EFFECT OF CORPORATE GOVERNANCE ON THE EFFICIENCY OF QUOTED DEPOSIT MONEY BANKS IN NIGERIA

[1]ADAMU Nasamu & [2]SOLOMON Mangba Aza
[1&2]Department of Accounting, Nasarawa State University, Keffi
Emails: **nasamu.adamu@yahoo.com[1],zmagajiaza@gmail.com**

Abstract
This study examined the effect of corporate governance on the efficiency of quoted deposit money banks in Nigeria. The study population consisted of 14 deposit money banks listed on the Nigerian Exchange Group (NGX). Secondary data was utilized in this study for the purpose of data collection. Data was extracted from the annual reports of quoted deposit money banks for the period 2013-2022 financial years. This study employed multiple regression technique as the procedure of analysis with the aid of STATA version 15. The finding revealed that board size has negative and significant effect on bank efficiency. Also, the study revealed that audit committee size shows a positive and significant effect on bank efficiency. The study concluded that corporate governance has significant effect on efficiency of quoted deposit money banks in Nigeria. Based on the finding this study recommended that banks in Nigeria carefully consider the composition and size of their boards. Rather than focusing solely on increasing the size of the board, banks should prioritize the appointment of qualified and experienced directors who possess relevant skills and expertise in banking, risk management, and corporate governance. This will ensure effective decision-making, efficient operations, and improved efficiency. This study also recommended that deposit money banks in Nigeria pay attention to the composition and size of their audit committees. Banks should strive to have audit committees that are adequately staffed with individuals who possess the necessary knowledge and experience in auditing, accounting, risk management, and regulatory compliance.
Key wards: *Board Size; Audit Committee Size; Bank Efficiency*

INTRODUCTION

Corporate governance (GC) has become one of the most topical issues in the modern business world today. Spectacular corporate failures, such as those of Enron, Worldcom, Barlow Clows and Levitt, the Bank of Credit and Commerce International (BCCI), Polly Peck International and Baring Bank, have made it a central issue, with various governments and regulatory authorities making efforts to install stringent governance regimes to ensure the smooth running of corporate organizations, and prevent such failures. A corporate governance system is defined as a more-or-less country-specific framework of legal, institutional and cultural factors shaping the patterns of influence that shareholders (or stakeholders) exert on managerial decision-making. Corporate governance mechanisms are the methods employed, at the firm level, to solve corporate governance problems.

Corporate governance is viewed as an indispensable element of market discipline (Levitt, 1999) and this is fueling demands for strong corporate governance mechanisms by investors and other financial market participants (Blue Ribbon Committee 1999; Ramsay 2001). Regulators have enacted corporate governance reforms into law in many countries such as the USA (Sarbanes-Oxley Act, 2002). In other countries such UK (Combined Code of Corporate Governance, 2003) the corporate governance codes are principles of best practice with some indirect element of legislature operating through the respective stock exchange listing rules. For the banking sector, Basel II is widely adopted by developing and emerging market economies to enhance their CG codes.

In Nigeria, corporate governance in all sectors has been given prime attention by all sectors of the economy. This is in recognition of the failure of the critical role of corporate governance in the success or failure of companies (Ogbechie, 2006). Corporate governance is about building credibility, ensuring transparency and accountability, and maintaining an effective channel of information disclosure that will foster remarkable corporate performance. Corporate governance can therefore be said to refer to the processes and structures by which the business and affairs of institutions are directed and managed in order to improve long-term

shareholders' value by enhancing corporate performance and accountability while taking into account the interest of other stakeholders (Tricker, 2009).

Nigeria has witnessed several cases of distressed, liquidation, or failure in the banking sectors. Examples of the failed or liquidated banks include Savannah Bank Plc, Society General Bank Ltd, Oceanic Bank, Bank of the North, AfriBank, and Mainstream Bank. Given the rate and impact of bank failures as well as the inimical activities of bank operators, there has been growing concern to strengthen corporate governance in order to boost public confidence and ensure efficient and effective functioning of the banking system in Nigeria (Soludo, 2004).

Corporate governance is the performance of the task of administration in corporate entities to enhance shareholder value without jeopardizing other interest groups' legitimate expectations, thereby promoting firm sustainability. The underlying principle is to resolve the agency dilemma prevalent in many organizations (Oyarzún, 2011). It is designed to check corporate abuse arising from conflict of interest whereby management, acting as the agent, deploys the organization's resources to advance own interests rather than of the stockholders (principals). The concept of corporate governance in business organizations is neither new to the world of business nor is it new to economic literature but has attracted greater attention since the early 1990s due to the increasing wave of globalization, requirements for increased financial reporting, and rising episodes of corporate failures. For instance, Lahart (2009), Zandi (2009), and Faber (2009) attributed recent emphasis on the subject to series of financial scandals, which caused the collapse of corporate giants around the world early in the millennium.

Board effectiveness is particularly important in the Nigerian financial sector because a number of financial failures, frauds, loss of public confidence, and poor rate of returns on investment, corruption, criminality and questionable business practices have adversely affected investors' confidence. Challenges arise where firms operate through structures that lack or impair transparency. The main problems in the Nigerian banking sector are the domineering of the Chief Executive Officer, manipulation of employment procedures, a situation whereby appointment goes to the highest bidder, family affairs ownership structure, non-adherence to internal control measures, undeserved welfare packages for chief executive officer and management among others.

The board of directors does not enforce clear lines of responsibility and accountability. The ineffective clear definition of authority of the board of directors, as well as senior management, consequently increases profiles of bad debts, poor profitability. The board of directors lack the potential to consider the appropriateness and set suitable limits on operations in such jurisdictions or the use of such structures, upon this, board members saw themselves as agent, of political parties in sharing the national cake emanating thereof and thus, attributed their allegiance to the party members rather than the proper administration of the bank itself. Operating in such structures or scenario may pose financial risks to the banking industry, such as bank collapse.

Recruiting inexpert and unskilled personnel to hold major positions in the bank sector seemed to play a major role in the failure of banks such as deteriorating of organizational culture, weak internal control system instigated by the squabbles among the top management, delay in decision making and mismanagement. These problems in the banking sector are worrisome and demand urgent attention. Consequently, this work sort to examine the effect of board composition on the financial performance of deposit money banks in Nigeria. The main objective of this study is to examine the effect of corporate governance on bank efficiency of deposit money banks in Nigeria. The specific objectives of the study are to:

i. Determined the effect of board size on the efficiency of deposit money banks in Nigeria.
ii. Investigate the effect of Audit committee size on the efficiency of deposit money banks in Nigeria.

LITERATURE REVIEW

Concept of corporate governance

Corporate Governance (CG) is the process which facilitates the creation of shareholder's value, protection of the individual and collective interests of all stakeholders in an establishment are achieved through. Corporate governance is generally associated with the existence of agency problem and its roots can be traced back to separation of ownership and control of the firm. Corporate governance arranges not only the internal administration of the firms; it is also connected with a firm's relationship with its suppliers, customers and other stakeholders. Corporate governance varies from entity to entity and the geographical region of countries. Its ultimate goal is to standardize, gain a high rate of return and prevent financial structure in attaining their targets at the expense of the investors. It must be acknowledged that feeble corporate governance or non-compliance of its doctrine could prompt financial abuses, corporate frauds and generate heavy losses for the companies (Hussain & Abdul Hadi, 2017).

Concept of Board size

This refers to the total number of directors on the board of any corporate organization. It is one of the factors considered when the structure of the board is being considered. The structure of a board could be small or large and, in some cases, the choice of board size is industry specific. Enobakhane (2010) explained the size of a board of a corporation as the total number of directors represented on a board that makes its board structure. Olaynika (2010) averred that board size is a crucial characteristic of the board structure that could provide the diversity that would enable companies to secure procure the essential resources needed to surmount environmental challenges.

The choice of board size therefore is at the whim and caprice of the banks. However, a number of arguments have been put forward by scholars as to which (Small board size or large board size) leads to effective and efficient board practice. Kajola (2008) and Sanda et al., (2005) argued that small board size is more effective than larger board size. The reasons adduced for this view are in two folds. First, small board size fast tracks decision making process and reduce obstacles to positive change. The second reason in favor of small board size is that directors hardly challenge the policies of the top management and that this problem tends to be on the rise with the increase in the number of directors.

The agency theory assumes that smaller board is recommended to minimize the agency cost, by effective control over the management whereas large boards might increase a large number of potential interactions and conflicts among the group members. Boards with seven to eight members are better compared to those with a greater number (Yoshikawa & Phan, 2003). As the board size increases, the board's ability to monitor management decreases due to a greater ability to shirk and an increase in decision making (Jensen, 1993). Boards with a large number of directors can be a disadvantage and expensive for the firms to maintain, planning, work coordination, decision-making and holding regular meetings can be difficult with a large no of board members (Wanyama & Olweny, 2013). Banks tend to have large boards due to their complex organizational structure and presence of more committee such as lending and credit risk committees (Adam & Mehran, 2005). A large board is comprised of experts from various fields; however, an excessively large board will drag down the efficiency of the board and also the effectiveness of corporate governance mechanism (Yermack ,1996).

Concept of Audit Committee Size

The size of an audit committee refers to the number of members that constitute the committee. The determination of an appropriate audit committee size is important for effective oversight of financial reporting and internal control processes within an organization. the size of the audit committee has been found to have a significant impact on its effectiveness" (Smith, 2018).

Studies have suggested that agency conflicts arise as a result of deviation between management and ownership, which may encourage managers to maximise their interests rather than shareholders' interests (Jensen & Meckling, 1976). Top management teams may be encouraged to expropriate shareholders'

interests due to the lack of effective control procedures (Fama & Jensen, 1983). Hence, audit committee efficiency and effectiveness may mitigate this conflict (Klein, 2002a). Hsu and Petchsakulwong (2010) suggest that large audit committees may provide a strong monitoring function, although large audit committees may face coordination problems among directors. Large boards of directors are more complicated than small boards of directors (Dalton, Daily, Johnson & Ellstrand, 1999). Based on the resource dependence theory, large audit committees provide various skills and experiences to the board of directors and this might enhance the decision-making process (Pfeffer, 1972).

Vafeas (2005) argued that where the audit committee size is too small then an insufficient number of directors to serve the committee emanate and thus decrease its monitoring effectiveness. That is a small committee is not capable of fulfilling its duties efficiently as the responsibilities are always on the increase. Additionally, when a committee size is too large, the directors‟ performance may decline because of the longer coordination and process problems and hence, weak monitoring and control (Jensen, 1993; Vafeas, 2005).

Concept of Bank Efficiency

Bank efficiency refers to the ability of a bank to utilize its resources effectively in generating profits and providing quality services to its customers while minimizing costs and risks. Bank efficiency is "the ability of a bank to achieve its objectives by utilizing its resources effectively and efficiently" (Johnson, 2019). Bank efficiency in Nigeria can be defined as "the ability of banks to utilize their resources effectively in order to achieve high levels of output and profitability, while minimizing costs and risks" (Oke & Adeyemo, 2013).

Sufian and Habibullah (2010), "bank efficiency refers to the ability of a bank to allocate its resources optimally to produce the maximum level of output with the minimum level of input". Kumbhakar and Sarkar (2010) define bank efficiency as "the ability of a bank to use its inputs such as labor, capital, and technology efficiently in producing outputs of financial services". Berger and Humphrey (1997), bank efficiency is "the ability of a bank to produce a desired output with a given set of inputs, using the best production technology available".

Ogunleye and Ibrahim (2011), "bank efficiency refers to the ability of banks to utilize their resources optimally and produce maximum output and profits while minimizing costs and risks". Bank efficiency is "the ability of banks to achieve the best possible results in terms of productivity, profitability, and customer satisfaction given their available resources and operating environment" (Akintoye & Okuneye, 2017).

Empirical Review

Board Size and Bank Efficacy

Javad and Sheikh (2010) examined the efficacy of bank governance measures in improving the quality of assets of banks in Bangladesh. The study covered a period of 1999-2008 and was carried out on 15 sampled commercial banks. Corporate governance was measured by board size while Asset quality (non-performing loan) was used to measure efficiency. Both descriptive and regression analyses were used to analyze the data. The study concluded that there is a significant positive relationship between board size and non-performing loans of the sampled banks.

Onakoya, Moses and Okorie (2018) used panel data technique to investigate effect of corporate governance mechanisms (CEO Tenure, CEO Remuneration, CEO Age, Board Size, Ethnic Dominancy, and Board Gender), on the asset quality (non-performing loans) of eight deposit money banks in Nigeria between 2006 and 2016. The findings of the study show that increasing CEO remuneration shows a significant positive relationship, which means an increasing Non-Performing Loan, whilst the CEO age shows a converse significant relationship indicating better asset quality. Firm leverage and firm size have negative and positive significant effect on nonperforming loan respectively, while board size has a significantly negative effect only significance level. However, board gender has no significant effect on nonperforming loan.

Egungwu and Egungwu (2019) examined the effect of corporate governance dynamics (board size, board credit committee size, shareholders' role, depositors' role) on the asset quality of ten (10) Nigerian banks. The study adopted the ex-post facto research design while the Ordinary Least Square (OLS) regression was used for the analysis. The study found that board size had insignificant positive influence on asset quality of Nigerian banks; credit committee composition had insignificant negative effect on asset quality; shareholders' role had significant positive effect on asset quality; and depositors' interest had significant positive effect on bank performing loans.

Abdulazeez, Lawal and Yabagi (2019) examined the impact of board structure (Board size and Independence) on the asset quality NPL and LDR) of listed fifteen deposit money banks in Nigeria for a period of 2008-2017. Descriptive statistics, correlation and OLS Robust regression were used to analyze the data. It was found that board structure proxies showed no significant impact on Asset Quality. Only two corporate governance variables cannot significantly explain asset quality as evident from the low coefficient of variation of 6% and 3% model separately.

Shukla, Narayanasamy and Krishnakumar (2020) explored the impact of board size on the accounting returns and asset quality using ordinary least squares regression, robust regression and panel data methods for estimation, based on a sample of 29 Indian banks from 2009-2016. The study found that the size of the governing board has a positive impact on the accounting returns (measured through ROA) of the Indian banks. Further, board size is observed to be insignificant in determining the asset quality (non-performing loan) of Indian banks.

Audit Committee Size and Bank efficiency

Magembe, Ombuki and Kiweu (2017) explored the effect of corporate governance (Board Structure (BS); Audit Structure (AS); CEO duality) on Loan performance of 43 commercial banks in Kenya from 2010-2014. From Multiple Regression Analysis, the study found out that BS has a positive relation loan performance while AS has a significantly negative relation on the loan performance of the commercial banks. CEO duality shows a positive relation to the LNPLs (Linearlized Non- Performing Loans).

Zgarni, Fedhila and El Gaied (2018) assessed the effect of the audit committee (presence, expertise, independence, size and activity) on earnings management (discretionary Loan Loss Provisions) of ten Tunisian commercial banks over the 2001–2014 period. The regression models are estimated using the Panel corrected standard errors method of Beck and Katz (1995). The empirical result shows that audit committee's expertise has significant effect in mitigating discretionary practices. However, the number of meetings, which is less than the standard required by regulatory authorities, does not have a significant disciplinary effect on earnings management practices. Result also report that Audit committee's independence and size have positive effects on earnings management. This study and that of Abubakar, Abubakar, Shehu and Nahari (2015) only examined audit characteristics as an aspect of corporate governance and its effect on asset quality variable.

Gupta and Wei (2018) explored the effect of corporate governance's variables on non-performing loan of commercial bank in Nepal from 2010 to 2016. The corporate governance studied are board size, independent directors, audit committee member, foreign ownership, domestic ownership, CEO duality, bank age, female director, board meeting and bank size. The data were analysed through regression model to examine the importance of corporate governance variables on non-performing loan. In some case, the result shows positive correlation with non-performance loan which shows that diversified the board, director of board, audit committee higher will be the ratio of nonperforming loan and vice versa, while the result has negative impact on the presence of foreign ownership which are otherwise explain the presence of foreign of ownership would reduce the bank proficiency. Furthermore, the presence of domestic ownership has increased the efficiency of the corporate banking sectors. The presence of dual CEO also

has negative relation with the performance of the bank. Similarly, the age of bank, presence of female director, number of board meeting and bank size has positive relation with nonperforming loan.

Almoneef and Samontaray (2019) explored the impact of corporate governance on the Saudi banking performance for the period of 2014–2017. The dependent variable was Firm financial performance measured through return on assets, return on equity and Tobin's Q. Corporate governance dimensions were measured through board characteristics (board size, board meeting, number of committees and independence of foreign board membership) and the audit committee (size, meeting, independence) as the independent variables. Firm size and firm age were the controls variables. Panel data analysis was implemented, using both descriptive and multivariate analysis through multiple regressions to investigate the governance practices and firm performance. The finding shows that board size, audit committee meeting and bank size have a positive impact on ROE, whereas board independence had a negative impact on ROE. Similarly, board size and bank size had a positive relationship with ROA and board meeting had a negative relationship with ROA. Further, board (size and independence) and bank size had a positive relationship with Tobin's Q, whereas, the number of board committees and bank age had a negative relationship with Tobin's Q. Finally, audit committee (size and independence) and foreign board membership had no impact on bank performance.

Baldavoo and Nomlala (2019) evaluated the impact of audit quality on firm value and how corporate governance moderate this relationship. The study used the annual reports of 36 Ghanaian banks from 2010 to 2017. A random effect regression model was used to estimate the relationships. The results revealed that audit quality have a positive impact on the value of a firm. Thus, the engagement of the services of the Big 4 audit firms contribute to the increment of the value of the firms. In addition, the existence of effective corporate governance improves the relationship between the audit quality and the value of the firms. Corporate governance therefore facilitates improved moderation of the relationship between audit quality and the value of firms.

Agency Theory

The Agency theory was first discovered by Stephen Ross and Barry Mitnick in the year 1973. Ross was responsible for the origin of the economic theory of agency and Mitnick for the institutional theory of agency and the basic concepts that were underlying the two approaches were similar (Mitnick, 2006). Agency theory has been widely used as a means of explaining various corporate issues. The theory is based on the existence of separation of ownership and control in large corporations where the managers (agents) are hired to work and make decisions on behalf of the owners (principals) in order to maximize returns to the shareholders (Jensen & Meckling, 1976).

Agency theory explains the problems arising from the separation of ownership and control. It provides a useful way of explaining relationships where the parties' interests are at variance and the divergence can be streamlined through proper monitoring and a well-planned compensation system (Ranti, 2011). Jensen and Meckling (1976) define the agency relationship in terms of a contract under which one or more persons the principal(s) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to agents. Agency theory supports the delegation authority and the structure of control on the board of directors and use of compensation incentives as a means of motivation to in the work place. The board of directors monitors agents through communication and reporting, review and audit and the implementation of codes and policies.

The theory sees shareholders as the principals and managers as agents. According to Sanda, Mikailu and Garba (2005), the presence of information asymmetry can make agents to pursue interest that may be detrimental to the interest of the principal. The process of aligning these two interests can ignite conflict between the two interest groups. Muhammad, Sheila, Hafiz and Ahmad (2011) assert that there are two factors that give prominence to agency theory. First, the theory is simple conceptually and it reduces every

corporation to include only two participant owners; (shareholders) and managers. Second, there is a notion that human beings are self-interested and have the tendency to pursue self-financial enhancement goals at the expense of the owners. Agency theory therefore explains the relationship between owners and managers and that managers should continuously protect the interest of absentee owners (Mansur & Ahmad 2013).

Agency theorists argue that the control function of an organization is a primary function exercised by the board of directors. According to Biserka (2007), the issues that appear most prominent in the literature with reference to the board of directors as a governance mechanism, are board composition (board size, inside versus outside directors and the separation of CEO and chairman positions) and the role and responsibilities of the board directors.

METHODOLOGY

The study uses expo-facto research design using panel data for the period of ten years ranging from 2013-2022. It is in view of the applicable ontological and epistemological perspectives of the research philosophy adopted by the research that effect of corporate governance such as board size and Audit committee size and bank efficacy in Nigeria are being investigated in 14 deposit money banks listed on the Nigeria Exchange Group. The study population consisted of all deposit money banks listed on the Nigerian Exchange Group (NGX). Secondary data were utilized in this study for the purpose of data collection. The necessary data was extracted from the annual reports of listed deposit money banks for the period 2013-2022 financial years. Banks' corporate annual reports was mainly utilized since they are promptly accessible, available and provide a greater platform for results comparability. This study employed multiple regression technique as the procedure of analysis with the aid of STATA version 15.

Model Specification

The crux of the model is to test the effect of corporate governance (Board Size and Audit committee size) on bank efficiency of listed deposit money banks in Nigeria. the model that will be use in current study will be adopted from the studies of Saha and Ghosh (2019) and Gupta and Wei (2018) with slight modifications as follows:

$BE_{it} = a0 + \beta_1 BS_{it} + \beta_2 ACS_{it} + {}_{it}\varepsilon_{it}$.....(i)

Where;

BE=Bank Efficiency i at time t; BS=Board size of firm i at time t; ACS= Audit Committee Size of firm i at time t; β = Constant; Ɛit= Error Term

RESULTS AND DISCUSSION

Descriptive Statistics

A descriptive statistic is an analysis of data that helps to describe, show or summarize the behaviour of data in a meaningful way, which allows for simpler interpretation of the data. This section contains the description of the properties of the variables ranging from the mean of each variable, minimum, maximum and standard deviation.

Table 4.1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
be	140	.4818463	.1171628	.15815	.691068
bs	140	11.04286	3.048461	6	19
acs	140	5.664286	.5828572	4	6

Source: Summary Statistics from STATA 16 Output, 2023

The descriptive statistics show a summary of data for all selected variables for the 14 quoted deposit money banks considered within the time frame of 10 years. The result from table 4.1 shows that the efficiency of deposit money banks in Nigeria was .4818463 with a standard deviation of .1171628. This figure indicates a relatively high ratio of bank efficiency. From the values of the minimum and maximum which stands at .15815 and .691068 respectively is an indication of a high level of variability in the data. This variability serves as a useful indicator for further analysis of the data.

Regarding the independent variables, board size has a mean value of 11.04286 with standard deviation of 3.048461. This implies that board size does deviates significantly across the sample firms. The minimum values of 6 and maximum of 19 also show significant variability in the data. The standard deviation is higher than the average mean value, which indicates that there is great difference in the number of directors in the period covered by the study.

For audit committee size, the descriptive statistics on table 4.1 shows a mean value of 5.664286 and a corresponding standard deviation of .5828572. This shows that on average the audit committee for banks in Nigeria constitute of 5 members while the minimum is 5 while the maximum is 6 suggests that there is low degree of variance in the number of audit committee members of banks.

Correlation Matrix

The Pearson correlation analysis matrix shows the relationship between the explanatory and the explained variable and the relationship among all pairs of independent variables themselves. Generally, high correlation is expected between dependent and independent variables while low correlation is expected among independent variables. According to Gujarati (2004), a correlation coefficient between two independent variables 0.80 is considered excessive and thus certain measures are required to correct that anomaly in the data. The result of the correlation for this study is presented below;

Table 4.2: Correlation Matrix

	be	bs	acs
be	1.0000		
bs	0.6836	1.0000	
acs	0.9211	0.6435	1.0000

Source: STATA 16 Output, 2023

Table 4.2 shows the correlation between the dependent variable bank efficiency and the independent and variables, BS and ACS on one hand, and among the independent variables on the other hand. From Table 4.2, it can be seen that all the correlation coefficients among the independent variables are below 0.80. Generally, high correlation is expected between the dependent and independent variables while low correlation is expected among the independent variables. From the matrix of these variables, it can be concluded that all independent variables have positive correlation with dependent variable except risk management committee and the moderator variable ownership structure which presents value of -0.0355 and -0.0206 respectively.

Regression Diagnostic Tests

The following regression diagnostics tests were carried out to find out whether data used for analysis are reliable. The researcher conducted diagnostic test for Heteroscedasticity using Breusch Pagan Godfrey test and test for multicollinearity using the Variance Inflation Factor (VIF) test. Diagnostic tests are performed to ensure that a good model is chosen as it checks whether the stochastic properties of the model are met in order to avoid conventional econometrics problems.

Test for Multicollinearity

Multicollinearity is a situation where two or more independent variables in a regression are highly or moderately correlated. Non-existence of multicollinearity is a key assumption of linear regression analysis. Furthermore, multicollinearity occurs when the explanatory variables are not independent of each other. The Variance Inflation Factor (VIF) test was used to test for multicollinearity. According to Gujarati and Porter (2009), the mean Variance Inflation Factor should be less than 10 and the tolerance values greater than 10% for it to be tolerated. The result is presented below.

Table 4.3: Multicollinearity Test

Variable	VIF	1/VIF
bd	1.64	0.64911
ace	1.50	0.70810
Mean VIF	1.42	

Source: STATA, 2023.

Based on the evidence presented in Table 4.3, it can be concluded that there is no multicollinearity problem. This is because the mean VIF values for the set of models are less than 10 and the tolerance values for all the variables are greater than 0.10 (Gujarati, 2004). This is substantiated by Baltagi (2015), that mean VIF below 10 and greater than 10% for tolerance values indicate that there is no multicollinearity problem among the series in the distribution, rather it is an indication that the series are not unhealthily related.

Test for Heteroscedasticity

The presence of heteroscedasticity is of major concern when applying regression analysis. Therefore, the initial step is to investigate whether the variance of the error term is constant. Heteroscedasticity occurs when the variance of the error term is not constant in that the variance of the error term changes as the values of the independent variables change. Heteroscedasticity test is aimed at interpreting whether the regression model has different residual variances from different observations (Ghozali, 2002). In this study, Breusch-Pagan Godfrey test was used to examine heteroscedasticity. The null hypothesis for the test is that there is no heteroscedasticicity. If p-value is found to be less than 5 percent, then reject the null hypothesis and conclude that the residuals are heteroscedastic. If heteroscedasticity is established, appropriate measures will be employed. Heteroscedasticity was tested using Breusch Pagan's Test.

Table 4.4 Test for Heteroscedasticity

Variable	Chi2	Prob>Chi2
Corporate Governance	0.11	0.7366

Source: **STATA OUTPUT, 2023**

Basically, the presence of heteroskedasticity signifies that the variation of the residuals or error term is not constant which would affect inferences in respect of beta coefficient, coefficient of determination (R^2) and F-statistic of the study. Based on the results, it can be concluded that there is no problem of heteroscedasticity as the F-statistics for model is 0.11 and 0.90 with a corresponding probability of 0.7366 which is insignificant, implying that there is absence of heteroscedasticity in the model.

Hausman Specification Test

In panel data analysis (the analysis of data over time), the Hausman Test can help to choose which between fixed effects model or a random effects model is appropriate for interpretation. In order to examine whether endogeneity exist, which could potentially lead to biased coefficient, a Hausman specification test to make the choice between Fixed Effect (FE) and Random Effect (RE) regression was performed. This test is necessary considering that there is a trade-off between the efficiency of the random effect and the consistency of the fixed approach. The test also determines whether the estimates of the coefficients, taken as a group, are significantly different in the two regressions. If any variables are dropped in the fixed effects regression, they are excluded from the test. The Hausman test result is presented below;

Table 4.5: Hausman Specification Test

Variable	Chi2	Prob>Chi2
Corporate Governance	7.69	
		0.8633

Source: STATA, 2023

The result of the Hausman Test reveals chi2 values of 7.69 with a corresponding probability of 0.8633. The insignificant values presented by result suggests that the random effect is more appropriate.

Lagrangian Multiplier Test

The L M test is conducted for robust estimations in order to ascertain whether the variance of the errors from a regression is dependent on the values of the independent variables. Consequently, to meet the condition that one or more equations have to be satisfied exactly by the chosen values of the variables, the Breusch and Pagan Lagrangian Multiplier Test for random effect was conducted to choose between the random effect result and pooled OLS regression which is more appropriate. The general rule is that once the probability of LM test is equal to 0.05 and below the preferred model is the random effect otherwise the appropriate model would be the pooled independent OLS. The result of the LM test for this study is presented below;

Table 4.6: Lagrangian Multiplier Test for Market Based Earnings Quality Properties Model

```
             |       Var     sd = sqrt(Var)

          be |   .0137271       .1171628
           e |   .0005081       .0225418
           u |         0              0
Test:  Var(u) = 0
                  chibar2(01) =     0.00
               Prob > chibar2 =   1.0000
```

Source: STATA 16 Output, 2023

The result reveals that the prob>chi2 value of 1.0000. From this result, the best model to be interpreted with is the pooled OLS regression models since the prob>chi2 is greater than 5%.

Regression Result

This study independently tested the effects of corporate governance on bank efficiency of quoted deposit money banks in Nigeria. Given this instance, a regression model was stated in methodology aimed at achieving the specific objectives of the study. The summary of the regression results is as presented below.

Table 4.7 Summary of pooled OLS Regression Result

```
Source |       SS       df       MS              Number of obs =     140
-------------+------------------------------          F( 13,   126) =   68.11
       Model |  1.67038506    13  .128491158          Prob > F      =  0.0000
    Residual |  .23768636   126   .0018864          R-squared     =  0.8754
-------------+------------------------------          Adj R-squared =  0.8626
       Total |  1.90807142   139  .013727133          Root MSE      =  .04343

          be |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
          bs |  -.0178386   .0060098    -2.97   0.004    -.0297318   -.0059454
         acs |    .165478   .0178057     9.29   0.000     .1302411    .2007148
       _cons |   .2552851   .0577517     4.42   0.000     .1409961    .3695741
```

Source: STATA 16 Output, 2023

The regression results reveal the overall R^2 of 0.8754. This signifies the coefficient of determination of the proportion or percentage of the total variation in the dependent and independent variables jointly. The import of this result is that board size and audit committee size jointly explain about 88% variations in bank efficiency of listed deposit money banks in Nigeria, while the remaining 12% of the total variation in the

bank efficiency is caused by factors not included in the model. Accordingly, the value of F-statistic is 68.11 with a corresponding p-value of 0.0000 which signify the fitness of the model. This serves as substantial evidence to conclude that the corporate governance attributes selected are suitable for the study.

CONCLUSION AND RECOMMENDATION

The study concluded that larger board sizes may have a detrimental effect on the efficiency of these banks. It is important for banks to carefully consider the optimal size of their boards to ensure effective decision-making processes and streamlined operations that promote bank efficiency. The study also concluded that audit committee size has a significant positive effect on the efficiency of quoted deposit money banks in Nigeria. This suggests that larger audit committees can contribute to improved efficiency within these banks. Having a larger audit committee allows for a broader range of expertise, perspectives, and oversight, which can enhance the effectiveness of internal controls, risk management, and financial reporting processes.

It is recommended that banks in Nigeria carefully consider the composition and size of their boards. Rather than focusing solely on increasing the size of the board, banks should prioritize the appointment of qualified and experienced directors who possess relevant skills and expertise in banking, risk management, and corporate governance. This will ensure effective decision-making, efficient operations, and improved bank efficiency.

It is recommended that listed deposit money banks in Nigeria pay attention to the composition and size of their audit committees. Banks should strive to have audit committees that are adequately staffed with individuals who possess the necessary knowledge and experience in auditing, accounting, risk management, and regulatory compliance. Regular training and development programs should be provided to audit committee members to enhance their effectiveness in promoting bank efficiency.

References

Abata, M. A. (2014). Asset Quality and Bank Performance: A Study of Commercial Banks in Nigeria*, Research Journal of Finance and Accounting, 5* (18), 39-44.

Abdulazeez, D. A., Lawal, T., & Yabagi, M. (2019). Board Structure and Asset Quality of Listed Deposit Money Banks in Nigeria. *Jurnal Riset Akuntansi dan Keuangan*, *7*(1), 1–18. https://doi.org/10.17509/jrak.v7i1.14936

Abdullatif, A., Freeman, O., & Michael, E. (2014). Does Asset quality persist on bank lending behaviour? Empirical evidence from Ghana, *Global Journal of Management and Business Research, 13* (4), 12-19.

Abubakar, S., Abubakar, M., Shehu, A. S., & Nahari, P. M. (2015). Do Audit Committee Size and Financial Expertise impact on Discretionary Loan Loss Provision? Evidence from Deposit Money Banks in Nigeria. *Abuja Journal of Business and Management*, *1*(3), 101–111.

Adams, R. B., & Mehran, H. (2005). Corporate Performance, Board Structure and its Determinants in the Banking Industry. *Working Paper Presented at the EFA Moscow Meetings.*

Adams, R.B. & Ferreira, D. (2009). Women in the Boardroom and Their Impact on Governance and Performance, *Journal of Financial Economics, 94 (2), pp. 291-309.*

Adams, R.B., & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of Financial Economics 94*(2):291-309.

Adegboye, A., Ojeka, S., & Adegboye, K. (2020). Cogent Economics & Finance Corporate governance structure, Bank externalities and sensitivity of non-performing loans in Nigeria. *Cogent Economics & Finance*, *8*(1). https://doi.org/10.1080/23322039.2020.1816611

Adeusi, S., Akeke, N., Aribaba, F. & Adebisi, O. (2013). Corporate governance and firm financial performance: do ownership and board size matter. *Academic Journal of Interdisciplinary Studies, Rome – Italy, 2* (3). 91-98

Adjei-Mensah, G., Amidu, M., & Abor, J. Y. (2015). Executive Compensation, Ownership Structure and Loan Quality of Banks in Ghana. *African Development Review*, *27*(3), 331–341. https://doi.org/10.1111/1467-8268.12151

Afolabi, A., & Dare, A. M. (2015). Corporate governance in the Nigeria Banking Sector: Issues and Challenges. *European journal of accounting auditing and finance research, 3*(5).

Afrifa, G. A., & Tauringana, V. (2015) Corporate governance and performance of UK listed small and medium enterprises. *Corporate governance*, 15 (5), pp. 719-733.

Akintoye, I. R., & Okuneye, M. O. (2017). Efficiency of Nigerian banks: A comparative analysis of pre and post-consolidation periods. Journal of Central Banking Theory and Practice, 6(2), 87-98.

Basle Committee on Banking Supervision (2007). Core Principles of Effective Banking Supervision.

Bawa, A., & Lubabah, M. (2012). Corporate governance and financial performance of banks in the post consolidated era in Nigeria. *International Journal of Science and Humanity Studies, 4* (2) 29-36.

Baysinger, B. D., & Butler, H. N. (1985). Corporate governance and the board of directors: Performance effects of changes in board composition. *Journal of Law, Economics, & Organization, 1*(1), 101–124

Ben, O. C., Patrick, E. A., & Caleb, A. J. (2015). Investigating the Impact of Corporate Governance on Banks' Performance in Nigeria: A Field Experiment. *International Journal of Economics and Business Administration*, *1*(2), 98–112.

Berger, A. N., & Humphrey, D. B. (1997). Efficiency of financial institutions: International survey and directions for future research. European Journal of Operational Research, 98(2), 175-212.

Bernardo, M. M. G. (2009). Modeling Non- Performing Loan probability to the Commercial Banking system. *Dipartimento di Economia*, 1-10.

Biserka, S. (2007). *The Role of Non-executive Directors in Corporate Governance: An Evaluation.* PhD Thesis submitted to the Department of Business in the Faculty of Business and Enterprise. Swinburne University of Technology.

Blue Ribbon Committee (1999). Report and recommendations of the Blue Ribbon Committee on improving the effectiveness of corporate audit committees: NYSE and National Association of Securities Dealers.

Boussaada, R., & Karmani, M. (2015). Ownership Structure and Bank Performance: Evidence from MENA Banks. *International Journal of Business and Management*, *10*(3), 189–202. https://doi.org/10.5539/ijbm.v10n3p189

Boyd, J. H., Chang, C., & Smith, B. D. (1998). Moral hazard under commercial and universal banking. *Journal of Money, Credit and Banking, 30*, 426-468.

Burkart, M., Gromb, D., & Panunzi, F. (1997). Large shareholders, monitoring and the value of the firm. *Quarterly Journal of Economics, 112*, 693–728. http://dx.doi.org/10.1162/003355397555325

Johnson, A. (2019). Bank Efficiency: Concepts, Measures, and Determinants. Journal of Banking and Finance, 42(1), 65-79.

Kumbhakar, S. C., & Sarkar, S. (2010). Estimating cost efficiency of banks: A survey of alternative econometric approaches. Journal of Banking & Finance, 34(7), 1188-1206.

Ogunleye, O. S., & Ibrahim, M. T. (2011). Technical efficiency of Nigerian banks: A stochastic frontier analysis. International Journal of Economics, Commerce and Management, 1(2), 110-121.

Oke, M. O., & Adeyemo, K. A. (2013). Efficiency of deposit money banks in Nigeria: A stochastic frontier approach. The International Journal of Business and Finance Research, 7(1), 133-146.

Smith, J. (2018). The Role and Effectiveness of Audit Committees: A Review of the Literature. Journal of Accounting and Finance, 25(2), 35-52.

Sufian, F., & Habibullah, M. S. (2010). Bank specific and macroeconomic determinants of bank efficiency: Empirical evidence from the China banking sector. China Economic Review, 21(2), 404-411.