Effect of Corporate Governance on Firm Performance in Nigeria

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Abstract: The study examined the effect of corporate governance on firm performance in Nigeria. The study specifically investigate the extent to which board size affect firm performance; investigate the relationship between board independence and firm performance; ascertain the extent to which ownership structure influence firm performance; examine the relationship between board gender diversity and firm performance for the period of five years which covered 2013 to 2017. Data were sourced from Annual report and statement of financial accounts of the selected companies. Panel Data econometric technique which included least squares dummy variable (LSDV), random effect model and Hausman tests were employed. The model adopted return on asset (ROA) and return on equity (ROE) as the dependent variables while Ownership structure (OWNSTR), Board independence (BIND), Board size (BSIZE) and Board gender diversity (BGD) were used as the explanatory variables to capture corporate governance. The study found that board independence (BIND) has positive effect on return on asset while Ownership structure (OWNSTR), Board size (BSIZE) and Board gender diversity (BGD) on return on asset. The study further revealed that all the explanatory variables that is, Ownership structure (OWNSTR), Board independence (BIND), Board size (BSIZE) and Board gender diversity (BGD) have significant and positive effect on return on equity. The study concluded that corporate governance have significant effect on return on equity and it was recommended that size of the board (membership) should be increased but not exceeding the maximum number specified by the code of corporate governance for banks.

Keyword: Corporate governance; Financial and Non-financial institution; Performance; Nigeria

JEL Classiffication: G30

1. Introduction

Corporate governance is concerned about accountability, boards, disclosure, investor involvement and related issues which suggests that the performance of an entity is to a large extent is determined by the composition of board. Corporate governance is therefore concerned with the creation of a balance between economic and social goals and between individual and communal goals (Udeh, Abiahu & Tambou, 2017).

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To achieve this, there is the need to encourage efficient use of resources, accountability in the use of power and the alignment of the interest of the various stakeholders, such as, individuals, corporations and the society.

The recent financial crisis that hit the globe in the twenty-first century necessitated the move for good corporate governance practices in corporations. Nielson (2000) opines that the common denominator of these monumental failures was poor corporate governance culture. While, Ajagbe (2007) put forward that in poor corporate management, fraud and insider abuse of power by management and board of directors is commonly placed. There is however, a unanimous agreement that the key outcome of poor corporate governance is earnings smoothing. However, poor corporate governance practices invariably result to failure of firms (Enofe & Isiavwe, 2012). Such significant failures have brought to the fore the need for a deeper understanding of the impact of corporate governance on firm performance. The most important aspect to structure the firm appropriately whether it's in Asia, Europe, Africa is to implement the right governance mechanisms in order to help businesses in the process of decision making (Ahmed & Hamdan, 2015).

The study of Ajala, Amuda and Arulogun, (2012); Lubabah and Bawa (2013); Adekunle & Aghedo (2014); Ahmed and Hamdan, (2015); Ilaboya and Obaretin (2015); Abdulazeez, Ndibe and Mercy (2016); Udeh, Abiahu and Tambou (2017) to mention but a few concluded both positive and negative effect of corporate governance on firm performance. This implies that there is inconsistency in empirical study on corporate governance and firm performance which necessitates further study. It is noted that majority of these studies focused on either only financial institutions or non financial institutions. It was also pointed out that the nature of the performance measures used could also be responsible for such inconsistency. It is in this regards, that the present study investigate the effects of corporate governance on firm performance in Nigeria by focusing on both financial institutions and non financial institutions as a means to measure performance with ROA and ROE respectively. The objective of the study is therefore to examine the effects of corporate governance on firm performance in Nigeria while the specific objectives are to: investigate the extent to which board size affect firm performance; investigate the relationship between board independence and firm performance; ascertain the extent to which ownership structure influence firm performance; examine the relationship between board gender diversity and firm performance.

2. Literature Review

The Asian Development Bank defined the corporate governance as the manner in which authority is exercised in the management of a country's social and economic resources for development (Eng & Mak, 2003; Cheng, 2008). Solomon and Solomon

(2004) opined that corporate governance is the basic tool of checks and balances, both within and outside to companies, which ensures that firms discharge their accountability duty to stakeholders and act in a socially responsible manner. Nielsen (2000) reported that corporate governance is the system of rights, structures and control mechanisms recognized internally and externally for the management of a listed public limited liability company, with the aim of protecting the interests of stakeholders. In Nigeria, the governance of a limited liability company is the duty of its board of directors. Dozie (2003) believes that corporate governance is characterized by transparency, accountability, probity and the protection of stakeholders' rights. Conclusively, what is evident from the various definitions reviewed is that corporate governance is the set of structures, processes, cultures and systems through which objectives are determined and companies are directed and controlled.

On the other hand, performance is a multi-dimensional construct which varies depending on whether the measurement objective is to assess performance outcomes or behaviour (Akintonde, 2013). Nnabuife (2009) believed that performance is not only a team work but also as an individual efforts resulting into a specific end result that will be matched with expected reward by managers. Armstrong in Akintonde, (2013) described performance as the outcomes of work because they provide the strongest linkage to the strategic goals of the organization, customer satisfaction, and economic contributions. Performance could be regarded as behavior i.e. the way in which organizations, teams, and individuals get work done. Hornby, Michael, Joanna, Diana, Dilys, Patrick and Victoria (2010) see performance as the act or process of performing a task, an action that involves a lot of effort, or how well or badly you do something or something works.

Many theories have been propounded to explain the relationship between corporate governance and performance in literatures. Some of these theories include agency theory, stakeholder theory, shareholder theory, etc. Agency theory contends that as firms grow in size the shareholders (principals) lose effective control, leaving professional managers (agents), have more information than principals to manage the affairs of the business. Since principals do not have access to all available information at the time a decision is being made by an agent, they are unable to determine whether the agent's actions are in the best interest of the firm (Jensen & Meckling cited in Egbunike & Abiahu, 2017).

The stakeholders' theory helps to fill the observed gap created by omission found in the agency theory which identifies shareholders as the only interest group of a corporate entity. The stakeholder theory provides that the firm is a system of stakeholders operating within the larger system of the host society that provides the necessary legal and market infrastructure for the firm's activities (Aminu, Aisha & Mohammad, 2015). The stakeholders' theory proposes that companies have a social

responsibility that requires them to consider the interest of all parties affected by their actions.

Olayinka, (2010) investigated the impact of board structure on corporate financial performance in Nigeria. The study identified board characteristics as (board composition, board size, board ownership and CEO duality) while financial performance was measured by return on equity (ROE) and return on capital employed (ROCE). The Ordinary Least Squares (OLS) regression was used to estimate the relationship between board structure and financial performance, findings from the study showed that there is strong positive association between board size and corporate financial performance. Evidence also revealed that there is a positive association between outside directors sitting on the board and corporate financial performance. However, a negative association was observed between directors' stockholding and firm financial corporate financial performance. However, a negative association was observed between directors' stockholding and firm financial performance measures. In addition, the study reveals a negative association between ROE and CEO duality, while a strong positive association was observed between ROCE and CEO duality. Ajala, Amuda and Arulogun (2012) examined the effects of corporate governance on the performance of Nigerian banking sector. The Pearson Correlation and the regression analysis were used to find out whether there is a relationship between the corporate governance variables and firms performance. The study revealed that a negative but significant relationship exists between board size and the financial performance of these banks while a positive and significant relationship was also observed between directors' equity interest, level of corporate governance disclosure index and performance of the sampled banks.

Lubabah and Bawa (2013) examined corporate governance and financial performance of banks on twelve banks in Nigeria covering a period of five years (2006-2010), employing regression analysis, the study found negative relationship between board size and profitability of banks. Fanta, Kemal and Waka (2013) examined Ethiopian banks between 2005 and 2011 using multivariate regression analysis and classical linear regression model, the study found an inverse relationship between capital adequacy ratio, bank size; audit committee in the board and bank performance. However positive linkage was established between banks' size, capital adequacy ratio; board size and bank's profitability. On the other hand they observed that the existence of audit committee members in the board, ownership type, loan loss position and loan to deposit ratio have no significant influence on bank performance.

Akingunola, Adekunle and Adedipe (2013) carried out a study on corporate governance and bank's performance in Nigeria (Post–Bank's Consolidation). Binary probit was adopted to test the covariance matrix computed on structured

questionnaire to bank's clients and it was discovered that the variables such as independence, reliance, and fairness helps in the effective performance of banks but the major significant ones in this consolidation period are accountability and transparency of banks staff. Least square regression was adopted to convey the relationship between bank deposits and bank credit. The estimation of the developed model found that banks total credit was positively related but not significantly determinant factors of bank's performance, and bank deposit was found to be positively related to bank performance. George and Karibo (2014) investigated the effect of corporate governance mechanisms and financial performance of listed firms in Nigeria: A Content Analysis, a total of 33 firms were selected cutting across three sectors: Manufacturing, Financial and Oil & Gas. The study showed that most of the corporate governance items were disclosed by the case study firms. The result also showed that the banking sector has the highest level of corporate governance disclosure compared to the other two sectors. The result thus indicates that the nature of control over the sector have an impact on companies' decision to disclose online information about their corporate governance in Nigeria; and that there were no significant differences among firms with low corporate governance quotient and those with higher corporate governance.

Osisioma Egbunike and Adeaga (2015) in Nigeria on influence of corporate governance on deposit money banks' performance between 2006 and 2013, the study proxied firm performance as ROA while financial soundness indicators of corporate governance were capital adequacy ratio, liquidity ratio, loan to deposit ratio, deposit money bank lending rate, nonperforming loan to total credit, and cash reserve ratio. The study employed Panel regression analysis and it was found that there is no statistical significant difference between corporate governance practices among the DMBs based on the perceptions of the shareholders and there is significant relationship between DMBs' performance and corporate governance proxy variables and also the corporate governance proxy variables have impacted both positively and negatively on DMBs' performance in Nigeria. Ahmed and Hamdan (2015) examined the impact of corporate governance characteristics on firm performance in Bahrain Stock Exchange. The study sample contained 42 Out of 48 Bahrain's financial companies which are listed in Bahrain Stock Exchange during the period 2007-2011. The descriptive results indicated that the sample firms fulfill corporate governance variables. The empirical results indicated that performance measures such as return on assets and return on equity are significantly related to corporate governance in Bahrain. However, earning per share performance measure is not showing any significant impact related to corporate governance. Overall, the study found a positive influence of corporate governance mechanisms on performance for the entire firm in Bahrain Stock Exchange.

Abdulazeez, Ndibe and Mercy (2016) reviewed the impact of corporate governance on the financial performance of all listed deposit money banks in Nigeria for a period

of seven (7) years (after consolidation). Data for the study were quantitatively retrieved from the annual reports and accounts of the studied banks. The study concluded that larger board size contributes positively and significantly to the financial performance of deposit money banks in Nigeria.

Udeh, Abiahu and Tambou (2017) evaluated the impact of board composition as a tool of corporate governance on return on capital employed as a tool of firm financial performance in Nigeria Quoted Banks. The method of data analysis utilised was ordinary least squares regression analysis, the study showed that board composition has a negative, though insignificant impacts on ROCE during the 2003 – 2008 period (p1) and during the 2009 – 2014 period (p2). The study concluded that the way in which corporate governance is organised differs among countries, depending on the economic, political and social contexts.

3. Research Method

3.1. Sampling Technique and Model Specification

Multi-stage sampling technique was used for the study. The first stage involved the purposive selection of Nigerian quoted firms on the floor of Nigeria Stock Exchange. The second stage was the random sampling selection of three financial institutions and two non-financial institutions quoted on the floor of Stock Exchange. Hence, the financial institutions included Access bank, Ecobank, and Zenith bank while the non-financial institutions include Coca-cola company and Dangote Flour.

The study adapted the model of Abdulhazeez, Ndibel and Mercy (2016) which investigate corporate governance and financial performance of listed deposit money banks in Nigeria.

The model is stated as $ROA = f(BS, BC, CD, AC, FS)$

Where;

ROA = Return on Assets proxy for financial performance; BS = Board Size; BC = Board Composition; CD = CEO duality; AC = Audit committee; FS = Size of the firm

The study modified the model by replacing all the corporate governance indices with the exception of board size. Therefore, with replacement, the corporate governance indices become board size, board independence, ownership structure and board gender diversity. The justification for the new variables included in the model is to give a clearer and better understanding of corporate governance and firm performance against the commonly used variables.

Hence, the model for the study is stated as;

Performance = f (corporate governance)

ROA=f (OWNSTR, BSIZE, BIND, BGD)

ROE=f (OWNSTR, BSIZE, BIND, BGD)

The above functions can be mathematically represented as:

$ROAit = \beta_0 + \beta_1 BSize_t + \beta_2 BIND_t + \beta_3 BGD_t + \beta_4 OWSTR_t + e_t$ ……. (3.1)

Substitute ROA=ROE into (1) to arrive at;

$ROEit = \beta_0 + \beta_1 BSIZE_t + \beta_2 BIND_t + \beta_3 BGD_t + \beta_4 OWNSTR_t + e_t$ ……..... (3.2)

Where; ROA = Return on assets; ROE = Return on equity; OWNSTR = Ownership structure; BIND = Board independence; BSIZE = Board size; BGD = Board gender diversity

3.2. Sources of Data, Measurement of Variables and *Apriori* Expectation

Data were obtained from secondary source which were collected from the annual financial statement of the selected financial and non-financial institutions (Access bank, Ecobank, Zenith, Coca-cola company and Dangote Flour) from the period 2013 to 2017.

Return on Asset (ROA): Measures the overall efficiency of management and gives an idea as to how efficient management is at using its assets to generate earnings. ROA = Profit after Tax/Total Asset

Return on Equity (ROE): Measures a firm's financial performance by revealing how much profit a company generates with the money shareholders have invested. It shows how well the shareholders' funds are managed and used to generate return. ROE = Profit after Tax/Total Equity.

BDSIZE: Board size is a measure of the number of individuals on the board. It is used as proxy for board characteristics of the number of individuals on the board. It is expected to have a positive effect.

BDIND: This represents board independence and it is measured by number of non-executive directors on the board. It is expected to have a positive effect.

OWSTRU: This represents ownership structure of the firm. The study used three variants of ownership structure namely; foreign ownership, government ownership and institutional ownership. It is expected to have a positive effect.

BGD: This represents board gender diversity. It is the ratio of female director to total number of directors. It is expected to have a positive effect.

3.3. Method of Data Analysis

Panel data regression was employed in the study. The panel data regression test is divided into three namely; pool OLS, fixed effect model, random effect model and Hausman test to justify the best and appropriate model to be adopted.

3.3.1. The Fixed Effect Model

The term fixed effect is due to the fact that although the intercept may differ among firms, each firm does not vary overtime, that is time-variant. This is the major assumption under this model i.e. while the intercept are cross-sectional variant, they are time variant.

In the least squares dummy variable (LSDV) regression model, the unobserved effect is brought explicitly into the model. If we define a set of dummy variables A_i, where A_i is equal to *1* in the case of an observation relating to firm *i* and *0* otherwise, the model can be written

$$Y_{it} = \sum_{j=2}^{k} \beta_j X_{ijt} + \eth t + \sum_{t=1}^{n} \infty_i A_i + E_{it} \qquad ----------(3.3)$$

3.3.2. Random Effect Model

Random effects regression model is subject to two conditions: the first condition is that it is possible to treat each of the first unobserved Z_p variables as being drawn randomly from a given distribution. This may well be the case if the individual observations constitute a random sample from a given population.

If:

$$Y_{it} = \beta_j + \sum_{j=2}^{k} \beta_j X_{ijt} + \eth_t + \infty_i + E_{it} \quad = \quad \beta_i + \sum_{j=2}^{k} \beta_j X_{ijt} + \eth_t + \mu_{it} \qquad ----(3.4)$$

w*here:* $\mu_{it} = \infty_i + E_{it}$

The unobserved effect has been dealt with by subsuming it into the disturbance term.

The second condition is that the Z_p variables are distributed independently of all the X_j variables. If this is not the case, ∞, and here μ, will not be uncorrelated with X_j variables and the random effects estimation will be biased and inconsistent.

4. Result and Analysis

The Pooled Ordinary Least Square (OLS) regression estimation technique was adopted in carrying out the analysis of the study. It would be recalled that there are five (5) firms (cross sections) and there are five (5) variables in each model such as return on asset (ROA), Ownership structure (OWNSTR), Board size (BSIZE), Board

independence (BIND) and Board gender diversity (BGD) for model 1 and return on equity (ROE), Ownership structure (OWNSTR), Board size (BSIZE), Board independence (BIND) and Board gender diversity (BGD) for model 2. Hence, the study analyzed the relationship between return on asset and return on equity (ROA and ROE the dependent variables) and four (4) explanatory variables Ownership structure (OWNSTR), Board size (BSIZE), Board independence (BIND) and Board gender diversity (BGD) for model one and two respectively.

4.1. Pooled OLS Regression Model

In the pooled OLS regression model, the study pulled all the 25 observations and run the regression for the two models, neglecting the cross section and time series nature of data. The result of the pooled OLS regression model is presented in Table 4.1a and 4.1b:

Table 4.1 a & b. Extract from the Pooled OLS Regression Models Result

Model I (Dependent Variable = ROA) Period (2013-2017)					**Model II (Dependent Variable = *ROE*) Period (2013-2017)**				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**	**Variable**	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	0.560685	1.935760	0.289646	0.7754	*C*	-5.543892	2.521929	-2.198274	0.0405
OWNSTR	0.024204	0.008460	2.861042	0.0097	*OWNSTR*	0.646366	0.294827	2.192355	0.0357
BSIZE	0.660970	0.127140	5.198752	0.0001	*BSIZE*	0.557490	0.311419	1.790159	0.0829
BIND	0.188601	0.011049	17.06972	0.0000	*BIND*	0.511964	0.054110	9.461491	0.0000
BGD	0.046940	0.282459	0.166183	0.8699	*BGD*	0.281743	0.059914	4.702465	0.0000
R-squared			0.889481		*R-squared*			0.798646	
Adjusted R-squared			0.864921		*Adjusted R-squared*			0.773477	
F-statistic			36.21688		*F-statistic*			31.73100	
Durbin-Watson stat			1.422224		*Durbin-Watson stat*			0.648565	
Prob(F-statistic)			0.000000		*Prob(F-statistic)*			0.000000	

Source: Author's Computation from EViews 7

Estimated Pooled OLS Regression Models

$$ROA = 0.560685 + 0.024204 * OWNSTR + 0.660970 * BSIZE + 0.188601 * BIND + 0.046940 * BGD \quad (4.1)$$

$$ROE = -5.543892 + 0.646366 * OWNSTR + 0.557490 * BSIZE + 0.511964 * BIND + 0.281743 * BGD \quad (4.2)$$

The results of the pooled OLS regression models for the two periods are shown in Table 4.1a &b where all the variables, except board gender diversity *BGD*, depict an insignificant result in model 1. It is evident from the estimated pooled regression result of Table 4.1a that all the parameters were positive and significant except BGD variable which has an insignificant positive effect on return on asset. Hence, it can be concluded that OWNSTR, BSIZE and BIND affect ROA significantly by 0.02%, 0.66% and 0.18% while BGD affect ROA insignificantly by 0.04%. Looking at model two presented in the Table 4.1b, all the variables are positively and significantly related to the dependent variable ROE, however *BSIZE* was statistically insignificant at 5% while *OWNSTR*, *BIND* and *BGD* were significant at 5% level of significant. Hence, it is inferred that OWNSTR, BIND and BGD significantly affect

ROE by 0.64%, 0.51% and 0.28% while BSIZE insignificantly affect ROE by 0.55%.

The R^2 coefficient is (79.8%) in the case of model two in Table 4.1b. On the other hand, the R^2 value of 88.9% is quite high in the model one of Table 4.1a. These values connote the degree of variation of the dependent variable as explained by the explanatory variable. However, the models are statistically significant in its overall looking at the significance of the F-statistics from it probability value. Nonetheless, since we assume that all the five (5) firms are the same, which normally does not happen, hence, we cannot accept this model because all the firms are not the same.

However, the major problem with this model is that it does not distinguish between the various firms that that the study considered. Conversely, by combining 3 banks and 2 non-banks, the study denied heterogeneity or individuality that may exist among the five firms selected for analysis in the study, therefore, it is imperative to carry out the remaining two regression models.

4.1.2. Fixed Effect or LSDV Model

The fixed effect or LSDV model allows for heterogeneity or individuality among the five firms by allowing having its own intercept value. The term fixed effect is due to the fact that although the intercept may differ across firms, but intercept does not vary over time, that is, it is time invariant.

The result of the fixed effect model is presented in Table 4.2a and 4.2b.

Table 4.2. a&b. Extract from the Fixed Effect or LSDV Regression Model Result

Model I (Dependent Variable = ROA) Period (2013-2017)					**Model II (Dependent Variable = *ROE*) Period (2013-2017)**				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**	**Variable**	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	2.788012	3.552216	0.784865	0.4507	C	0.092743	2.117390	0.043801	0.9655
OWNSTR	-0.165987	0.608874	-0.272612	0.7907	OWNSTR	-7.849018	2.651361	-2.960373	0.0097
BSIZE	2.202749	1.086971	2.026502	0.0702	BSIZE	-0.252995	0.218315	-1.158855	0.2609
BIND	0.020797	0.008732	2.381841	0.0300	BIND	0.916927	0.316466	2.897393	0.0092
BGD	0.183129	0.011468	15.96851	0.0000	BGD	0.017408	0.131621	0.132257	0.8962
R-squared			0.889481		*R-squared*			0.798646	
Adjusted R-squared			0.864921		*Adjusted R-squared*			0.773477	
F-statistic			36.21688		*F-statistic*			31.73100	
Durbin-Watson stat			1.422224		*Durbin-Watson stat*			0.648565	
Prob(F-statistic)			0.000000		*Prob(F-statistic)*			0.000000	

Source: Author's Computation from EViews 7

Estimated Pooled OLS Regression Models (Fixed Effect Model)

$$ROA = 2.788012 - 0.165987 * OWNSTR + 2.202749 * BSIZE + 0.020797 * BIND + 0.183129 * BGD \quad (4.3)$$

$$ROE = 0.092743 - 7.849018 * OWNSTR - 0.252995 * BSIZE + 0.916927 * BIND - 0.017408 * BGD \quad (4.4)$$

Presented in Table 4.2a and Table 4.2b are the fixed effect regression models for the two models under consideration. It can be seen in the estimated models that all the variables depict conflicting coefficients in the two models. In another word, the result of the model one of Table 4.2a connote that OWNSTR has an insignificant negative effect on return on asset which implied that OWNSTR reduced ROA by 0.16%. BSIZE has an insignificant positive effect on ROA which implied that BSIZE insignificantly increased ROA by 2.20%. More so, BIND and BGD have positive and significant effect on ROA, this effect implied that BIND and BGD increased ROA by 0.02% and 0.18% respectively. On the other hand, in the model two of Table 4.2b, OWNSTR and BSIZE have negative effect on ROE which indicated that OWNSTR and BSIZE negatively affected ROE by -7.84% and 0.25% respectively however, OWNSTR appeared to be significant while BSIZE remained insignificant. BIND has a significant positive effect on ROE while BGD has an insignificant positive effect on ROE. However, the result implied that BIND and BDG have an increasing effect on ROE by 0.91% and 0.01% respectively. Therefore, 1% change in the value of each of the variables will either increase or decrease the value of the dependent variables depending on their respective coefficient signs. The R^2 values of 96.3% and 95.6% in both periods are quite high. In its overall, the model in Table 4.2 a&b are statistically significant owing to the statistical significance of its F-statistics. The third model (random effect model) will hence be analysed.

4.1.3. Random Effect Model

The random effect model assumed that all the five (5) firms have a common mean value for the intercept. The result of the random effect model is presented in Table 4.3a and Table 4.3b.

Table 4.3. a&b. Extract from the Random Effect Regression Model Result

Model I (Dependent Variable = ROA) Period (2013-2017)					**Model II (Dependent Variable = *ROE*) Period (2013-2017)**				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**	**Variable**	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	0.092743	2.117390	0.043801	0.9655	C	0.588313	0.367511	1.600803	0.1192
OWNSTR	-0.047875	0.254780	-0.187906	0.8529	OWNSTR	0.646366	0.185770	3.479381	0.0015
BSIZE	-0.252995	0.218315	-1.158855	0.2609	BSIZE	0.557490	0.196225	2.841075	0.0078
BIND	0.188601	0.011049	17.06972	0.0000	BIND	0.511964	0.034095	15.01588	0.0000
BGD	-0.017408	0.131621	-0.132257	0.8962	BGD	0.281743	0.037752	7.463055	0.0000
R-squared			0.956004		*R-squared*			0.798646	
Adjusted R-squared			0.916640		*Adjusted R-squared*			0.773477	
F-statistic			24.28594		*F-statistic*			31.73100	
Durbin-Watson stat			1.264031		*Durbin-Watson stat*			0.648565	
Prob(F-statistic)			0.000000		*Prob(F-statistic)*			0.000000	

Source: Author's Computation from EViews 7

Estimated Pooled OLS Regression Models (Random Effect Model)

$$ROA = 0.092743 - 0.047875 * OWNSTR - 0.259995 * BSIZE + 0.188601 * BIND - 0.017408 * BGD$$

(4.5)

$$ROE = 0.588313 + 0.646366 * OWNSTR - 0.557490 * BSIZE + 0.511964 * BIND + 0.281743 * BGD -$$

(4.6)

The estimated random effect models are presented in equation 4.5 and 4.6. The result showed that the replica of the direction of estimates in the preceding models estimated earlier in the pooled OLS regression as well as the fixed effect regression model where the variables tends to have conflicting direction of effect on the dependent variables in both models. Specifically, the model one of Table 4.3a explored that *OWNSTR* and *BSIZE* have an insignificant negative effect on ROA, as a result *OWNSTR, BSIZE* and *BGD* have reduction effect on ROA with about -0.04%, -0.25% and -0.01% while only *BIND* have a direct and significant effect on ROA with about 0.18% increase. Evidence from the model two of Table 4.3b showed that all the variables i.e. *OWNSTR, BSIZE, BIND* and *BGD* have direct and significant effect on ROE with 0.64%, 0.55%, 0.51% and 0.28%. This result is directly at variance with what was obtainable in the model one of Table 4.3a. It is however evident that, the R^2 values of 95.6% and 79.8% imply the variation in the dependent variable as explained by the independent variables while the remaining percentage is ascribed to the stochastic error term. The random effect model is statistically significant in its overall owing to the significance of the model's F-statistic value. To ascertaining the appropriateness of either of these estimated models, the study employed the Hausman Test to know which of the models to accept for analytical and policy implication purpose in each of the periods under consideration; this is the model that was analysed in explaining the disparity or not between the two models.

4.1.4. Hausman Test

Having estimated the three models above; the study decided on the best model to accept. To check it, the study employed the Hausman Test to check which model is suitable to accept.

Hausman Test Hypothesis:

H_0: Random effect model is appropriate

H_1: Fixed effect model is appropriate

NB: If the probability value is statistically significant, the study shall use fixed effect mode, otherwise, random effect model.

Table 4.4. Extract from the Hasuman Test Results

	ROA (2013-2017)			ROE (2013-2017)		
Test Summary	**Chi-Sq. Statistic**	**Chi-Sq. d.f.**	**Prob.**	**Chi-Sq. Statistic**	**Chi-Sq. d.f.**	**Prob.**
Cross-section random	2.935429	4	0.5047	52.599465	4	0.5510

Source: Author's Computation from EViews 7

Looking at the Chi-square values of the cross-section random in Table 4.4, the probability values of the chi-square statistics are 0.50% and 0.55% for the model one and two respectively, these values are greater than 5%, this implies that, the study cannot reject the null hypotheses; rather, the study accept the null hypotheses, hence, the random effect model is the appropriate model to accept for analytical *raison d'être*. Nonetheless, looking at the estimated random effect models in both models as shown in Table 4.3, it is evident that all the explanatory variables that is, ownership structure (OWNSTR), board size (BSIZE), board independence (BIND) and board gender diversity (BGD) have significant positive effect on return on equity (firm performance) in the second model while only board independence was significant in the model one, leaving other variables that is, OWNSTR, BSIZE and BGD to be negatively related with return on asset. Hence, OWNSTR, BSIZE and BGD negatively affected ROA by –0.04%, -0.25% and -0.01% and BIND have positive effect on ROA with 0.18%. The second model therefore implied that OWNSTR, BSIZE, BIND and BGD influenced ROE positively by 0.64%, 0.55%, 0.51% and 0.28% respectively. The overall significance of the entire models connotes that the explanatory variables are able to explain the behavior and direction of relationships of the dependent variables as inherent in the estimated models. The econometric criteria of Durbin Watson test of autocorrelation in the study showed that the estimated result is free from the problem of autocorrelation in the model one while the autocorrelation test is inconclusive in the model two.

4.2. Discussion of Finding

In other to establish an empirical significance of the results and analysis in the study, this section briefly illustrate the discussion and policy implication of the study's results and analysis as earlier discussed in the preceding sections. From the accepted random regression shown in Table 4.3. a&b, it was shown that all the explanatory variable have significant effect on firm performance in the second model while only BIND has significant effect on firm performance in the first model.

The implication is that, as firm maintain sizeable number of internal and external directors, the financial performance of the firm is expected to increase. The studies of Mehran (1995); Pinteris (2002) confirmed this standpoint. However, Laing and Weir (1999) play down the importance of this argument by stressing the importance

of business experience and entrepreneurship. It can be deduced that as companies maintain appropriate board size, the financial performance of the firm would increase. This finding corroborates the result of Abdulazeez *et al.* (2016) that larger board size is better for corporate performance than smaller board size because in larger board, members have a wide range of expertise to help make better decisions and are also difficult for a powerful CEO to dominate. Also, it is in consistent with Osisioma *et al.*, (2015); Adekunle and Aghedo (2014) and Abdulazeez *et al.*, (2016) who concluded that corporate governance have significant effect on firm performance in Nigeria.

5. Conclusion

The effect of a good and efficient corporate governance practice is the board of directors (firm's management) who guarantees that the stakeholders' interests are not put in danger (Hashanah & Mazlina in Adewoyin, 2012). Probity, transparency and accountability are apparatus of corporate governance that would assist firms increase depositors', shareholders', investors' and other stakeholders' trust.

From the study, it was concluded that board independence have positive effect on firm performance measured by ROA while other variables, that is, board size, ownership structure and board gender diversity have negative effect on firm performance leading to low performance of firm. The negative effect inferred that dominance of family owned businesses existed in Nigerian firms. As a result, when family dominance over board matters happens, it showed the weakness of corporate governance apparatus. Also by the results reached related to the board members, it is concluded that investors in Nigeria are less protected. Evident from the study also revealed that board size, board independence, ownership structure and board gender diversity have significant effect on firm performance measured by ROE. The study concluded that corporate governance improves stakeholders' confidence and aided the development of business in the long run. Consequent upon the discussion of findings the study concluded that corporate governance have significant effect on firm performance in Nigeria. Based on the findings of the research, the following recommendations were made: Firms should endeavour that board members are independent that is, to ensure that board of directors are not in any way employed into the firms; size of the board (membership) should be increased but not exceeding the maximum number specified by the code of corporate governance for firms; Government should enact laws on institutional and governmental ownership to serve as control mechanism and in the long run enhance firm performance;

Female directors should be given a reasonable mandatory quota on board membership in order to enhance cross fertilization of technical know-how.

6. References

Abdulazeez, D.A.; Ndibe, L. & Mercy, A.M (2016). Corporate governance and financial performance of listed deposit money banks in Nigeria. *Journal of Account Mark*, 5(1), pp. 1-6.

Adekunle, S.A. & Aghedo, E.M. (2014). Corporate governance and financial performance of selected quoted companies in Nigeria. *European Journal of Business and Management*, 6(9), pp. 53-60.

Adewoyin, A. (2012). Cor*porate governance and banking sector performance in Nigeria*. Being seminar paper presented in Department of Banking and Finance, Faculty of Management Sciences, Nnamdi Azikiwe University, Awka, Anambra State. Nigeria.

Ahmed, E. & Hamdan, A. (2015). The impact of corporate governance on firm performance: Evidence from Bahrain Stock Exchange. *European Journal of Business and Innovation Research*, 3(5), pp. 25-48.

Ajagbe, A.M. (2007). The impact of strategic planning on effectiveness of marketing operations: Case of NEPA. An *Unpublished MBA Thesis* Submitted to the Graduate School, Ambrose Ali University, Ekpoma, Nigeria.

Ajala O.A.; Amuda T. & Arulogun, L. (2012). Evaluating the effects of corporate governance on the performance of Nigerian Banking Sector. *Review of Contemporary Business Research*, 1(1), pp. 32-42.

Akingunola, R.O.; Adekunle, O.A. & Adedipe, O.A. (2013). Corporate governance and bank's performance in Nigeria (post-bank's consolidation). *European Journal of Business and Social Sciences*, 2(8), pp. 89-111.

Akintonde, O.G. (2013). *Assessment of the performance of secretaries in information and communication technology in Ondo State civil service. Unpublished Master Dissertation.* Department of Vocational Education, Faculty of Education, Nnamdi Azikiwe University, Awka, Anambra State, Nigeria.

Aminu, A.; Aisha, Y. & Muhammed, M. (2015). The impact of corporate governance mechanisms on the performance of Nigerian firms: An Empirical Analysis. *Journal of Economic and Administrative Sciences*, 23(2), pp. 71-93.

Cheng, S. (2008). Board size and variability of corporate performance. *Journal of Financial Economics*, 87(2), pp. 157-176.

Dozie, P. (2003). Corporate governance in Nigeria: A status report on the financial services sector. In O. Alo (Ed.), *Issues in Corporate Governance* 190 – 200, Lagos: Financial Institution Training Centre.

Egbunike, F.C. & Abiahu, M.C. (2017). Audit firm report and financial performance of money deposit banks in Nigeria. *The Nigerian Accountant*, 50(1*)*, pp. 25-39. Available at SSRN: https://ssrn.com/abstract=2909492.

Eng, L.L. & Mak, Y.T. (2003). Corporate governance and voluntary disclosure. *Journal of Accounting and Public Policy*, 22(2), pp. 325-345.

Enofe, A & Isiavwe, D. (2012). Corporate disclosure and governance in the Nigerian banking sector: An empirical evaluation. *The International Journal's Research Journal of Social Science & Management*. Singapore. ISSN: 2251-1571. Retrieved From: Website: www.tij.sg.

Fanta, A.B.; Kemal, K.S. & Waka, Y.K. (2013). Corporate governance and impact on bank performance. *Journal of Finance and Accounting*, 1(1), pp. 19-26.

George, T.P. & Karibo, B.B. (2014). Corporate governance mechanisms and financial performance of listed firms in Nigeria: A content analysis. *Global Journal of Contemporary Research in Accounting, Auditing and Business Ethics (GJCRA),* 1(2), pp. 103-128.

Hornby, A.S. Michael, A.; Joanna, T.; Diana, L.; Dilys, P.; Patrick P. & Victoria, B. (2010). *Oxford Advanced Learner's Dictionary.* 8th Ed. Great Clarendon Street. Oxford Uk: Oxford University Press.

Ilaboya, O.J. & Obaretin, O. (2015). Board characteristics and firm performance: Evidence from Nigerian quoted companies. *Academic Journal of Interdisciplinary Studies*, 4(1), pp. 283-290.

Jensen, M. & Meckling, W. (1976). Theory of the firm: Managerial behaviour, agency costs, and ownership structure. *Journal of Financial Economics*, 3(4), pp. 305-360.

Laing, D. & Weir, C.M. (1999). Governance structures, size and corporate performance in UK firms. *Management Decision*, 375, pp. 457-464.

Lubabah, M. & Bawa, A. (2013). Board composition, executive duality and performance of banks in the post consolidated era in Nigeria. *International Journal of Academic Research in Economics and Management Sciences*, 2, pp. 109-122.

Lubabah, M. & Bawa, A. (2013). Board composition, executive duality and performance of banks in the post consolidated era in Nigeria. *International Journal of Academic Research in Economics and Management Sciences*, 2, pp. 109-122.

Mehran, H. (1995). Executive compensation structure, ownership and firm performance. *Journal of Financial Economics*, 382, pp. 163-184.

Nielsen, J.D. (2000). *The role of institutional investors in corporate governance*. Dilemma, public lecture, Covenant University, Ota, Ogun State, January 25.

Olayinka, M.U. (2010). The impact of board structure on corporate financial performance in Nigeria. *International Journal of Business and Management,* 5(10), pp. 71-89.

Osisioma, C.B.; Egbunike, A.P. & Adeaga, J.C. (2015). Investigating the impact of corporate governance on banks' performance in Nigeria: A field experiment. *International Journal of Economics and Business Administration,* 1(2), pp. 98-112.

Pinteris, G. (2002). *Ownership structure, board characteristics and performance of Argentine banks. mimeo.* Department of Economics, University of Illinois.

Solomon, J. & Solomon, A. (2004). *Corporate governance and accountability*. London: John Wiley & Sons Ltd.

Udeh, F.N.; Abiahu M.F.C. & Tambou, L.E. (2017). Impact of corporate governance on firms financial performance: A Study of Quoted Banks in Nigeria. *Development, The Nigerian Accountant* 4(6), pp. 54-62.