly focused on financial firms in general or the industrial firms in particular. Thus, the research had used only the board of directors' attributes as mechanisms of evaluating corporate governance in the Egyptian banking sector.

## 5.3 Suggestions for Further Future Studies

The limitations of the study have prompted suggestions for further research as listed below:

1. This research has gone some way in exploring corporate governance variables and corporate performance of banks in a broader context. Further research could explore the relationship in more specific categories for example, in not-for-profit organizations, in government organizations, and in family businesses. Since this study focused on the Egyptian banking sector, it would be beneficial to have a clearer understanding of corporate governance roles in other types of organizations. Such research could address the similarities and differences of the roles in different organizations and consider also the legal requirements for different organizations.
2. The period of study for this research is only three years i.e. (2011-2013), which the post Egypt's uprising period. This limitation was imposed by the non-availability of data pertaining to the reviewed banks. However, further research can consider more time frames

based on the availability of the annual reports and even can make a comparison between the era before the Egyptian revolution and the era after it.

- Further research is also required on the behavioral aspects of boards. Researchers in developed countries have recently started examining board processes by attending actual board meetings; however this also needs to be expanded by researchers in developing economies. There is therefore the need to go beyond the quantitative research, which is yielding a mixture of results, to perhaps a more qualitative approach as to how boards work. Expanding this current research into a wider study of board dynamics and decision making would be a start in developing a better understanding of corporate governance.

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