



Article

Corporate governance and the financial performance of commercial banks in Ghana

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Abstract: This study aims to provide further evidence on the effect of corporate governance on the performance of Ghanaian banks. Two performance measures were used in this study, namely: Return on Asset (ROA) and Cost-Income Ratio (CIR). Data for the analysis were sourced from 21 commercial banks from 2005 to 2015. Regression estimation techniques were employed for analysis purposes. The result revealed that large board size reduces banks' performance. Furthermore, CEO duality and foreign ownership negatively affect the performance of banks. However, while the effect of CEO duality was significant on CIR, it was not significant in the case of ROA. On the contrary, the effect of foreign ownership was only significant on ROA. Moreover, board independence has a significant positive effect on both CIR and ROA, while audit committee independence has no significant effect on CIR and ROA. The paper argues that for a good corporate governance practice, banks should institute a small board with more than half of the members being independent directors. Furthermore, the role of the board chair should be separated from that of the managing director/CEO. The study provides insight and further evidence to stakeholders and regulators to deal with the crisis in the Ghanaian banking sector.

Keywords: corporate governance; Ghana; banks; performance; audit committee.

JEL codes: G21, G32.

1. Introduction

In today's dynamic economy, especially considering the dynamism of the Ghanaian banking, the importance of corporate governance cannot be over-emphasized. Many factors could influence the performance of banks, but the relevance of corporate governance in banks is necessary because it underpins the organizational climate for the core activities of the bank, and it is a key determinant for the profitability and efficiency of firms (Nyarko, Yusheng & Zhu, 2017). Corporate governance is how an organization is directed and controlled (Cadbury Report, 1999). The concept of corporate governance gained root following the financial scandals and sudden collapse of large firms like Enron, WorldCom, Xerox, and others in the early 2000s (Berndt & Leibfried, 2007). Notwithstanding, the financial crises in the middle of 2007, leading to bank insolvency, loss on the global stock exchange, and decline in the economy, corporate governance has gained more popularity in the banking sector. To alleviate corporate scandals and fraud in organizations, scholars and business practitioners have promoted corporate governance in firms (Adusei, 2011; Al-Hawary, 2011; Nyarko et al., 2017; Zhou, Owusu-Ansah, & Maggina, 2018;).

A plethora of studies on corporate governance has found evidence that corporate governance enhances firm performance (Abor & Adjasi, 2007; Adusei, 2011; Chung et al., 2003; Frimpong et al. 2015; Hu & Izumida, 2008; Nyarko et al., 2017; Sarpong et al., 2013). However, a few studies have debunked the general idea of corporate governance, enhancing firm performance by reporting a negative relationship between corporate governance and firm performance (Bathala & Rao, 1995; Hutchinson, 2002). Other research by Park and Shin (2003), Prevost et al. (2002) and Young (2003) have reported no relationship between corporate governance and firm performance

Though the majority of studies exist on the relationship between corporate governance and the financial performance of firms, little has been done in the banking sector of Ghana. Meanwhile, studies focusing on the banking sector have reported mixed results. For example, Nyarko et al. (2017) reported that large board size, long-serving CEOs, size of the audit committee, audit committee independence, foreign ownership, institutional ownership, annual general meeting, and dividend policy is positively associated with the financial performance of banks in Ghana. Adusei (2011) reported a positive association with board independence and the bank's efficiency. Aboagye, Agyemang, and Ahali (2013) in a similar study reported mixed results between governance variables and the bank's performance.

Recent developments in Ghana's banking sector has raised alarming concern for the quality of corporate governance practice in the industry. In the middle of 2017, the Bank of Ghana collapsed two giant banks in Ghana. Notwithstanding, in early August of 2018, the Bank of Ghana revoked the license of five banks and consolidated them into 'The Consolidated Bank'. These were both unlisted and listed banks on the Ghana Stock Exchange. The Bank of Ghana accused the collapsed firms of a range of issues, including poor corporate governance, questionable transactions, and dishonest reporting (Bank of Ghana, 2018). These events have created doubts among investors and corporate players concerning the governance of banks and other financial institutions in Ghana. Despite the numerous studies on corporate governance in Ghana, current development in the banking industry is absurd, suggesting that further evidence is required to elucidate this situation. This study is, therefore, focused in this direction by providing additional evidence on this corporate governance dilemma, and to provide evidence that could explain the recent tumult in the Ghanaian banking sector.

While prior research has enhanced our understanding of the relationship between corporate governance and the performance of banks in Ghana, several gaps remain unexplored. One generally unexplored area is the simultaneous evaluation of listed and unlisted banks. The majority of the literature has assessed either corporate governance in association with the performance of unlisted banks or listed banks, with most of the studies focusing on the later except for Adusei, (2011) and Nyako et al., (2017). Prior literature in Ghana has used historical accounting performance measures like return on equity (ROE), return on assets (ROA), and Cost-Income Ratio (CIR) to measure the performance of banks (Nyarko et al., 2017, Frimpong et al., 2015, Adusei, 2011). However, few studies like Adeabah, Gyeke-Dako, and Andoh (2018) and Frimpong et al. (2015) have focused on examining the effect of corporate governance on the efficiency of banks. This study, therefore, adds to the literature by providing further evidence on how corporate governance affects both the efficiency and financial performance of banks by utilizing ROA (financial performance) and CIR (efficiency) as the primary performance variables. Moreover, the study provides a parsimonious explanation for why corporate governance practices do not only affect the financial performance of banks but also the efficiency of the banks. Notwithstanding, this study is timely as it could provide evidence on the reason for the recent turbulence in the Ghanaian banking sector.

The paper is structured as follows: Section 2 introduces the corporate governance codes and regulation of banks in Ghana. Section 3 reviews prior literature as a basis for developing the testable hypothesis. Section 4 presents the research methodology, the variables, and how the variables were measured. Section 5 presents and discusses the empirical results, and the last part concludes with a discussion on practical implications and limitations

2. Background of Banking and Governance in Ghana

The Ghanaian banking sector has experienced substantial phases of financial deregulations to make the industry very competitive. Banking activities in Ghana commenced in 1896 with the establishment of the British Bank of West Africa, now Standard Chartered Bank Limited, to provide lending and borrowing of money (Buckle, 1999). Although Barclays Bank Ghana Limited was set up in 1917 to dispense banking activities in Ghana, the banking industry was still manipulated by foreign hands because Ghana was bogged down in the quagmire of colonialism (Akomea-Frimpong, 2017).

After Ghana gained political independence from the British in 1957, the central bank (Bank of Ghana) was established. The central banks implemented some interventional policies and regulations for prudent control of the cost and direction of finances to enhance economic development. The establishment of public sector banks, imposition of administrative controls on interest rates, and sectoral allocation of bank credits were notable among these policies. Ghana witness expedient expansion in the banking sector after these policies were implemented after independence (Akomea-Frimpong, 2017).

However, the banking sector was plagued with financial crisis from 1983 to 1988. The industry was characterized by financial repression, negative interest rate, and massive public sector borrowing, which are often unproductive (Brownbridge & Gockel, 1998). This crisis resulted in a landmark reform program by the Bank of Ghana, with assistance from the World Bank and IMF is known as the Financial Sector Structural Adjustment Program (FINSAP) to address this problem. The FINSAP resulted in the resuscitating of the financial sector and the creation of new institutions such as the Ghana Stock Exchange and Non-Banking Financial Institutions to revive the financial industry.

These reforms were successful, albeit some difficulties. In 1989 a New Banking Act was introduced to parallel these reforms. This Act spelled out the capital requirements for local and foreign banks and gave supervisory and legal powers to the Bank of Ghana. These reforms stabilized and stimulated the banking sector. For example, the number of commercial banks increased from 14 in 1994 to 24 commercial banks in 2012 (Ghana Banking Survey, 2012). Other several regulations, acts, and developments have taken place in the banking industry. Over the years, the Banks of Ghana has increased the minimum capital requirements of banks to strengthen further the safety, soundness, and stability of the banking system. For example, in 2008 the minimum capital was GHC 60 million (\$ 30 million), GHC 120 million (\$ 60 million) in 2017, and currently GHC 400 million by the end of 2018 which the bank of Ghana has estimated that only 19 universal banks could meet this minimum capital requirement (Bank of Ghana, 2018).

These regulations and the supervisory role of the Bank of Ghana has increased the assets base of the banking industry and has placed the nation in a situation where it can capitalize on modern banking technology. The rise in the number of banks and competition among banks has resulted in the banks spending vast sums of money on innovative marketing, developing new products and state of the art technology to keep abreast with time and remain competitive ((Akomea-Frimpong, 2017).

In Ghana, there are several mechanisms implemented to boost the practice of corporate governance. The regulatory framework for an effective corporate governance practice enshrined in the Companies code 1963 (Act 179), the Security Industry Law, The Ghana Stock Exchange Regulations 1990, (Legislative Instrument (L.I.) 1509), the Securities and Exchange Regulations (2003), L.I. 1728, and the Stock Exchange Commission guidelines on best practices in corporate governance (issued and published in 2003). According to Sarpong et al., (2013), these frameworks aid in the regulation of the financial sector and other business sectors as well.

According to the Stock Exchange Commission guidelines on best practices in corporate governance (issued and published in 2003), the regulatory framework for effective corporate governance in Ghana has been divided into six sections, namely:

1. The mission, responsibilities, and accountability of the board;
2. Committees of the board;
3. Relationship to shareholders and stakeholders, and the rights of shareholders;
4. Financial affairs and auditing;
5. Disclosures in annual reports; and

6. Code of ethics.

The World Bank assessed Ghana's legal and regulatory framework regarding the observance of standards and codes. The initiative which was to identify weaknesses that may contribute to the financial vulnerability of the country benchmarks the country's legal and regulatory framework of listed firms regarding the Organization of Economic Co-operation and Development (OECD) principles. The report revealed that Ghana lags in some key areas compared to some other countries in the sub-region. Apart from the numerous regulations and laws governing the operation of companies in Ghana, the Ghana Stock Exchange in 2010, developed and implemented Ghana's code of best practices of Corporate Governance (2010) to regulate all listed firms on the Ghana Stock Exchange.

Due to the recent collapse and merger of some giant banks in Ghana in 2017 and 2018, the concept of corporate governance of banks has become crucial in the banking sector of Ghana. Although there are numerous regulations governing banking activities in Ghana, the continuous shrinking of banks has become quite worrisome. Also, despite the evidence provided by the numerous studies in Ghana on corporate governance and performance of firms, banks are still saddled with poor corporate governance. This suggests that further evidence is needed on corporate governance and performance in the banking sector.

3. Literature and Hypothesis Development

3.1 Empirical Literature

Adeabah et al. (2018) investigated the efficiency of 21 listed and non-listed Ghanaian banks under board gender diversity, and also examined the determinants of bank efficiency. The study concluded that gender diversity promotes bank efficiency to a certain threshold, and board size improves bank efficiency while influential chief executives do the opposite. They mentioned ownership structure, bank size, bank age, and loan-to-deposit ratio as factors affecting bank efficiency. Notwithstanding, Nyarko et al. (2017) in their study on corporate governance and performance of firms in the banking sector of Ghana, argue that board size, long-serving CEOs, size of the audit committee, audit committee independence, foreign ownership, institutional ownership, annual general meeting, and dividend policy are positively related and associated with the financial performance of banks in Ghana. Frimpong et al. (2015) examined the impact corporate governance has on the performance of listed Ghanaian banks. The study revealed a significant positive relationship between ROA and non-executive directors, bank size, and bank growth. In contrast, audit committee size, board gender diversity, board business management, board member education recorded a significant negative association with ROA.

The study of Fidanoski, Mateska, and Simeonovski (2013) investigated corporate governance and the performance of banks in Macedonia and found that board independence is negatively associated with banks' performance while the size of both supervisory and the managing board is positively associated with profitability. The study also showed that the proportion of non-executive members is positively associated with profitability. Similarly, Adusei (2011) examined the relationship between board structure and Bank performance in Ghana. The study using data from 17 commercial banks in Ghana revealed that banks' profitability increases with the size of the board. Again, they uncovered that board independence is positively related to bank efficiency but negatively related to profitability.

Bokpin (2010) examined ownership structure, corporate governance, and bank efficiency in Ghana. The study result showed that foreign banks are more cost-efficient than domestic banks and enjoy better quality loans. The cost-efficiency of banks is as a result of managerial leadership. The study revealed that a larger board size strongly improves profit but slightly worsens banks' cost-efficiency. Papanikolaou and Patsi (2009) studied corporate governance and performance of some banks in Europe, Canada, America, Australia, and Japan. The study revealed a negligible negative relationship between bank performance and corporate governance. Although the study found a positive correlation between inside shareholders and bank performance, it concluded that there is no reliable evidence that corporate governance affects bank performance. Again, Love and Rachinsky

(2008) investigated the relationship between ownership, corporate governance, and operating performance of Russian and Ukrainian banks. The study revealed some significant but economically unimportant relationship between corporate governance and operating performance.

Again, Kyereboah-Coleman (2007) examined the impact of corporate governance on firm performance in Africa by drawing dynamic data from Ghana, Nigeria, South Africa, and Kenya. The study revealed that a large and independent board enhances firms' value and that CEO duality hurts firm performance. The result also portrayed that the CEO's tenure of office and the size of the audit committee together with their intensity of meeting have a positive effect on performance. On the contrary, board activity intensity affects profitability negatively. Kyereboah-Coleman and Biekpe (2006a) investigated the effect boards, and CEOs have on the performance of banks in Ghana using ROA and changes in interest income as a performance measure. The study concluded that a more independent board harms profitability. While their result showed a positive relationship between board size and ROA, CEO tenure of office mostly impacts profitability negatively. Although their study primarily indicated mixed results, the study suggested that banks should operate with moderate board size and adopt a two-tier board structure.

The above literature postulates that many researchers have widely investigated the concept of corporate governance and the performance of banks. The majority of these studies have been carried out in most advanced markets and economies as well as developing countries. However, the current literature on corporate governance and banks' performance in Ghana is scanty. Furthermore, the majority of the studies have focused on samples drawn from either listed firms or non-listed firms without considering a comprehensive data set. Moreover, the majority of studies have employed financial and market performance variables, while a few studies have explored efficiency performance measures. Considering the recent developments in the banking sector of Ghana, banks' operating efficiency has become a crucial question. This study utilizes a large sample constituting both listed and non-listed banks to provide further evidence on the effect of corporate governance on the efficiency and financial performance of Ghanaian banks.

3.2 Hypothesis Development

3.2.1 Board Size

There have been mixed results as to the influence board size has on the performance of firms. According to Lawal (2012), the quality of board deliberations and the ability of the board to achieve the best possible corporate decisions are influenced by board size. The study of Kyereboah-Coleman and Biekpe (2006b) and Nyarko et al. (2011) opined that large board size has a positive association with the performance of Ghanaian firms because the board will exhibit more exceptional intellectual ability which will lead to improve decision-making and enhance firm performance. However, the study of Adusei (2011) argued that small board size increase profitability since the benefits of higher intellectual ability might be swallowed by the incremental cost of inadequate communication associated with large groups. This position has been articulated by researchers like Frimpong et al. (2015) who supported small board size. Jensen (1993) and Lipton and Lorsch (1992) concurred with this assertion by voicing that large board size is less productive and can be controlled easily by a powerful CEO. According to The Bank of Ghana (2018), a bank's board should constitute a minimum of five members and a maximum of 13 members. In this study, large board size is defined as a board with more than eight members. It is expected that a large board size should have a positive relationship with the performance of banks. Therefore, the study formulates the hypothesis below:

H1: ceteris paribus, a large board size has a significant positive effect on the performance of Ghanaian banks.

3.2.2 CEO Duality

This mechanism indicates how the firm separates the role of the CEO from that of the chairman. The agency theory argues that the role of the CEO must be separated from that of the chairman to protect the right of shareholders. Nyarko et al., (2017), have argued that separating the role of the CEO

and the chairman can improve the quality of board monitoring, leading to better decision-making and performance as well. A combined role may result in conflicting perspectives which will hinder the monitoring power and effectiveness of the board. Prior studies on this subject have reported a positive relationship between the separation of the role of the CEO from chairman and performance. For example, the study of Wahab, Haron, Lock, and Yahya (2015) reported a significant positive relationship between the separation of CEO and chairman and performance after examining corporate governance mechanisms in Malaysia firms. Again, Kyereboah-Coleman and Biekpe (2006b) reported a negative relationship between performance and a one-tier board where one person performs a dual role as CEO and chairman of listed firms in Ghana. The study explained that the concentration of decision management and decision control in one person reduces the effectiveness of the board monitoring powers on top management. The Bank of Ghana in 2017 issued new regulations on CEO duality, stating that the positions of Managing Director and Board Chair cannot be occupied concurrently in the case of foreign banks in Ghana. Other studies by Abdullah (2004); Van den Berghe and Levrau, (2004) have also reported similar results. However, Finegold, Benson, and Hecht (2007) document mixed results regarding how the separation of CEO from chairman affects performance. However, existing literature has shown that separation of the role of CEO from chairman serves as a useful mechanism for improving the performance of firms. Therefore, leading to the second hypothesis:

H2: ceteris paribus, CEO duality has a significant positive effect on the performance of Ghanaian banks.

3.2.3 Audit Committee Independence

The audit committee is an essential corporate governance mechanism as it protects the interest of shareholders and oversees financial reporting. Existing studies have argued that an independent audit committee has a positive effect on the performance of firms. For instance, Kyereboah-Coleman (2007) reported a positive association between an independent audit committee and the performance of Ghanaian firms. This is supported by the study of Hamdan, Sarea, and Reyad (2013) who reported a significant positive relationship between Tobin's q and audit committee independence. Triki and Bouaziz (2012) expounded that the crucial role of the audit committee is to protect shareholders' interest. It is evident that an independent audit committee enhances firm performance since the Bank of Ghana accused the collapsed firms of a range of issues including questionable transactions and dishonest reporting-which is the job of the audit committee (Bank of Ghana, 2018).

Although some studies like that of Kajola (2008) showed no evidence of an association between firm performance and audit committee independence in non-financial institutions, this study considers audit committee independence as an essential mechanism in the governance of firms. The study asserts that their presence improves performance. To test this argument, the following hypothesis is put forward:

H3: ceteris paribus, Audit Committee Independence has a positive effect on the performance of Ghanaian banks.

3.2.4 Board Independence

In the banking literature, the majority of studies have documented the positive effect board independence has on bank's performance. For example, the study of Kyereboah-Coleman and Biekpe (2006a) found a significant positive relationship between the majority of non-executive directors and the performance of Ghanaian banks. The results concurred with a more recent study by Nyarko et al., (2017) who found a positive relationship between board independence and banks' performance in Ghana. The study argued that an independent board enhances monitoring effectively and promotes firm value maximization. Likewise, other studies such as Baker and Gary (2015) Mashayekhi and Bazaz (2008), and Uadiale (2010) reported a significant positive relationship between board independence and firm performance. Few studies, like Kajola (2008) showed a negative relationship between board composition and performance.

In Ghana, banks are required to have a maximum of a thirteen-member board, the majority of which must be non-executives and ordinary residents of Ghana (Bank of Ghana, 2018). Therefore, a board that has more than 50% of non-executive directors is considered to be independent in this study. This study argued that board independence is critical for more excellent monitoring, transparency, and improved performance in the case of the Ghanaian banking sector, where many banks have collapsed or experienced principal shrinks in operations. Thus, it is expected that board independence should have a performance-enhancing effect on banks in Ghana. The hypothesis that was used to test the argument put forward is:

H4: Ceteris paribus board independence has a significant positive effect on the performance of Ghanaian banks.

3.2.5 Foreign ownership

Foreign ownership in this study refers to banks owned and managed by foreign investors. According to Nyarko et al. (2017), foreign ownership enhances the performance of banks in Ghana. The study argued that foreign owners are more concerned about how their resources are managed and therefore ensure effective monitoring of management to prevent managerial exploitation. Stulz (1999) posited that the presence of foreign investors reduces agency costs. The study expounded that these investors may be from countries where corporate governance has gained its stance and would ensure that the same practices are adhered to by the firms they invest in. Therefore, it is expected that foreign ownership should enhance the performance of banks in Ghana. This leads to the fifth hypothesis:

H5: ceteris paribus, foreign ownership has a significant positive effect on the performance of Ghanaian banks

4. Data and Methods

4.1 Sample and Data collection

The population of the study includes all commercial banks in Ghana. Currently, there are 31 banks in Ghana, with eight listed on the Ghana Stock Exchange (GSE). Data was collected from 21 of these banks. These banks were selected based on the availability of data for the period under study. The data collected were panel data pooled from the financial reports of the financial institutions from 2005 to 2015.

Table 1. Sample Selection.

| Sample Selection | Observations |
|--|--------------|
| Total number of licensed banks in Ghana as of August 2015 | 31 |
| Banks listed on the Ghana Stock Exchange | 8 |
| Unlisted banks in Ghana | 23 |
| Number of listed banks included in the sample for the period under study | 8 |
| Number of unlisted banks included in the sample (note: 10 banks were excluded due to unavailability of some data for the period under study) | 13 |
| Total banks sampled from 2005 to 2015. | 21 |

4.2 Method of Data Analysis

The study employed ordinary least squares (OLS) based on a panel data regression analysis since the data consist of observation of multiple variables over multiple periods.

The general form of the model is given as:

$$y_{it} = \alpha_i + \beta X_{it} + \epsilon_{it}$$

i = Cross-sectional dimension

t = time series dimension

y = dependent variable

βX = set of independent variables in the model

α = the constant

Therefore, the empirical model for the study is established as below:

$$PERFORM_{it} = \delta_0 + \delta_1(BDSIZE)_{it} + \delta_2 (DUALITY)_{it} + \delta_3(AUDITIND)_{it} + \delta_4 (BDIND)_{it} + \delta_5(FOROWN)_{it} + \delta_6(FMSIZE)_{it} + \delta_7(LISTING)_{it} + \delta_8(BIG-4)_{it} + \epsilon_{it} \quad (1)$$

- PERFORM =Performance is measured by two indicators: CIR (as a measure of bank efficiency) and ROA (as a measure of financial performance). The ROA is measured by net income divided by total assets, while CIR is non-interest costs as a proportion of net income.
- BDSIZE = Size of the board of directors;
- DUALITY = Refers to the situation where the position of the board chair is concurrently occupied by the managing director/CEO.
- AUDITIND = The ratio of non-executive directors on an audit committee to the total number of directors on the audit committee of a bank;
- BDIND =The ratio of the number of independent members on a board of directors to the total number of directors of a bank;
- FOROWN = The proportion of foreign ownership
- FMSIZE = Firm size measured by the log of total assets;
- LISTING = Listing status of a bank coded one if it is listed on Ghana Stock Exchange and zero otherwise.
- BIG-4= Dummy variable: code 1 if the firm is audited by a Big 4 auditing firm and 0 if otherwise.

Literature has revealed that most studies on corporate governance suffer from the problem of endogeneity which could influence the interpretation of the results. For example, audit committee independence and firm performance could be endogenously determined. Therefore, following Zhou et al. (2018), the study employs a 2SLS model to estimate an equation system to address this endogeneity problem. Furthermore, to take into account the serial correlation of the errors in the linear regression model, the study also employed the Paris-Winsten estimator (Paris & Winsten, 1954).

Table 2. Summary of Variables Used in the Study.

| Variable | Symbol | Measurement |
|------------------------------|----------|--|
| Dependent Variables | | |
| Return on Assets | ROA | Net income divided by total assets |
| Cost-income Ratio | CIR | Non-interest costs/Net income |
| Independent Variables | | |
| Board Size | BDSIZE | Count of the total number of members on the board. |
| CEO Duality | DUALITY | Dummy variable. 0 if the CEO is the same as chairman and 1 for separate leadership. |
| Board Independence | BDIND | The proportion of non-executive directors to the total number of directors. |
| Audit Committee Independence | AUDITIND | The proportion of independent directors in the audit committee to the total number on the committee. |
| Foreign ownership | FOROWN | 1 if the firm is foreign-owned and 0 if it is Ghanaian owned. |
| Control Variables | | |
| Firm size | FMSIZE | Log of total assets |
| Listing | LISTING | Dummy variable: coded 1 if a sample bank is listed and 0 if otherwise. |
| Big 4 auditing firms | BIG-4 | Dummy variable: code 1 if the firms are audited by the Big 4 auditing firms and 0 if otherwise. |

4.3 Model Diagnosis

Table 3 shows that no autocorrelation among the variables since Prob>f was 0.0007. Similarly, the data shows no Heteroskedasticity since prob>chi was 0.0000. This suggests that the empirical model is fit for the study.

Table 3. Test for Model Fit.

| Model fit | | |
|-------------------------|-----------|--------|
| Autocorrelation Test | F (1,16) | 17.349 |
| | Prob>F | 0.0007 |
| Heteroskedasticity Test | Chi2 (1) | 32.07 |
| | Prob>chi2 | 0.0000 |

5. Results and Discussion

5.1 Descriptive Statistics

Table 4 presents the descriptive statistics of the variables used in the regression analysis.

Table 4. Descriptive Statistics of Variables.

| Variables | Mean | Std. Dev. | Skewness | Kurtosis | Min. | Max. |
|-----------|-------|-----------|----------|----------|--------|--------|
| BDSIZE | 8.450 | 3.719 | 0.456 | 1.025 | 6.000 | 12.000 |
| DUALITY | 0.201 | 0.164 | -0.432 | -0.696 | 0.330 | 0.601 |
| AUDITIND | 0.450 | 0.300 | -1.491 | 0.248 | 0.200 | 0.510 |
| BDIND | 0.420 | 0.466 | 0.574 | -0.494 | 0.300 | 0.530 |
| FOROWN | 0.380 | 0.486 | 0.511 | -1.756 | 0.000 | 0.410 |
| ROA | 0.017 | 0.037 | -0.212 | 2.851 | -0.220 | 0.074 |
| CIR | 0.139 | 0.276 | -0.492 | 3.741 | -1.091 | 0.603 |
| FMSIZE | 5.835 | 0.989 | 3.881 | 14.255 | 2.398 | 7.508 |
| LISTING | 0.240 | 0.427 | 1.232 | -0.489 | 0.000 | 1.000 |
| BIG-4 | 0.666 | 0.473 | -0.281 | -1.945 | 0.000 | 1.000 |

The results from Table 4 indicate that the average board size of commercial banks in Ghana is 8, with a minimum number of 6 members and a maximum of 12 members. This is an indication that commercial banks have a moderate level of board size. On average the board is composed of 42% non-executive directors. This indicates that the majority of the banks' boards are not independent. This is a weak sign since an independent board is required for good corporate governance.

Furthermore, about 20% of firms on the average have the CEO occupying the chairmanship position. This depicts that banks have separate persons holding the roles of the CEO and chairman of the board. Audit committee independence recorded an average of 45%, indicating that banks relatively have an independent audit committee. The result shows that about 38% of the sample banks are foreign-owned.

The average ROA and CIR were found to be 1.7% and 13.9% respectively. This is an indication that the banks generate low returns on their assets employed. However, the banks' efficiency performance looks promising. Some banks have reported negative CIR and ROA, suggesting that much improvement is needed. The average for total assets and Big-4 were 5.835 and 66% respectively. This indicates that the Big-4 auditing firms in Ghana audit most of the banks. The result shows that 24% of the sampled banks are listed on the Ghana Stock Exchange.

5.2 Correlation Matrix

Table 5 presents the correlation matrix for the variables used in the study. It also shows the Variance Inflation Factor (VIF) and Tolerance statistics to test for multicollinearity between the

variables. The result indicates that the highest correlation is 0.7945, which is between ROA and CIR. Furthermore, the results in Table 5 shows that the VIF shows the highest value of 1.72 and the lowest value of 1.06. Notwithstanding, the Tolerance statistics also recorded the lowest value of 0.581. This is an indication that two or more explanatory variables are not linearly correlated. Therefore, it can be concluded that multicollinearity is not an issue in the empirical model.

Table 5. Correlation Matrix.

| Variables | CIR | ROA | BDSIZE | DUALITY | AUDITIND | BDIND | FOROWN | FMSIZE | LISTING | BIG-4 | VIF | |
|-----------|--------|--------|--------|---------|----------|-------|--------|--------|---------|-------|-------|-------|
| CIR | 1.000 | | | | | | | | | | | |
| ROA | 0.795 | 1.000 | | | | | | | | | | |
| BDSIZE | -0.143 | -0.135 | 1.000 | | | | | | | 1.13 | 0.912 | |
| DUALITY | 0.054 | 0.138 | -0.421 | 1.000 | | | | | | 1.33 | 0.824 | |
| AUDITIND | 0.212 | 0.081 | -0.16 | 0.033 | 1.000 | | | | | 1.72 | 0.638 | |
| BDIND | 0.300 | 0.191 | 0.114 | -0.295 | 0.538 | 1.000 | | | | 1.57 | 0.581 | |
| FOROWN | -0.146 | -0.312 | -0.124 | -0.256 | 0.082 | 0.263 | 1.000 | | | 1.59 | 0.881 | |
| FMSIZE | 0.412 | 0.413 | 0.242 | -0.612 | 0.282 | 0.35 | -0.164 | 1.000 | | 1.06 | 0.989 | |
| LISTING | 0.333 | 0.143 | -0.022 | 0.193 | 0.406 | 0.328 | 0.022 | 0.494 | 1.000 | 1.47 | 0.721 | |
| BIG-4 | -0.056 | 0.032 | -0.105 | 0.183 | 0.030 | 0.030 | 0.322 | -0.166 | 0.000 | 1.000 | 1.43 | 0.657 |

5.3 Analysis of Regression Results

This section analyzes the regression result for corporate governance, financial performance and efficiency of commercial banks in Ghana. The result is presented in Table 6 below:

Table 6. Regression Result.

| VARIABLES | (1) | (2) | (3) | (4) | (5) | (6) |
|--------------|----------------------|---------------------|----------------------|---------------------|----------------------|----------------------|
| | 2SLS | 2SLS | OLS | OLS | Prais-Winsten | Prais-Winsten |
| | CIR | ROA | CIR | ROA | CIR | ROA |
| BDSIZE | -0.033*** (0.002) | -0.002** (0.001) | -0.030*** (0.007) | -0.002** (0.001) | -0.034*** (0.006) | -0.004*** (0.001) |
| DUALITY | -0.081*** (0.005) | -0.002 (0.011) | -0.082*** (0.000) | -0.001 (0.009) | -0.186*** (0.006) | -0.017*** (0.005) |
| AUDITIND | -0.983 (0.075) | -0.009 (0.013) | -0.139 (0.062) | -0.011 (0.008) | -0.041 (0.139) | -0.001 (0.013) |
| BDIND | 0.372** (0.183) | 0.031 (0.030) | 0.245** (0.167) | 0.037* (0.019) | 0.178 (0.170) | 0.009 (0.019) |
| FOROWN | -0.079*** (0.034) | -0.011 (0.008) | -0.147** (0.055) | -0.010 (0.007) | -0.156 (0.102) | -0.012 (0.009) |
| FMSIZE | 0.073*** (0.019) | 0.020*** (0.007) | 0.066*** (0.032) | 0.019** (0.009) | 0.232*** (0.013) | 0.023*** (0.004) |
| LISTING | 0.088 (0.054) | -0.003 (0.012) | 0.063 (0.057) | -0.001 (0.012) | 0.054* (0.030) | -0.012*** (0.004) |
| BIG-4 | 0.098 (0.051) | 0.015 (0.009) | 0.053 (0.067) | 0.013** (0.006) | 0.143* (0.044) | 0.025*** (0.008) |
| Constant | -0.273 (0.126) | -0.087** (0.039) | -0.141 (0.235) | -0.079 (0.057) | -0.230** (0.120) | -0.093*** (0.025) |
| Observations | 96 | 96 | 96 | 96 | 96 | 96 |
| R-squared | 0.354 | 0.304 | 0.341 | 0.305 | 0.320 | 0.253 |
| Wald | 143.94*** | 32.38*** | | | 458.94*** | 562.20*** |
| F-Stats | | | 7.37*** | 5.08*** | | |

Note: Robust standard errors in parentheses, ***Coefficient is significant at the 0.01 level ($p < 0.01$), **Coefficient is significant at the 0.05 level ($p < 0.05$), *Coefficient is significant at the 0.1 level ($p < 0.1$)

The result in Table 6 indicates that large board size has a significant negative effect on ROA and CIR at the 0.01 level of significance for all three regression estimates. This demonstrates that hypothesis 1 is not supported. However, the significant negative result depicts that a percentage increase in board size leads to a decrease in the performance and efficiency of Ghanaian banks. When board size is too large, there arises the free-rider problem. Thus, most board members become passive in their roles of monitoring and will eventually hurt performance and efficiency, which could be a reason for the poor performance and collapse of some Ghanaian banks in 2017 and 2018. Again, this finding is in support of the agency theory, which suggests that a large board size will hinder the CEO and the organization's performance. The study finds inefficient use of assets of most banks in the sample resulting in negative ROA, a large board size poses additional cost to the bank. According to the study of Haniffa and Hudaib (2006), large board sizes are costly in terms of compensation and incentives, and it is ineffective in monitoring performance.

This result is in line with the study of Frimpong et al. (2015) and Nyarko et al. (2017) who found a negative but insignificant association between large board size and the performance of banks in Ghana. The reason for the significant result in this study may be due to the methodology and the sample size employed. The study also provides differences and specificities in the sample, making the result significant contrary to previous studies in the banking sector of Ghana. However, the research is in agreement with the findings of Adusei (2011). The study found that the size of a bank's board decreases as its profitability increases. Therefore, the study result provides new evidence for banks to have a small board size.

CEO duality recorded a significant negative effect on CIR at the 1% level of significance, but no significant impact was recorded between CEO duality and ROA in all the three regression estimates. This suggests that, while CEO duality may negatively affect the efficiency of Ghanaian banks, it has no significant effect on banks' financial performance. Under the old governance regulations for banks by the Banks of Ghana (2017), the positions of Managing Director and Board Chair can be occupied by one person in the case of domestic banks. Still, they cannot be held concurrently in the case of foreign banks. The result of this study could explain why the bank of Ghana cited operating inefficiency as one of the reasons for closing down most banks (Bank of Ghana, 2018). It is, therefore, not surprising that the new corporate governance code for financial institutions in Ghana encourages the separation of powers by separating the role of the board chair and the managing director/CEO (Bank of Ghana, 2018). The result of the study is in line with this new regulation since CEO duality negatively and significantly affects the efficiency of Ghanaian banks. Meanwhile, Tornyeva and Wereko (2012) argued that CEO holding the chairmanship position would be dominant and take decisions that maximize his interest as against that of the shareholders, and this could explain the case in Ghanaian banks

Another interesting finding is that audit committee independence has no significant effect on CIR and ROA. Therefore hypothesis 3 is not supported. Although the result is insignificant, the positive relationship indicates that the crucial role played by the audit committee in protecting the interest of shareholders and its effect on the efficiency and financial performance of the firm. The audit committee is to oversee the preparation of financial statements, alleviate the changes in earnings restatements, and improve the credibility in the financial statement. Therefore, this committee increases the confidence of investors and maximize shareholders wealth (Zhou et al., 2018). A similar study by Nyarko et al. (2017) found a significant positive relationship between audit committee independence and the financial performance of banks in Ghana. Frimpong et al. (2015), however, reported a negative relationship between audit size and performance of banks in Ghana. This study supports Zhou et al. (2018), who found no significant relationship between audit committee independence and firm performance. The research is inconsistent with other studies like Hamdan, et al. (2013) and Zábajniková (2016).

The result revealed that board independence has a positive and significant effect on CIR and ROA at the 5% level of significance in the 2SLS and OLS regression. The Prais-Winsten regression shows that the effect of board independence on CIR and ROA is significant at the 1% significant level. This stipulates that having a majority non-executive board of directors affects the efficiency and

performance of banks in Ghana. The finding supports a prior study by Nyarko et al. (2017) on corporate governance and performance of Ghanaian banks. The result is also in line with Tornyeva and Wereko (2012) who posited that the majority of non-executive members on the board would enhance the independence of the board, this leads to an effective monitoring role by the board and encourage competition among managers which eventually leads to improvement in performance.

Similarly, agency theory posits that firm performance is enhanced when there are more non-executive directors. Amid recent shakeup in the banking industry, the role of independent directors needs to be reinforced since the descriptive statistic in Table 4 recorded an average of 42% and a minimum of 30% for board independence. This study is consistent with the works of Khan, Nemati, and Iftikhar (2011) and Kyereboah-Coleman (2007), who find a significant positive relationship between board compositions and firm performance. However, Kajola (2008) found a negative association between board composition and firm performance.

Furthermore, the result of the study shows that foreign ownership hurts both CIR and ROA. However, the effect of foreign ownership on ROA was found to be significant at the 5% significant level in the 2SLS and OLS regression. In contrast, the effect of foreign ownership on CIR was insignificant in all the three regression estimates. This result is quite surprising since it is anticipated that banks with foreign ownership are highly monitored and governed. These banks invariably tend to employ cost reduction methods and better technology to reduce waste that may lead to improved efficiency and performance (Nyarko et al., 2017). Although this is an unexpected result, the study is consistent with that of Kyereboah-Coleman and Beikpe (2006b) who reported a negative effect of foreign-owned firms on performance. Nevertheless, this result is contradictory to the study of Nyarko et al. (2017), who found that foreign ownership of banks has a significant positive association with the performance of banks.

6. Conclusion and Policy Implication

This study provides further insight into corporate governance and the performance of banks in Ghana. The study reported mixed results for governance variables and performance measures. This demonstrates that the relationship between corporate governance, bank efficiency, and financial performance in the Ghanaian banking sector could be multifaceted. Moreover, it could be an indication that the banking sector did not follow the government guidelines and regulations strictly in the initial years of the study sample which could explain the cause of the banking crisis in late 2017 and early 2018. The main findings of the study indicate that small board size and board independence are crucial determinants of firm performance. While CEO duality may not affect the financial performance of banks, it is a significant determinant of bank efficiency. On the other hand, while foreign ownership does not affect the efficiency of banks, its effect on financial performance cannot be overemphasized. Last but not least, audit committee independence was not found to be a crucial determiner of performance in Ghanaian banks.

The result of this study has several policy implications for both managers of banks and policymakers. Firstly, for improved efficiency, Ghanaian banks should separate the role of the board chair from that of the managing director/CEO. Secondly, banks in Ghana are encouraged to have independent boards composing more than 50% non-executive members and board size of at most eight members. Thus, banks should keep a moderate size of corporate boards to balance their performance. Although, the effect of audit independence on performance was not significant banks are encouraged to implement a strong independent audit since a positive effect was recorded. Finally, foreign banks are encouraged to increase monitoring and supervision to improve their efficiency and financial performance.

The study has several limitations that need further consideration. This study only focused on board characteristics, ownership, and leadership variables. However, it must be stated that corporate governance embraces a wide range of variables like legal, political, and economic environment, ownership, structures, employee involvement in daily activities, the existence of internal controls, among others. Therefore, further studies are encouraged to look into several corporate governance

variables to ascertain the full picture of the effect of corporate governance on the performance of commercial banks in Ghana. Our data set dating from 2005 to 2015 constitute another limitation of this study. It is suggested that further studies widen the scope for the data set and could compare the effect of corporate governance on performance before and after the banking clean-up exercises. The conclusions and validity of this study, however, has not been compromised due to these limitations.

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