

# The Effect of Board and Ownership Structure on the Financial Performance of Listed Firms

**Edirin JEROH, PhD, ACA**

Department of Accounting and Finance,  
Faculty of the Social Sciences,  
Delta State University, Abraka.  
e-mail: jeroh4laffs@gmail.com

*pp 193-202*

## ABSTRACT

An examination of how the financial performance of listed firms is affected by a combination of board structure and institutional ownership is the thrust of this study. To guide this study, hypothesis was formulated and tested (sig. at 0.01 level). Financial data on board structure, ownership and performance for 70 Nigerian listed firms were gotten from the database of MACHAME Ratios. Analysis was done by means of canonical correlation technique and findings indicate that the combination of board and ownership structure had significant association with measures of firm performance. Specifically, individual measures of board structure exert positive effect on firm financial performance, whereas individual measures of ownership structure had no significant positive association with measures of firm performance. On this note, recommendation among others was that given the significance of board structure measures to firms' performance, firms should take considerable measures in ensuring that decisions on the composition of board membership must be mindful of the role which size, independence and diversity (gender diversity) play to the overall organizational success. In effect, the ideal/optimal size, level of independence among others should not be treated with levity.

**Keywords:** Firm Ownership, Corporate Governance, Best Practice, Performance, Board Structure, Canonical Correlation.

## Introduction

The introduction and subsequent revisions of Corporate Governance Codes (CGC) for firms across countries and sectors have raised concerns on the moderating role of measures and mechanisms of such CGC on the performance and survival of firms. With the increasing concern on the subject of corporate governance, studies have generally examined the linkage between the governance of firms and indices like leverage, firm value and of course, firm performance (Guest, 2009; Ongore, 2011; Chandrasekharan, 2016 and Badara, 2016).

No doubt, the increasing interests on corporate governance in firms surfaced due to cases of corporate collapse that questioned the integrity and credibility of corporate reports specifically, and the accounting profession in general. Other questions that surfaced based on reports of investigations borders on ownership and board structure. In Zimbabwe for instance, investigations proved that the collapse of ZIMRE Holdings Ltd. (around 2013) was due to solvency issues and diminishing capital base/threshold which practically resulted from scandalous acts of board members who influenced business/corporate transactions for personal gains/interests (Sandada, Manzanga & Shamhuyenhanzva, 2015). This situation is not different from other cases like Cadbury Plc reported in Nigeria and other developing economies (Jeroh & Okoro, 2014).

However, in arriving at a resolve for the increasing number of corporate failures in both developing and developed economies, experts have canvassed the idea of focusing on how management decisions could be monitored and effectively managed. This has therefore revived arguments on the importance of ownership structure on the efficiency or otherwise of boards/managements' decisions. Accordingly, AL-Najjar (2015) maintained that ownership structure has increasingly become an important determinant of firm performance since institutional investors (corporate monitors) are now actively involved in monitoring managements' decisions. Managements' decisions on the other hand have direct effect on the overall performance of firms.

Khamis, Hamdan & Elali (2015) maintained that one major additional reason why ownership structure has received considerable attention in recent studies could be attributed to the mixed results of studies within and outside the Anglo Saxon economies which is occasioned by the different dimensions of ownership structure among firms. While some studies focused on institutional, family and

government ownership respectively, others focused on managerial ownership and ownership concentration (see AL-Najjar, 2015; Pirzada, Mustapha & Wickramasinghe, 2015; Irshad, Hashmi, Kausar, & Nazir, 2015; Matanda, Oyugi & Lishenga, 2015, Hykaj, 2016 and Tariq & Naveed, 2016).

It is therefore expected that with this new wave of discourse on governance mechanisms, since in addition to the management of firms, firm ownership and the board plays integral roles in the operational activities of firms, researches ought to be conducted to find out the extent to which CG measures (e.g. ownership and board structure) affect the financial performance of firms.

Interestingly, while studies have concentrated on the relationship between CG as a whole and firm performance, disclosure practice and firm value (Fatimoh, 2011; Garba & Abubakar, 2014 and Jeroh & Okoro, 2014), most prior studies in Nigeria and other developing economies have not considered finding out the individual and combined effect which board and ownership structure would have on the financial performance of firms. This therefore creates the knowledge gap which this paper is designed to fill.

## Literature and Empirical Review

Several studies have examined the relationship between CG indicators and other firm variables. The general conclusion is that firms with enabling environment and good CG perform better and are able to optimally maximize shareholders' wealth (Hykaj, 2016). This section highlights the concept of CG and the relationship between CG indicators and indices of firm performance.

## Corporate Governance (CG)

CG involves every system that governs the management of firms/organizations and the coordination of their relationships with their respective stakeholders and communities such that all concerned experience improved quality of life. Jeroh, Ekwueme & Okoro (2015) defined CG as those methods/systems that organizations may have put in place to effectively and efficiently manage their resources/affairs. In similar vein, Zabri, Ahmad & Wah (2016), viewed CG from an economic standpoint to mean all efforts designed to achieve efficiency in allocating and utilizing scarce resources of entities needed to generate high returns that will maximally satisfy stakeholders' diverse interests. It therefore means that good CG is necessary to achieve accountability, transparency and fairness in the treatment of transactions and in the preparation of

corporate reports. This is evident in the assertion of Fatimoh (2011) who opine that the design of CG is premised on the echelon of corporate responsibility on which any company is expected to exhibit vis-a-vis ethical values, accountability, and transparency.

Given the importance of CG to the survival of firms, the relevant regulatory authority in Nigeria (Securities and Exchange Commission – SEC) came up with the needed CGC for enforcement. With the content of the SEC 2011 codes, several mechanisms or measures of CG were highlighted. Just like in other jurisdictions/countries, these measures of CG are either internal or external (Zabri, Ahmad & Wah, 2016). This study focus on some significant CG measures, and are briefly discussed below:

### **Board Structure**

The effectiveness of any board is paramount to the success and governance of firms. Given that board effectiveness depends on its structure, it becomes reasonable for studies to empirically ascertain the influence of measures of board structure on firms' financial performance. This study scrutinizes three (3) dimensions (size, independence, and gender diversity) of board structure to see the effect they may have on firms' financial performance. According to Zabri, Ahmad & Wah (2016), and Jeroh & Okoro (2014), board size connotes the numerical value of directors on a firm's board. Although, there may be no specific rule regarding the universally accepted number of directors every company's board must have (Tariq & Naveed, 2016), it is a clear fact that an optimal size for any board must include executive and non-executive directors.

Generally, the sizes of companies' boards vary across countries depending on culture or legal, political and economic atmosphere among others. Studies (Jensen, 1993; Florackis & Ozkan, 2004 and Hermalin & Weisbach, 2003) have suggested that for boards to be effective, their size should not be more than seven (7) or eight (8) members. However going by the 2011 SEC codes which is applicable to publicly quoted firms in Nigeria, no maximum limit of board size was fixed, but expressly, the code specified that a company's board should have a minimum number of five (5) members and should have a mix of both executive and non-executive directors.

Correspondingly, board independence, usually measured as the total numerical value of independent non-executive directors as a percentage of total board size is used to ascertain the level of

independent directors' presence in the board (Zabri, Ahmad & Wah, 2016). This can help to gauge the level of independence of the board. The independence of a board would determine the extent to which independent judgment would be applied in scrutinizing executives' and managements' proposals and actions. The expectation is that a board's level of independence would affect managements' decision which in the long run would also affect the financial performance of firms.

One other CG measure of interest in this study is board diversity. Increasingly, board diversity has raised notable debates in the sphere of CG discourse. Chandrasekharan (2016) reiterated that continuous clamour for improved and better governance measures contributed to the greater concern on board diversity in recent studies. Diversity characteristics according to Zainal, Zulkifli & Saleh (2013) are mostly characterized into two broad groups – cognitive diversity and demographic diversity. While the demographic diversity focus on observable attributes like ethnicity, gender, religion, age, cognitive diversity relates basically to unobservable attributes like experience, educational attainment, etc (Chandrasekharan, 2016). The agitation for a more diverse board resulted from the normative perception for equity and social justice which strongly oppose all forms of discrimination against any group or individual perceived as “minority”. The crux of arguments is that where a board comprises of individuals from various backgrounds, educational qualification, gender etc, equitable opportunities would be provided for creativity, innovation and considerable discernment of real market dynamics.

### **Ownership Structure**

Ownership structure describes the proportion of stock ownership/holding by stockholders. It determines the identity and voting capacity of stockholders (Tariq & Naveed, 2016). Ownership structure is deemed significant because the remunerations of management and other staff is mostly a function or outcome of the decisions of the owners of the firm, whereas, staff remunerations significantly influence the productivity and performance of a given workforce. This is why studies on CG (Jensen & Meckling, 1976; Fatimoh, 2011; Garba & Abubakar, 2014; AL-Najjar, 2015 and Tariq & Naveed, 2016) have identified ownership structure as one important mechanism of CG since it can affect performance in both positive and negative magnitudes (Irshad, Hashmi, Kausar, & Nazir, 2015).

Since different dimensions of ownership structure have been identified (Khamis, Hamdan & Elali, 2015) the concern of this study is to focus on ownership structure measures recognized by the SEC 2011 CGC. Specifically, ownership dimension that this study will focus on shall be Chief Executive Officer (CEO) Ownership (managerial ownership) and Board Chairman Ownership (Ownership Concentration). While outcome of studies suggests positive association between ownership concentration (OWNCON) and performance (Javid & Iqbal, 2008), studies have also shown that where the board is dominated by stockholders with deficiency in expertise (as was found in Pakistan), a negative association was found between ownership concentration (OWNCON) and firm performance (Shah, Butt & Saeed, 2011).

### **Firm Financial Performance**

Companies' financial performance has attracted copious debates and researches that had involved academics, companies' management and several other stakeholders. Analysing firms' financial performance may require a careful scrutiny of various indices/measures like sales growth, turnover, dividend growth, profitability, asset base, size, capital employed, returns, earnings, Tobin's Q, market share among others. A company's performance according to Omondi & Muturi (2013) could be measured in 3 dimensions – productivity, profitability and market premium. While productivity focus on input/output mix, market premium focus on market/book value relationship. Conversely, the profitability dimension focuses on the earnings of companies. Most accounting/finance researches on financial performance (Omondi & Muturi, 2013; Zabri, Ahmad & Wah, 2016; and Badara, 2016) were conducted under the purview of the profitability dimension where performance is basically measured by Returns on Asset (ROA) and Returns on Equity (ROE). Sticking to the precepts of prior studies, this study takes ROE and ROA as measures of financial performance of firms in Nigeria. ROA as a measure indicates the percentage of earnings that investments in capital assets may have produced. ROE on its part has the capacity of showing an interested investor the magnitude of profit that a firm can generate through the judicious use/application of shareholders' fund.

### **Empirical Review**

Globally, instances of corporate failures and scandals awakened interests on CG because stakeholders are now aware that even when the financial results of a firm portray high amounts of profitability, the same firm may simultaneously be

in a bad state of liquidity. This has further increased research efforts targeted at finding out the link between CG measures and performance generally.

Qasim (2014) sought to know how CG impacts on performance of UAE firms by analyzing 281 (firm/year) observations. Data on ROA, Tobin's Q, ownership, board size, and audit quality from 2007–2011 were obtained, collated and analyzed. The pooled regression (OLS) results proved that CG measures impacted significantly on performance of UAE firms.

Matanda, Oyugi & Lishenga (2015) focused on the influence which institutional ownership alone may have on commercial performance, by obtaining survey data from 43 licensed Kenyan banks. Hierarchical panel regression technique was inference base of this study. Findings indicate that institutional ownership does not influence/affect performance of banks licensed in Kenya.

In Bahrain, a study on how the dimensions of ownership structure would affect corporate performance was conducted by Khamis, Hamdan & Elali (2015). Data from 42 Bahrain firms were analyzed with 2SLS statistics. Result show that ownership concentration (owncon) had an inverse effect on companies' performance; whereas, in the event of declining owncon managerial ownership was observed to exhibit positive relation with performance.

AL-Najjar (2015) examined the trend in Jordan, to see whether institutional ownership affects firm performance. Data from 82 firms (non-financial sector) covering periods 2005 – 2013 were collated and analyzed with the pooled, fixed and random effect regression models respectively. Interestingly, no evidence could confirm a statistic positive relation between performance and institutional ownership of Jordanian firms.

In the U.S., Hykaj (2016) examined how financial performance is affected by CG and institutional ownership. Data from 105 firms covering 2007-2012 were analyzed based on two hypotheses formulated. Methods adopted include univariate, multivariate and OLS (pooled) regression. Accordingly, research outcome revealed that CG measures significantly affected performance.

Tariq & Naveed (2016) ascertained the effect which board structure, when combined with ownership structure would have on performance. The study's scope spanned from 2009 – 2014. By adopting OLS

and the value added (EVA) approach, data from 100 listed Pakistan firms were analyzed. Evidence indicated a positive correlation between performance and board size, meetings, ownership structure and family ownership. Government ownership was found to have negative effect on performance.

In Nigeria, Chandrasekharan (2016) ascertained the effect which board diversity would have on performance of DMBs. Data from 8 banks were analysed via Fixed Effect (FE) regression with robust SE. Board diversity had significant effect on DMBs' performance as indicated in the results from the tests of hypotheses.

Badara (2016), studied the effect which firm size as a moderator would have on the presumed linkage between board structure and performance of Nigerian DMBs. Financial statements were consulted and relevant data sourced from 2005-2015. Analysis (OLS) was conducted and results convincingly proved that board structure affects performance in significant terms.

**Hypothesis**

Resulting from the literature, hypotheses were developed and subsequently tested.

**HO1:** There is no significant association between firms' performance variables and board structure variables.

**HO2:** There is no significant association between firms' performance variables and ownership structure variables.

**HO3:** There is no significant association between firms' performance variables and the combination of board and ownership structure variables.

**Methods**

This empirical study adopts the expost-facto research design. Ten (10) years data (yearly data from 2006 - 2015) on financial performance and measures of board and ownership structure which were extracted from the published accounts of 70 quoted Nigerian firms across different industrial sectors/categories were gotten from MACHAMERATIOS®. The Canonical Correlation technique was deemed appropriate and adopted for analytical purpose. Descriptive and inferential analyses were done via STATA 13.0.

**Model Specification**

The relationship between specific CG variables and firm performance were modeled in this empirical

study. Variables of interest were selected since they were key variables highlighted in the 2011 SEC code of corporate governance for public companies in Nigeria. Analysis of data is based on the composite model specified below:

$$\text{Firm Performance} = f(\text{BDSTRUCT}, \text{OWNSTRUCT}) \quad \text{eq.1}$$

Firm performance in the above context is measured using two proxies (retoe and retoa) and BDSTRUCT and OWNSTRUCT captures board structure and ownership structure respectively.

Based on hypothesis 1 (HO1), we developed a model to reflect the association between variables of firms' performance and board structure; and specified thus:

$$\text{Firm Performance} = f(\text{BDSTRUCT}) \quad \text{eq.2}$$

Similarly, for hypothesis 2 (HO2), a model to reflect the association between variables of firms' performance and ownership structure was developed and specified thus:

$$\text{Firm Performance} = f(\text{OWNSTRUCT}) \quad \text{eq.3}$$

To test hypothesis 3 (HO3), the composite model designed to reflect the association between variables of firms' performance and the combination of board and ownership structure (see eq.1) was relied on. Bringing in measures of BDSTRUCT and OWNSTRUCT in Model I (eq.1) is thus re-written to derive the composite model as follows:

$$\text{Firm Performance} = f(\text{bdsiz}, \text{bdindep}, \text{bgendiv}, \text{ceown}, \text{bdcown}) \quad \text{eq.4}$$

The explicit forms of eq.2, eq.3 and eq.4 when the measures of all variables are brought in is expressed in the models below:

**Model I**

$$\text{FirmPerfit} = \beta_0 + \beta_1 \text{bdsizit} + \beta_2 \text{bdindepit} + \beta_3 \text{bgendivit} + \epsilon \quad \text{eq.5}$$

**Model II**

$$\text{FirmPerfit} = \beta_0 + \beta_1 \text{ceownit} + \beta_2 \text{bdcownit} + \epsilon \quad \text{eq.6}$$

**Model III**

$$\text{FirmPerfit} = \beta_0 + \beta_1 \text{bdsizit} + \beta_2 \text{bdindepit} + \beta_3 \text{bgendivit} + \beta_4 \text{ceownit} + \beta_5 \text{bdcownit} + \epsilon \quad \text{eq.7}$$

**Where:**

FirmPerf = Firm performance (measured as retoe and retoa)

retoe = Return On Equity (measured as Profit After Tax divided by Equity)

retoa = Return On Asset (measured as Profit After Tax divided by Total Assets)

bdsiz = Board Size (measured as number of directors)

bdingep = Board Independence (measured as number of non-executive directors divided by board size)

bgendiv = Board Gender Diversity (measured as number female board members divided by board size)

ceown = CEO Ownership (measured as total share of CEO divided by total directors shares)

bdcown = Board Chairman Ownership (measured as total shares of Board Chairman divided by total shares of board of directors)

i = firm parameter  
 t = time dimension  
 $\beta_0, \beta_1, \dots, \beta_5$  = Beta Coefficients  
 $\epsilon$  = Error Term (variables not captured in the model)

**Analyses, Results and Discussion**

Analyses in this study were conducted in phases and included descriptive and conjectural/inferential statistics. Analysis for each phase/section is presented along with results and the respective discussions.

**Descriptive Statistics**

The results for the descriptive statistics is summarized in Table 1

Table 1: Summary of Results For Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
retoe	700	15.37723	175.2756	-2087.7	2897.94
retoa	700	3.401586	19.3313	-188.95	232.62
bdsiz	700	8.989771	2.504961	4	17
bdingep	700	.6481429	.159718	0	1
bgendiv	700	.0765571	.0894155	0	.4
ceown	700	3.620586	10.66983	0	63.67
bdcown	700	4.461171	10.26229	0	60

Source: Computations from Stata.13.0 output, 2017

The number of observations evidenced in Table 1 totaled 700. This is a confirmation that data for 70 firms for 10 years (2006 – 2015) was deployed for use in the analyses. Also indicated in the table are results for the mean, standard deviation and the minimum and maximum values for all variables of concern in this study.

**Correlation Analysis**

Table 2: Result For Correlation Analysis

	retoe	retoa	bdsiz	bdingep	bgendiv	ceown	bdcown
retoe	1.0000						
retoa	0.0446	1.0000					
bdsiz	0.0446	0.1239	1.0000				
bdingep	-0.0133	-0.0480	0.1124	1.0000			
bgendiv	0.0058	0.1104	0.0212	-0.0039	1.0000		
ceown	-0.0424	-0.0330	-0.2224	-0.0755	0.0072	1.0000	
bdcown	-0.0222	-0.0442	-0.0052	0.0408	0.0850	0.0916	1.0000

Source: Computations from Stata.13.0 output, 2017

Table 3: Result For Variance Inflation Factor Test

Variable	VIF	1/VIF
ceown	1.06	0.939332
bdsiz	1.06	0.940718
bdcown	1.02	0.982094
bdingep	1.02	0.982437
bgendiv	1.01	0.992191
Mean VIF	1.03	

Source: Computations from Stata.13.0 output, 2017

As indicated in Table 3, the computed mean VIF (1.03) is below the maximum allowable benchmark (10); thereby confirming the absence of multicollinearity among the independent/explanatory variables (ceown, bdsiz, bdcown, bdingep, and bgendiv).

**Test of Hypotheses**

All three hypotheses earlier formulated were tested by means of the Canonical Correlation Analysis (CCA). Note that CCA, though similar to multiple regression analysis, except that under CCA, we regress several independent variables against multiple dependent variables. Impliedly, under CCA, we have more than one (1) dependent variable. In essence, we are able to establish the composite association between pairs of dependent variables and measures of several independent variables. The results of the CCA are summarised thus:

**Hypothesis I**

Table 4: Summary of CCA Result For Test of Hypothesis I

```

.canon (retoe retoa) (bdsiz bdingep bgendiv)
Number of obs = 700
Canonical correlation analysis
Raw coefficients for the first variable set

```

	1	2
retoe	0.0011	-0.0056
retoa	0.0504	0.0121

Raw coefficients for the second variable set

	1	2
bdsiz	0.2995	-0.2465
bndindep	-2.2395	0.9125
bgendiv	6.6076	8.9440

Canonical correlations:

0.1786 0.0255

Tests of significance of all canonical correlations

	Statistic	df1	df2	F	Prob>F
Wilks' lambda	.967479	6	1390	3.8614	0.0008 e
Pillai's trace	.0325416	6	1392	3.8373	0.0008 a
Lawley-Hotelling trace	.0335926	6	1388	3.8855	0.0007 a
Roy's largest root	.0329417	3	696	7.6425	0.0000 u

e = exact, a = approximate, u = upper bound on F

Source: Computations from Stata.13.0 output, 2017

Evidence from Table 4 suggest that with a higher raw coefficient (performance variables only), return on asset (retoa) is more relevant than return on equity (retoa). Also indicated from the table is that by holding other variables constant, a unit increase in the standard deviation of retoa will culminate into 0.0504 increase in the standard deviation scores of the first canonical variate among the sets of independent (board structure) variables. Similarly, by holding other variables as constant, any unit increase in the standard deviation of retoa will result to 0.0011 increase in the standard deviation scores of the first canonical variate among the sets of independent (board structure) variables.

A cautious scrutiny of the displayed results in Table 4, further reveals that bgendiv (6.6076) stood as the most important board structure variable. This was followed by bndindep (2.2395); whereas, bdsiz (0.2995) stood as the least important among these sets of independent variables (board structure variables).

Furthermore, the CCA also revealed that apart from bndindep, both bdsiz (0.2995) and bgendiv (6.6076) had positive association with performance variables. This means that a more diversified board would guarantee better strategic decisions, improvement and innovation which ultimately would improve performance. The result also support the argument where the board size is too small or is reduced, the level of performance is negatively affected. This is because with a positive sign, size and performance move in the same direction.

Interestingly, from the tests of significance for all canonical correlations, the statistics for the Wilks'

lambda (0.967479), Pillai's trace (0.0325416), Lawley-Hotelling trace (0.335926) and Roy's largest root (0.329417), had f-values of 3.8614 (p-value = 0.0008), 3.8373 (p-value = 0.0008), 3.8855 (p-value = 0.0007), and 7.6425 (p-value = 0.0000) respectively. These results are significant at 1% significance level (p<0.001).

The above clearly demonstrates that there is a significant association between performance variables (retoa and retoa) and those of board structure (bdsiz, bndindep and bgendiv). Thus, the hypothesis that there is no significant association between firm financial performance and board structure is rejected. Hence, this study concludes that there is a significant association between the financial performance of Nigerian firms and their board structure.

**Hypothesis II**

The results for the test of hypothesis 2 is summarized in Tables 5a and 5b below:

Table 5a: Summary of Raw Coefficients For First and Second Variable Sets

Raw Coefficients for the First Variable Set

	1	2
retoa	-0.0036	0.0044
retoa	-0.0387	-0.0344

Raw Coefficients for the Second Variable Set

	1	2
ceown	0.0667	-0.0664
bdcown	0.0623	0.0754

Source: Computations from Stata.13.0 output, 2017

**Table 5b: Summary of CCA Result For Test of Hypothesis II**

Canonical correlations:  
0.0668 0.0172

---

Tests of significance of all canonical correlations

	Statistic	df1	df2	F	Prob>F
Wilks' lambda	.995247	4	1392	0.8300	0.5060 e
Pillai's trace	.00475417	4	1394	0.8304	0.5058 a
Lawley-Hotelling trace	.00477422	4	1390	0.8295	0.5063 a
Roy's largest root	.00447779	2	697	1.5605	0.2108 u

e = exact, a = approximate, u = upper bound on F

Source: Computations from Stata.13.0 output, 2017

Results in Table 5a clearly suggest that with a slightly higher raw coefficient (ownership variables only), CEO ownership (ceown) appeared to be more relevant than board chairman ownership (bdcown). Although, by holding other variables constant, a unit increase in the standard deviation of ceown will lead to 0.0667 increase in the standard deviation scores of the first canonical variate among the sets of dependent variables (retoa and retoe). Similarly, by holding other variables constant, any unit increase in the standard deviation of bdcown will result to 0.0623 increase in the standard deviation scores of the first canonical variate among the sets of dependent variables.

Further examination of the displayed results in Table 5a revealed that retoe (0.0036) and retoa (0.0387) had negative association with ownership structure variables. Impliedly, any increase in the stockholding of the CEO or the Board Chairman would impact negatively on performance. However, from the tests of significance for all canonical correlations (Table 5b), the statistics for the Wilks' lambda (0.995247), Pillai's trace (0.00475417), Lawley-Hotelling trace (0.00477422) and Roy's largest root (0.0047779), had f-values of 0.8300 (p-value = 0.5060), 0.8304 (p-value = 0.5058), 0.8295 (p-value = 0.5063), and 1.5605 (p-value = 0.2108) respectively. This demonstrates in clear terms that there is no significant association between performance variables (retoa and retoe) and those of ownership structure alone (ceown and bdcown). Thus, the hypothesis that there is no significant association between firm financial performance and ownership structure is accepted. Hence, this study concludes that there is no significant positive association between the financial performance of Nigerian firms and their ownership structure.

**Hypothesis III**

**Table 6: Summary of CCA Result For Test of Hypothesis III**

. canon (retoe retoa) (bdsiz bdindep bgendiv

Canonical correlation analysis  
Number of obs = 700  
Raw coefficients for the first variable set

	1	2
retoe	0.0012	-0.0056
retoa	0.0500	0.0134

Raw coefficients for the second variable set

	1	2
bdsiz	0.2800	-0.0530
bdindep	-2.0912	0.5283
bgendiv	6.5626	6.1189
ceown	-0.0063	0.0721
bdcown	-0.0274	0.0127

Canonical correlations:

0.1867 0.0408

Tests of significance of all canonical correlations

	Statistic	df1	df2	F	Prob>F
Wilks' lambda	.963526	10	1386	2.5990	0.0040 e
Pillai's trace	.0365321	10	1388	2.5825	0.0042 a
Lawley-Hotelling trace	.0377948	10	1384	2.6154	0.0038 a
Roy's largest root	.0361309	5	694	5.0150	0.0002 u

e = exact, a = approximate, u = upper bound on F

Source: Computations from Stata.13.0 output, 2017

Again, evidence from Table 6 suggest that with a higher raw coefficient (performance variables only), return on asset (retoa) proved to be more relevant than return on equity (retoe). By holding other variables constant, a unit increase in the standard deviation of retoa will initiate 0.0500 increase in the standard deviation scores of the first canonical variate among the combined sets of independent variables (board and ownership structure). In likewise manner, by holding other variables constant, any unit increase in the standard deviation of retoe will result to 0.0012 increase in the standard deviation scores of the first canonical variate among the combined sets of independent variables.

A careful analysis of the displayed results in Table 6, further depict that bgendiv (6.5626) also remained



the most important independent variable. This was followed by *bndep* (2.0912); and *bdsiz* (0.2800). Ownership variables (*ceown* and *bdcown*) stood as the least important when all sets of independent variables were combined.

Furthermore, the CCA also revealed the results from the tests of significance for all canonical correlations with the statistics for the Wilks' lambda (0.963526), Pillai's trace (0.0365321), Lawley-Hotelling trace (0.0377948) and Roy's largest root (0.0361309), having *f*-values of 2.5990 (*p*-value = 0.0040), 2.5825 (*p*-value = 0.0042), 2.6154 (*p*-value = 0.0038), and 5.0150 (*p*-value = 0.0002) respectively. These results are significant at 1% significance level (*p*<0.001). This clearly demonstrates that there is a significant association between performance variables (*retoa* and *retoa*) and a combination of those of board and ownership structure (*bsiz*, *bndep*, *bgndiv*, *ceown*, *bdcown*). Thus, the hypothesis that there is no significant association between firm financial performance and a combination of board and ownership structure is rejected. Hence, this study concludes that there is a significant association between the financial performance of Nigerian firms and a combination of their board and ownership structure.

#### Conclusion

Evidence has shown that interests in CG discourse surfaced in increasing numbers following emerging cases of corporate collapse/scandals, globally. While the need for focusing on governance issues that will monitor managements' decisions and effectively guarantee the achievement of organizational goals in stakeholders' best interests have been canvassed, studies have also shown that even when firms declare high profits in the financial year end (on the premise of good management and effectiveness), liquidity problems still abound in such firms, maybe as a result of inefficiency. This study therefore pondered on how board and ownership structure could affect the financial performance of firms individually and collectively. Achieving this resulted in the collection of data from 70 listed firms in Nigeria and analyses were done with canonical correlation technique. The results from our analyses proved that the combination of board and ownership structure had significant association with measures of firm performance. Interestingly, individual measures of board structure had significant positive effect on firm financial performance, whereas individual measures of ownership structure had no significant positive association with measures of firm performance. These findings had far reaching implication resulting to the recommendations in the next section.

#### Recommendations

Recommendations include:

1. SEC must endeavour to guarantee unassailable investment environment that will cause stockholders to be involved in the monitoring of management. This will translate ownership structure to an admirable governance measure.
2. Given the significance of board structure measures to firms' performance, firms should take considerable measures in ensuring that decisions on the composition of board membership must be mindful of the role which size, independence and diversity (gender diversity) play to the overall organizational success. In effect, the ideal/optimal size, level of independence among others should not be treated with levity.
3. As part of reported data, quoted firms in Nigeria should endeavour to report information on family and other ownership measures. These were not included in this study due to inconsistencies and unavailability of complete dataset in this regard. Where reports on family and other ownership measures are available in annual reports/accounts, further studies can enlarge our scope to include such measures. Analysis of same would either confirm or refute our findings.
4. Other studies can be conducted with Pairwise Analysis within industry given the number of our dependent variable. In like manner, other studies should confirm which among our dependent variable has stronger correlation with governance variables.

#### References

- AL-Najjar, D. (2015). The effects of institutional ownership on firm performance: Evidence from Jordanian listed firms. *International Journal of Economics and Finance*, 7(12), 97-105.
- Badara, M.S. (2016). The moderating effect of firm size on the relationship between board structure and financial performance of deposit money banks in Nigeria. *Sahel Analyst: Journal of Management Sciences*, 14(3), 101-115.
- Chandrasekharan, C.V. (2016). Effect of board diversity on financial performance of listed deposit money banks in Nigeria. *Sahel Analyst: Journal of Management Sciences*, 14(3), 1-17.
- Fatimoh, M. (2011). Impact of corporate governance on banking sector performance in Nigeria. *International Journal of Economic Development Research and Investment*, 2(2), 52-59.
- Florackis, C. & Ozkan, A. (2004). Agency costs and corporate governance mechanisms: Evidence for UK firms. Working Paper, University of

- York.
- Garba, T. & Abubakar, B. A. (2014). Corporate board diversity and financial performance of insurance companies in Nigeria: An application of panel data approach. *Asian Economic and Financial Review*, 4(2), 257-277.
- Guest, P. (2009). The impact of board size on firm performance: Evidence from the UK. *The European Journal of Finance*, 15(4), 385-404.
- Hermalin, B.E. & Weisbach, M.S. (2003). Boards of directors as an endogenously determined institution: A survey of the economic evidence. *Economic Policy Review*, 9, 7-26.
- Hykaj, K. (2016). Corporate governance, institutional ownership and their effects on financial performance. *European Scientific Journal*, 12(25), 46-69.
- Irshad, R., Hashmi, S.H., Kausar, S. & Nazir, M.I. (2015). Board effectiveness, ownership structure and corporate governance: Evidence from Pakistan. *Journal of Business Studies Quarterly*, 7(2), 46-60.
- Javid, A. & Iqbal, R. (2008). Ownership concentration, corporate governance and firm performance: Evidence from Pakistan. *The Pakistan Development Review*, 643-659.
- Jensen, M. & Meckling, W. (1976). Theory of the firm: Managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.
- Jensen, M. (1993). The modern industrial revolution, exit and the failure of internal control system. *Journal of Finance*, 48(3), 831-880.
- Jeroh, E. & Okoro, G.E. (2014). Corporate governance and disclosure practices in the Nigerian banking industry. *Nigerian Journal of Management Science*, 4(2), 138-149.
- Jeroh, E., Ekwueme, C.M. & Okoro, G.E. (2015). Corporate governance, financial performance and audit quality of listed firms in Nigeria. *Journal of Academic Researches in Economics*, 7(2), 220-231.
- Khamis, R., Hamdan, A.M. & Elali, W. (2015). The relationship between ownership structure dimensions and corporate performance: Evidence from Bahrain. *Australasian Accounting, Business and Finance Journal*, 9(4), 38-56.
- Matanda, J. W., Oyugi, L. & Lishenga, J.L. (2015). Institutional ownership and commercial performance in Kenya: is there relationship? *Research Journal of Finance and Accounting*, 6(16), 219-227.
- Omondi, M.M. & Muturi, W. (2013). Factors affecting the financial performance of listed companies at the Nairobi Securities Exchange in Kenya. *Research Journal of Finance and Accounting*, 4(15), 99-104.
- Ongore, V.O. (2011). The relationship between ownership structure and firm performance: An empirical analysis of listed companies in Kenya. *African Journal of Business Management*, 5(6), 2120-2128.
- Pirzada, K., Mustapha, M.Z.B. & Wickramasinghe, D. (2015). Firm performance, Institutional ownership and capital structure: A case of Malaysia. *Procedia – Social and Behavioral Sciences*, 211(2015), 170-176.
- Qasim, A.M.J. (2014). The impact of corporate governance on firm performance: Evidence from the UAE. *European Journal of Business and Management*, 6(22), 118-124.
- Sandada, M., Manzanga, N. & Shamyehanzva, R. (2015). How do board characteristics influence business performance? Evidence from non-life insurance firms in Zimbabwe. *Acta Universitatis Danubius Oeconomica*, 11(4), 103-116.
- Shah, S.Z.A., Butt, S. & Saeed, M.M. (2011). Ownership structure and performance of firms: Empirical evidence from an emerging market. *African Journal of Business Management*, 5(2), 513-523.
- Tariq, I. & Naveed, M. (2016). Effects of Board & Ownership Structure on Firm Financial Performance: An economic value added perspective. *Developing Country Studies*, 6(8), 1-9.
- Zabri, S.M., Ahmad, K. & Wah, K.K. (2016). Corporate governance practices and firm performance: Evidence from top 100 public listed companies in Malaysia. *Procedia – Economics and Finance*, 35(2016), 287-296.
- Zainal, D., Zulkifli, N. & Saleh, Z. (2013). Corporate board diversity in Malaysia: A longitudinal analysis of gender and national diversity. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 3(1), 136-148.