



## CORPORATE BOARD DIVERSITY AND FINANCIAL PERFORMANCE OF INSURANCE COMPANIES IN NIGERIA: AN APPLICATION OF PANEL DATA APPROACH

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### ABSTRACT

*The major objective of this study is to investigate the relationship between board diversity and financial performance of insurance companies in Nigeria, with specific reference to how gender diversity, ethnic diversity, board size, board composition and foreign directorship affect financial performance of insurance companies listed on the Nigerian Stock Exchange. This study selects 12 listed insurance companies using non-probability sampling method in the form of availability sampling technique for a period of 6 years i.e. 2004 to 2009. Using ROA, ROE and TOBIN's Q as measures of firm performance and applying Feasible Generalised Least Squares (FGLS) and random effects estimators, the findings of this study reveal that gender diversity and foreign directors have a positive influence on insurance companies' performance. But the findings indicate a negative and significant relationship between board composition and performance of insurance companies in Nigeria. These findings have the implications that an increase in the number of female directors and foreign directors on the boards of insurance companies in Nigeria will enhance their performance but an increase in the ratio of outside directors on the board will reduce the performance.*

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**Keywords:** Insurance companies, Board diversity, Firm financial performance.

### 1. INTRODUCTION

Movement towards the attainment of robust deposit base is considered necessary for macroeconomic stability and increased national welfare (Obadan, 1996). It is obvious that insurance not only facilitates economic transactions through risk transfer and indemnification but also promotes financial intermediation. In view of this, insurance industry can be used to promote financial stability, mobilize savings, facilitate trade and commerce, and complement government security programs (Adeyele and Maiturare, 2012).

Therefore, there is a need for ensuring the sustainability of this sector through good corporate governance. Increasing interest in investigating the influence of corporate boards' characteristics on firms' performance has been largely out of necessity arising from increasing number of high profile corporate failures around the world. Companies that had become well established and respected over decades were found to have been involved in unethical practices ([Securities and Exchange Commission \[SEC\], 2004](#)). On the international scene, there is the collapse of large companies like Enron, WorldCom, Rank Xerox, Parmalat, Bank of Credit and Commerce International (BCCI), and the large scale crisis that rocked the Asian and African Financial Institutions ([Clarke, 2004](#); [Wikipedia, 2010](#)). However, in Nigeria, though not in insurance sector, the examples of corporate failures are better seen in what happened in the financial services sector some years back. The collapse of banks such as Abacus Merchant Bank Nigeria Limited, Royal Merchant Bank Limited, Rims Merchant Bank Limited, Financial Merchant Bank Limited, Progress Merchant Bank Plc, and Republic Merchant Bank Limited ([Securities and Exchange Commission \[SEC\], 2004](#)).

In view of the effects of corporate failures on companies and national economies, countries all over the world have taken one step or the other to ensure good corporate governance. One of these steps include, diversifying the corporate board. Therefore, a response has been made by SEC in collaboration with the Corporate Affairs Commission (CAC) in launching a Code of Corporate Governance for Nigerian public companies in 2003. Some of the provisions of the code for good corporate governance are bordered on responsibilities of board of directors ([Securities and Exchange Commission \[SEC\], 2004](#)). The recent financial crisis has had enormous impacts on an economy, leading to major problems in insurance companies. Insurance companies should therefore focus on good corporate governance that will build a stable foundation for recovery from this crisis ([Najjar, 2013](#)). Therefore, the National Insurance Commission (NAICOM), which is conferred with regulatory and supervisory power over insurance companies, is mandated to ensure the effective administration, supervision, regulation and control of insurance business in Nigeria. Despite all these efforts no provision is made for inclusion of diversity on the board in order to ensure good corporate governance in the sector.

Corporate governance is the system by which business corporations are directed and controlled. The corporate governance structure specifies the distribution of rights and responsibilities among different participants in the corporation, and spells out the rules and procedures for making decisions on corporate affairs. Such participants include the board, managers, shareholders and other stakeholders. Corporate governance also provides the structure through which the company objectives are set, and the means of attaining those objectives and monitoring performance ([Organization for Economic Cooperation and Development \[OECD\], 2004](#)).

The issue of board diversity may be linked to more general issue of independent outside directors ([Fields and Keys, 2003](#)). This may be as a result of the assertion that performance increases when outsiders are added to the board ([Duchin \*et al.\*, 2010](#)). Therefore, there is a need for introducing a greater degree of diversity on the board of directors as a corporate governance

mechanism. However the empirical studies on the area of corporate governance for insurance companies in Nigeria known to these researchers include: [Adeyele and Maiturare \(2012\)](#), [Effiok \*et al.\* \(2012\)](#) and [Torneyeva and Werekko \(2012a\)](#). However other few empirical studies in the area of corporate governance in Nigeria which are concerned with how other board characteristics are related to performance include: [Faleye \(2007\)](#), [Sanda \*et al.\* \(2008\)](#), [Sanda \*et al.\* \(2010\)](#) and [Olayinka \(2010\)](#). But to the best knowledge of the researchers, there is no empirical evidence linking insurance companies' performance to corporate board diversity in Nigeria. This will be main contribution of this study.

Therefore, the major objective of this paper is to examine the relationship between corporate board diversity and financial performance of insurance companies. This paper is structured into 6 sections to achieve its objectives. After this introduction, section 2 covers the theoretical framework while section 3 is concerned with literature review. Section 4 deals with methodology and sections 5 dwells on results and discussions. Finally, section 6 concludes the paper and gives policy implications.

## 2. THEORETICAL FRAMEWORK

The theoretical underpinnings for this study include Agency Theory and Stakeholders Theory. Agency Theory is concerned with the relationship between the principals and the agents. The principals are the shareholders while the agents are the company's executives and managers. In agency theory, shareholders who are the owners or principals of the company, delegate the running of the business to the executives ([Abdullah and Valentine, 2009](#)). Therefore, on the basis of Agency Theory, shareholders expect the agents to act and make decisions in the principals' interest. On the contrary, due to information asymmetry, the agents may not necessarily make decisions in the best interests of the principal, leading to agency problem ([Jensen and Meckling, 2004](#)). There is therefore a need for protecting the interests of owners in order to minimize agency problem. This may be done by monitoring the activities of Chief Executive Officer (CEO) through effective board of directors ([Donaldson and Davis, 1991](#)). Meanwhile, the composition of the board of directors has an important function here and in particular, diversity on the board may matter a lot.

However, Stakeholders Theory, incorporates corporate accountability to a broad range of stakeholders not necessarily shareholders per se ([Freeman \*et al.\*, 2004](#)). These groups include the women and other minorities, customers, governmental bodies etc., ([Brunk, 2010](#)). Nevertheless, stakeholders approach to corporate governance implies a shift in the traditional role of the board of directors, as a defender of shareholders interest alone, to a defender of all stakeholders' interest. Therefore, one can infer from the stakeholder theory that, it is not the interest of the shareholders alone that should be protected, but also that of women and other minority groups (racial, cultural, and ethnic minorities). In this regard however, a board is expected to use more diversified mechanisms to control and motivate the executives ([Pige, 2002](#)). The use of diversified mechanism to control the excesses of CEO may include gender diversity and diversity in other related variables.

### 3. LITERATURE REVIEW

Although other governance factors such as companies recruitment policy, staff training and development, communication policy and performance evaluation also have statistical significant positive relationship with the performance of the insurance companies (Tornyeva and Wereko, 2012a), board diversity may have an important role to play in firm financial performance therefore should not be ignored.

Board diversity can broadly be defined as variety amongst the members of boards of directors with regard to characteristics such as kinds of expertise, managerial background, personality, learning style, age, gender, education and values (Swartz and Firer, 2005). Diversity advocates suggest that, to make managers and board members act ethically, there should be a support for diversity of the boards of directors (Fields and Keys, 2003).

The findings on the relationships between gender diversity and performance are inconclusive. For instance; Williams (2000), Adams and Ferreira (2004), Farrell and Hersch (2005), Nishii *et al.* (2007), find significant positive relationship between gender diversity and firms' performance. In contrast, Dutta and Bose (2006) as well as Eklund *et al.* (2009), reported a significant negative relationship between gender diversity and firms' performance. However, the findings of Adams and Ferreira (2009), provide complex result, in the sense that, though diversity has a significant negative influence on firms' performance in firms with strong governance, such relationship turns to be positive in firms with weak governance. On the contrary, (Swartz and Firer, 2005), (Francoeur *et al.*, 2008) and Marimuthu and Koladaisamy (2009a), find no significant relationship between gender diversity and firms' performance.

However, there are variations in the findings on the relationships between ethnic diversity on the board and firms' financial performance. Williams (2000), Swartz and Firer (2005), Nishii *et al.* (2007), Marimuthu (2008), Marimuthu and Koladaisamy (2009a) find significant positive relationship between ethnic diversity and firms' performance. However, (Marimuthu and Koladaisamy, 2009b; 2009c) find no significant relationship between ethnic diversity on the board and firm performance.

Another board diversity variable that may impact on firm performance is foreign directorship. On the relationship between foreign directorships and firms' performance, Oxelheim and Randoy (2001), Sanda *et al.* (2008) and Tornyeva and Wereko (2012b), find a significant positive relationship between the presence of foreign directors on the board and firms' financial performance. But Schwizer *et al.* (2012) find a significant negative relationship between the variables.

Furthermore, there are mixed findings on the relationship between board composition (board independence) and firms' performance. Booth *et al.* (2002), Lawyer III *et al.* (2002), Huson *et al.* (2004), Sinha (2006), Charitou *et al.* (2007), Coles *et al.* (2008), Sanda *et al.* (2008), Eklund *et al.* (2009), Zainal- Abidin *et al.* (2009), Dimitropoulos and Asteriou (2010), Kim and Lim (2010), Olayinka (2010), Sanda *et al.* (2010) and Tornyeva and Wereko (2012b), find a significant positive relationship between independent board and firms' financial performance. However, He

(2008) finds significant negative relationship between independent board and firms' performance. But the relationship between the two variables as studied by [Duchin et al. \(2010\)](#) seems to be complex as the nature of the relationship between board composition and firms' performance depends on the cost of acquiring information. On the contrary, [Donaldson and Davis \(1991\)](#), [Adams and Mehran \(2008\)](#), [Erickson et al. \(2005\)](#) and [Pathan and Skully \(2010\)](#), find no significant relationship between board independence and firms' performance.

Moreover, the findings on the relationship between board size and firm performance are inconclusive. For example, [Adams and Mehran \(2008\)](#), [Zainal- Abidin et al. \(2009\)](#), [Olayinka \(2010\)](#), [Tornyeva and Wereko \(2012b\)](#), and [Najjar \(2013\)](#) find a significant positive relationship between board size and firms' performance. Nonetheless, [Bennedsen et al. \(2008\)](#) as well as [Cheng \(2008\)](#) find a significant negative relationship between board size and firm performance. But [Pathan and Skully \(2010\)](#) find no significant relationship between board size and firms' performance. Furthermore, [Sanda et al. \(2010\)](#) find a significant nonlinear negative relationship between board size and firms' performance.

Similarly, literature on the relationship between directors' equity ownership and firm performance reveals divergent results. [Bhagat and Bolton \(2008\)](#) find a significant positive relationship between directors' equity ownership and firms' performance. But [Olayinka \(2010\)](#) and [Sanda et al. \(2010\)](#) find a significant negative relationship between directors' equity ownership and performance, while [Mehran \(1995\)](#) find no significant relationship between the two variables. However, [Bhabra \(2007\)](#) find a nonlinear relationship between directors' equity holding and firms' performance. In view of these, the findings are inconclusive.

Another variable in connection to board characteristics that may influence firms' performance is family controlled board. [Lausten \(2002\)](#), [Maury and Pajuste \(2005\)](#), [Villalonga and Amit \(2006\)](#), and [Sanda et al. \(2008\)](#) all find a significant positive relationship between family controlled board and firms' performance.

#### 4. METHODOLOGY AND DATA

This section describes the methods used in collecting and analyzing data for this study. It consists of method of data collection, the sampling technique, sample size determination, variables measurement, method of data analysis, model specification, and diagnostics tests conducted.

##### 4.1. Data

This study makes use of secondary panel data obtained from the Nigerian Stock Exchange (NSE) Fact Books for various years, SEC Annual Reports and Accounts, and online materials from some websites ([African financials, 2012](#); [SBA Interactive, 2012](#)) and hard copies of quoted companies' annual reports and accounts obtained from individuals, SEC and NSE Abuja. Certain information not gotten from the aforementioned sources were sourced from stockbrokers through research assistants. For instance data on board composition, ethnicity, and nationality for certain firms were obtained from some stock brokers.

## 4.2. Sample Size and Sampling Technique

Non-probability sampling method in form of availability sampling technique was used in selecting the listed insurance firms as only insurance companies that meet the criteria of being listed on the Nigerian Stock Exchange since or before the year 2004 up to the period covering this study and having information on the variables captured in this research were included. This is because not all the insurance companies listed have being in existence up to 2009 and having all the information needed for this study.

This study covers a period of six years i.e., 2004 to 2009. The benchmark year was 2004 and the end year was 2009. The period chosen for this study reflects the time when corporate governance became effective in the Nigerian capital market. This is because regulatory innovation began in 2003, with the code of good corporate governance which was first launched in November 2003 in Nigeria (Securities and Exchange Commission [SEC], 2004; Wikipedia, 2010). The year 2009 was chosen as the last year because the NSE fact books used for selecting the companies sample were available up to 2010 and not beyond at the time of conducting this study, and each Fact book reports on the activities of the previous years. The sample size of this study that covered the span of the study and satisfy the criteria of having information on all the variables at the time of conduct of this study was 12 out of a total of 30 insurance firms listed on the Nigerian Stock Exchange as of 2010/2011(NSE, 2005-2010/2011).

## 4.3. Variables Measurement

This study makes use of a market-based measure of performance in the form of Tobin's Q, and accounting measures of performance [i.e., Return on Assets (ROA) and Return on Equity (ROE)]. The variables are measured following some previous studies. For instance, ROA is measured as net income divided by total assets (following the works of (Cheung *et al.*, 2005; Marimuthu, 2008; Marimuthu and Koladaisamy, 2009c)), ROE is measured as net profit as a proportion of equity value (adapted from (Marimuthu and Koladaisamy, 2009b; 2009c); Sanda *et al.* (2010)), and Tobin's Q is obtained as adjusted Q by dividing year-end market capitalization by the book value of total assets( following the work of Sanda *et al.* (2010)). Gender diversity is measured as the percentage of female directors on the board of directors (borrowing from the works of (Williams, 2000; Swartz and Firer, 2005).

However, ethnic diversity is measured by Swartz and Firer (2005) as the percentage of colored people on the board to the total board size. Ethnic diversity is also measured by Oxelheim and Randoy (2001) as a dummy variable given the value of 1 if the firm has one or more Anglo-American and 0 otherwise. This measure by Oxelheim and Randoy (2001) is adapted but with modification. Ethnic diversity is measured as a dummy variable taking the value of 1 if the board consists of both Northerners and Southerners in Nigeria, and 0 otherwise. Board composition is seen as the proportion of non-executive directors on the board of directors, i.e., outside directors as a percentage of total board members (following the works of (Davidson III and Rowe, 2004; Sanda *et al.*, 2010).

Board size is measured as the total number of directors on the board of directors in a particular financial year. This measurement is common among researchers (Core *et al.*, 1999; Cheng, 2008; Eklund *et al.*, 2009; Marimuthu and Koladaisamy, 2009b). For directors' equity ownership, Davidson III and Rowe (2004), Sanda *et al.* (2010) and Zainal- Abidin *et al.* (2009) measure it as the total number of shares owned by the directors of the firm as a proportion of outstanding shares of the firm. Family-controlled board is measured as the proportion of family directors to board size (following the work of Liu *et al.* (2010)).

**Table-1.** Summary of Variables Measurement

<b>Variables</b>	<b>Measurement</b>
ROA	= Return on assets, a proxy for firm performance, measured by expressing net profit as a proportion of total assets
ROE	= Return on Equity, a proxy for firm performance, measured by expressing net profit as a proportion to total equity value
Tobin's Q	= A proxy for firm performance, measured by dividing year-end market capitalization by the book value of total assets
GENDISTY	= Gender diversity, measured as the percentage of female directors on a board.
ETHDISTY	= Ethnic diversity, measured as a dummy variable taking the value of 1 if the board consists of both Northerners and Southerners, and 0 otherwise.
FRNGNDIR	= Foreign directorship, measured as the percentage of foreign directors on a board
BOARDCOM	= Board composition, measured by taking the number of non executive directors as a proportion of board size
BOARDSZ	= Board size, measured by taking the total number of directors on the board of directors of a firm in a particular financial year
BOARDSZSQ	= Board size squared, measured by taking the square of total number of directors on the board of directors of a firm in a particular financial year
DIROWN	= Directors equity ownership, measured by expressing the total number of shares owned by directors of a firm as a proportion to outstanding shares of the firm
DIOWNRSQ	= Directors equity ownership squared, measured by expressing the square of total number of shares owned by directors of a firm as a proportion to outstanding shares of the firm

#### 4.4. Method of Data Analysis

This study makes use of both descriptive and inferential panel regression analyses. The descriptive analysis has been executed to summarize and describe the data set. However, the

inferential panel regression analysis explains the effect of corporate board diversity and other control variables on insurance firms' financial performance. The panel regression models applied include the Feasible Generalised Least Squares (FGLS) and then Random Effects estimators. FGLS estimator has been applied instead of Fixed Effects because of the presence of heteroskedasticity problem after conducting Modified Wald test for group-wise heteroskedasticity in fixed effect regression model. According to Dougherty (2007) and Yaffee (2002) Generalised Least Squares can be applied in the presence of heteroskedasticity.

The model developed by Kim and Lim (2010) has been adapted in this research. This is because the study by Kim and Lim (2010) also examines the relationship between the diversity of independent outside directors and firm performance. However, their study focuses on Korean Stock Exchange listed companies which are similar to what is studied in this research. Similarly, the period covered by Kim and Lim (2010) is after Korea's 1998 corporate-governance reforms (i.e. 1999 to 2006), this study also reflects the time when corporate governance became effective in the Nigerian capital market.

#### 4.5 Model Specification

The theoretical model is given as:

$$Y_{it} = \alpha_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + C_{it} + \mu_{it} \dots \dots \dots (1)$$

Where:  $Y$  = a measure of firm performance,  $\alpha$  = Intercept coefficient,  $\beta_1$  = Vector of coefficients of board diversity,  $X_1$  = Vector of the measures of board diversity,  $\beta_2$  = Vector of the coefficient of control variables,  $X_2$  = the vector of control variables, Subscripts  $i$  and  $t$  refer to each firm  $i$  in year  $t$ ,  $C$  is a unit-specific error component,  $U$  = is the remaining error component.

Empirical model is given as:

$$\begin{aligned} \text{Firm Performance}_{it} &= \alpha_0 + \alpha_1 \text{GENDISTY}_{it} + \alpha_2 \text{ETHDISTY}_{it} + \alpha_3 \text{FRGNDIR}_{it} \\ &+ \alpha_4 \text{BOARDCOM}_{it} + \alpha_5 \text{BOARDSZ}_{it} + \alpha_6 \text{BOARDSZSQ}_{it} \\ &+ \alpha_7 \text{DIOWNR}_{it} + \alpha_8 \text{DIOWNRSQ}_{it} + \alpha_9 \text{FAMDIR}_{it} C_i \\ &+ \mu_{it} \text{-----} (2) \end{aligned}$$

Where:

$\alpha_0$  = The intercept, GENDISTY = The measure of gender diversity, ETHDISTY = The measure of ethnic diversity, FRGNDIR = The measure of foreign directorship, BOARDCOM = The



measure of board composition,  $BOARDSZ =$  The measure of board size,  $BOARDSZSQ =$  The measure of board size squared,  $DIOWNR =$  The measure of directors' ownership,  $DIOWNRSQ =$  The measure of directors' ownership squared,  $FAMDIR =$  The measure of family directorship,  $C_i =$  Is a unit-specific error component,  $\mu =$  The remaining error component.

This model is run for both FGLS and random effects estimators, and each model was ran using ROA, ROE and Tobin's Q as dependent variables.

## 5. RESULTS AND DISCUSSION

This section presents the descriptive and inferential results obtained from the study and findings from the results are discussed on the basis of the literature.

### 5.1. Descriptive Statistics

This subsection provides the descriptive results obtained from the study, this will give us a better understanding of the data.

Table 2 describes data set for insurance sector. The descriptive results for the firms captured in this sector revealed a sum of 652 directorships for the whole period of the study. The average board size for the sector stood at 9 directors. This was against the minimum of 6, and maximum of 15 board members. The results indicated that average board size of the insurance firms listed on the Nigerian Stock Exchange for the period under study was 9 directors and no firm had more than 15 board members or less than 6 directors on a board. The results further portrayed that some insurance firms had more than the minimum board size of 5 as stipulated by the code of corporate governance of Nigeria.

**Table-2.** Descriptive Result of Insurance Sector

S/N	Variable	Mean	Min	Max	Sum	N
1	Board size	9.055556	6	15	652	72
2	Male directors	8.194444	4	14	590	72
3	Female directors	.8611111	0	3	62	72
4	Hausa directors	.9305556	0	4	67	72
5	Yoruba directors	3.402778	0	8	245	72
6	Igbo directors	4.097222	0	11	295	72
7	North directors	.9444444	0	4	68	72
8	South directors	7.486111	2	15	539	72
9	Outside directors	6.694444	5	10	482	72
10	Family directors	.1944444	0	2	14	72
11	Foreign directors	.6388889	0	8	46	72
12	Directors' shareholding	4.84e+08	437446	6.45e+09	3.49e+10	72
13	Total outstanding shares	3.29e+09	1.16e+08	1.20e+10	2.37e+11	72
14	Total assets	6.72e+09	7.32e+08	2.48e+10	4.84e+11	72
15	Net profit	2.56e+08	2.25e+09	5.69e+09	1.84e+10	72

S/N	Variable	Mean	Min	Max	Sum	N
16	Total equity	1.91e+09	2.03e+08	1.73e+10	1.38e+11	72
17	Market capitalization	1.23e+10	3986380	1.53e+11	8.83e+11	72
18	Board composition	73.67362	44.44444	90.90909	5304.5	72
19	Family directorship	2.15812	0	25	155.3846	72

**Source:** Computed by the author from the data set using STATA Version 12.1

For the number of male directorships on the boards of insurance firms, the descriptive results revealed a sum of 590 male directorships in the sector. However, the average number of male directors was 8, as against minimum of 4 and maximum of 14 male directors on a board. The results therefore indicated that on the average, an insurance firm had 8 male directors during the period under study, but with some firms having not more than 4 male directors while some had up to 14 male directors.

As regards female directors, the results showed that there was a sum of 62 female directorships on the boards of insurance sector throughout the 6-year period covered by this study. However, there was an average of 1 female director on the board of insurance firms as against a minimum of 0 and maximum of 3 female directors on a board. The results therefore indicated that there were some boards without any female director while some had only 3 female directors. This further indicated that there has been a wide gap between male and female participation on the insurance firms' boards in Nigeria.

Pertaining to the ethnic diversity of the corporate boards, the descriptive results on insurance sector firms revealed that Hausas, Yoruba's and Igbo's directorships on the board, accounted for the sums of 67, 245, and 295 respectively. The, results further revealed an average of 1 Hausa director on a board, 3 Yoruba directors and 4 Igbo directors on a board in insurance sector. However, all the three ethnic groups had a minimum of 0 directors on a board in insurance sector, but a maximum of 4 Hausa, 8 Yoruba and 11 Igbo directors on a firm's board. These indicated that Hausa directors were underrepresented on insurance sector boards.

Another proxy for ethnic diversity is being a director as either northerner or southerner. The descriptive results indicated a sum of 68 directorships of northerners as against 539 directorships for southerners in insurance sector. In addition, the results showed an average of 1 and 7 northern and southern directors respectively on a board. However, the descriptive results revealed a minimum of 0 and 2 directors respectively. For the maximum number of directors according to the regional dichotomy, there was a maximum of 4 northern directors on a board as against a maximum of 15 southern directors. These results also indicated that northerners were underrepresented on the boards of insurance sector in Nigeria. But whether this has any significant effect on firms' performance is unclear and can be ascertained by inferential results.

The descriptive results on insurance sector also indicated that there was a sum of 486 outside directorships in this sector within the 6-year period covering this study. However, there was an average of 7 outside directors on a board as against a minimum of 3 and a maximum of 10 outside directors on a corporate board. The results therefore suggest that there were some insurance firms having only 3 outside director while some had up to 10 on the board.

Pertaining family directors on the boards of insurance sector, the results revealed a sum of 14 family directors on the boards of insurance firms in Nigeria within the 6-year period covering this study. As revealed by the descriptive results, there was an average of 0 family directors, with minimum of 0 and a maximum of 4 family directors on a board. The results indicated that there were some insurance firms that did not have directors from the same family. But there were instances of firms having up to 4 directors from the same family on a board.

With regards to the foreign directors, descriptive results showed that there was a sum of 46 foreign directors in the insurance sector in Nigeria within the six years covered by this study. On the average there was 1 foreign director on the board of insurance sector, which is against the minimum of 0 and a maximum of 8 foreign directors. These indicated that, there are firms with no foreign director while some were having up to 8 foreign directors on the same board. But the impact of this variable on firms' performance can only be verified from inferential results.

The descriptive result further revealed that directors of quoted insurance firms on the floor of Nigerian stock exchange covered in this study owned the sum of 34.9 billion units of shares of the firms within the six years of this study, while on the average, directors of insurance firms held 484 million units of shares. This was against the minimum of 437,446 and the maximum of 6.45 billion units of shares, indicating that there were no firms in the insurance sector without directors' equity ownership.

According to the descriptive result, the quoted firms in the insurance sector had a sum of 237 billion total outstanding shares. On the average, insurance firms held 3.29 billion units of shares, which were against the minimum of 116 million and a maximum of 12.0 billion units. These indicated that no firm had less than 116 million units of shares while some held up to 12.0 billion units.

The descriptive results further revealed that the insurance firms held a sum of 484 billion naira total assets value. It was also revealed by the descriptive results that on the average, an insurance firm had 6.72 billion naira value of total assets. This result was against the minimum of 732 million and a maximum of 24.8 billion naira value of total assets.

Pertaining to the net profit of firms in the insurance sector, the descriptive result showed the sum of 18.4 billion naira. The results also indicated a mean of 256 million naira as net profit, as against the minimum of -2.25 billion naira and a maximum of 5.69 billion naira. These indicated that on the average, a firm had net profit amounting to 256 million naira. But considering the minimum, there were some firms with liabilities up to -2.25 while some had profits up to 5.69 billion naira. Therefore, even from the descriptive result, insurance firms vary in their financial performance.

Moreover, the descriptive result showed that the insurance companies studied for the period of six years had a sum of 138 billion as their total equity value, with an average of 1.19 billion naira, as against the minimum of 203 million and a maximum of 17.3 billion naira. The results indicated that there were some insurance firms with less than average total equity value, showing a wide range of gap between companies in terms of their total equity value.

Pertaining to the firm year end market capitalization, a sum of 883 billion was revealed by the descriptive results as the total firm year-end market capitalization for the firms in insurance sector studied in this research. The results revealed that, on the average, a firm market capitalization was up to 12.3 billion naira, which was against the minimum of 4 million naira and a maximum of 153 billion naira.

The percentage of nonexecutive directors on the insurance sector boards was 74 percent, with a minimum of 44 percent and maximum of 91 percent. These indicated that despite the fact that some insurance companies in Nigeria have higher percentage of nonexecutive directors on their boards, there were some insurance firms with more executive directors than nonexecutive directors.

However, in connection to family directorship, there was a mean of 2 percent of family directors on a board of an insurance company as against the minimum of 0 and maximum of 25 percent. These indicated that there were instances where firms had no family directors on its boards, while there were instances where some insurance firms had 25 percent of family directors on a board.

## 5.2. Inferential Results

This subsection deals with inferential analysis of the data; this is because generalization cannot be made with only descriptive results.

**Table-3.** Regression Results for Insurance firms

Independent variables	ROA		ROE		TOBIN'S Q	
	FGLS	RE	FGLS	RE	FGLS	RE
Board size	5.132 (1.11)	5.262 (1.06)	14.898 (0.78)	14.898 (0.73)	-1.562 (-0.41)	-1.562 (-0.38)
Board size Squared	-0.279 (-1.23)	-0.283 (-1.16)	-0.843 (-0.90)	-0.843 (-0.84)	0.100 (0.53)	0.100 (0.49)
Ethnic diversity	-4.193 (-1.57)	-3.791 (-1.29)	-12.595 (-1.14)	-12.596 (-0.106)	2.840 (1.27)	2.840 (1.18)
Gender diversity	0.205 (1.88)*	0.237 (1.95)*	0.828 (1.85)*	0.828 (1.72)*	0.109 (1.20)	0.109 (1.12)
Foreign Directorship	0.213 (3.63)***	0.220 (3.23)***	0.739 (3.05)***	0.739 (2.83)***	0.160 (3.28)***	0.161 (3.05)***
Board Composition	-0.001 (-0.02)	0.003 (0.03)	0.181 (0.46)	0.181 (0.43)	-0.140 (-1.78)*	-0.140 (-1.65)*
Director Ownership	-0.005 (-0.13)	-0.018 (-0.05)	-0.049 (-0.34)	-0.049 (-0.32)	0.051 (1.74)*	0.051 (1.62)
Director ownership squared	-0.279 (-1.23)	5.42 (0.13)	0.000 (0.35)	0.000 (0.33)	-0.000 (-1.76)*	-0.000 (-1.63)
Family Directorship	-0.068 (-0.44)	-0.075 (-0.42)	0.197 (0.31)	0.197 (0.29)	-0.122 (-0.95)	-0.122 (-0.88)
<b>R<sup>2</sup></b>		0.2618		0.222		0.197
F, chi2	25.68 (0.002)***	19.75 (0.002)***	20.49 (0.015)**	17.65 (0.040)**	17.68 (0.039)**	15.22 (0.085)*

	ROA	ROE	TOBIN'S Q
Std. Error	0.044	0.000	0.000
	Significant at 10% (*), 5% (**), 1% (***)		

**Source:** Authors' calculation using STATA software version 12.1

**Notes:** The values in parentheses for other variables are t ratios and those against F and chi-square statistic are p values. F statistic is for adequacy of random effects (RE) and chi2 is for that of FGLS model.

The results in Table 4 show that, when ROA is used as a measure of firms' performance, gender diversity has positive and significant impact on firm performance at 10% level under both FGLS and random effects model. Foreign directorship also has positive and significant impact on firm performance at 1% level under both models. However, all other variables including ethnic diversity do not have any significant influence on firm performance when ROA is used as a measure of firms' performance. Both models are statistically adequate.

Similarly, when ROE is used as a dependant variable, gender diversity has significant positive influence on firms' performance at 10% level under both FGLS and random effects models. Similarly, foreign directorship has a positive and significant impact on firms' performance at 1% level under both models. However, all other variables including ethnic diversity do not have any significant impact on firms' performance when ROE is used as a measure of firm performance. But interestingly both models are statistically significant and adequate.

But when Tobin's Q as a market measure of performance is used as a dependant variable, the pattern of the results takes a different tune. While foreign directorship has positive and significant impact on firms' performance at 1% level under both models, gender diversity does not have any significant impact on firms' performance. Director ownership has a negative and significant nonlinear impact on firms' performance at 10% level under FGLS model only. This indicates a significant nonlinear negative relationship between director ownership and firm performance. That is as director ownership increases, firm performance increases up to a certain level, beyond which, any increase in directors' ownership will lead to decrease in firm performance. However, there is a puzzling finding indicating that, board composition has negative but significant impact on firms' performance at 10% level under both FGLS and random effects models. And both models are statistically adequate. However, all other variables including gender and ethnic diversity do not have any significant influence on firm performance when Tobin's Q is used as a measure of firms' performance.

The study draws its conclusion based on the adequacy of the models. It can also be argued, according to Fosu (2009) that, the model with the lowest standard error higher adjusted R-Square is the best.

### 5.3. Discussion of Results

As stated in the methodology of this study ROA, ROE and Tobin's Q are considered as proxies for firms' performance. The models used in investigating the relationship among gender diversity,

ethnic diversity, foreign directorship, board composition, board size, director equity ownership and family directorship are FGLS and Random effects models.

The inferential results on insurance companies reveal that gender diversity has positive and significant impact on firm performance at 10% level under both FGLS and random effects models when ROA as well as when ROE are used as a proxies for firms' performance. Interestingly however, the findings are similar to those found by [Norbun and Birley \(1986\)](#), [Williams \(2000\)](#), [Adams and Ferreira \(2004\)](#), [Farrell and Hersch \(2005\)](#), and [Nishii et al. \(2007\)](#).

The inferential results on insurance firms further reveal that ethnic diversity does not have any significant impact on firms' performance in both models, using all the specifications of firms' performance (Tobin's Q, ROE and ROA). This result is contrary to the findings by [Williams \(2000\)](#), [\(Swartz and Firer, 2005\)](#), [Nishii et al. \(2007\)](#), [Marimuthu \(2008\)](#); [Marimuthu and Koladaisamy \(2009a\)](#), but are in congruence with those of [\(Marimuthu and Koladaisamy, 2009b; 2009c\)](#). These results may be attributed to the fact that there is variation in the number of northerners and southern directors on the board, with northern directors only constituting 10% of the total directorship of the boards in the insurance sector.

The inferential results further reveal that foreign directorship has positive and significant impact on firm performance at 1% level under both models, using all the specifications. The findings are similar to those of [Oxelheim and Randoy \(2001\)](#) and [Sanda et al. \(2008\)](#) and [Tornyeva and Wereko \(2012b\)](#), but contrary to those of [Schwizer et al. \(2012\)](#).

The inferential results also reveal that board composition has a negative but significant impact on firm performance at 10% level under both FGLS and random effects models when Tobin's Q is used as a measure of firms' performance. Surprisingly however, these findings are contrary to those found by [. Booth et al. \(2002\)](#), [Lawyer III et al. \(2002\)](#), [Huson et al. \(2004\)](#), [Sinha \(2006\)](#), [Charitou et al. \(2007\)](#), [Coles et al. \(2008\)](#), [Sanda et al. \(2008\)](#), [Eklund et al. \(2009\)](#), [Zainal- Abidin et al. \(2009\)](#), [Dimitropoulos and Asteriou \(2010\)](#), [Kim and Lim \(2010\)](#), [Olayinka \(2010\)](#), [Sanda et al. \(2010\)](#) and [Tornyeva and Wereko \(2012b\)](#), . But the findings are similar to those found by [He \(2008\)](#) who finds a significant negative relationship between independent boards and firms' performance.

Furthermore, the inferential results on insurance firms also reveal that board size does not have any significant impact on firm performance in both models. These findings are contrary to those found by [Adams and Mehran \(2008\)](#), [Zainal- Abidin et al. \(2009\)](#), [Olayinka \(2010\)](#) and [Sanda et al. \(2010\)](#).

However, the results also reveal that, when Tobin's Q is used as a measure of firms' performance under FGLS model, director ownership has a significant nonlinear negative impact on firms' performance. That is, as directors' ownership increases, firms' performance increases up to a given threshold, beyond which, any further increase in the ownership will lead to a decrease in the performance. These findings are contrary to the those by [Bhagat and Bolton \(2008\)](#), who find a significant positive relationship between directors' equity ownership and firm performance, and also that of [Olayinka \(2010\)](#) and [Sanda et al. \(2010\)](#)who find a significant negative relationship

between directors' equity ownership and performance. These findings are also not conformity with those of [Mehran \(1995\)](#) who finds no significant relationship between the two variables.

Moreover, the results show that family directorship does not have any significant impact on firm performance in both models. These findings are contrary to those found by [Lausten \(2002\)](#), [Maury and Pajuste \(2005\)](#), [Villalonga and Amit \(2006\)](#), and [Sanda \*et al.\* \(2008\)](#)

## 6. CONCLUSIONS AND POLICY IMPLICATIONS

On the basis of the findings of this study, the following conclusions and policy implications are drawn:

Increase in gender diversity on the board significantly increases firm financial performance. By implication therefore, even though the percentage of female directors on corporate boards in Nigeria is low, an increase in female participation on the board will promote firms' performance.

However, increase in ethnic representation, family directors, and board size on the board of directors will not bring about any significant impact on the performance of insurance firms listed on the Nigerian Stock Exchange.

However, increase in the number of foreign directors on the board of directors will boost the financial performance of insurance firms listed on the Nigerian Stock Exchange. But on the contrary, an increase in the number of outside directors contributes in reducing the performance of insurance companies in Nigeria.

Furthermore, Directors' equity ownership does promote performance of insurance firms listed on the Nigerian stock exchange up to a given threshold, beyond which, any increase in ownership will decrease the performance of insurance companies in Nigeria.

Consequent upon the major conclusions of this study, the following policy implications are drawn:

- A reasonable increase in the percentage of female directors on the board will enhance the performance of insurance companies in Nigeria.
- Since ethnic diversity, family directors, and board size do not have any significant impact on the performance insurance companies, any increase in these factors will not promote insurance companies' performance.
- Appointing foreign directors to the boards of insurance firm will boost the financial performance of insurance firms in Nigeria. Therefore, increase in the number of foreign directors on the boards of insurance companies in Nigeria enhances performance.
- Although the literature indicates that an increase in the number of outside directors in the boards will promote firms' performance, that does not apply to the firms in insurance sector. On the contrary, an increase in the number of outside directors on a board will reduce the performance of an insurance company.

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## APPENDIX

The List of insurance firms that serves as the sample of this study:

SN	NAMES
1.	AIICO INSURANCE PLC
2.	CORNERSTONE INSURANCE PLC
3.	GUINEA INSURANCE PLC
4.	LASACO ASSURANCE PLC
5.	LAW UNION & ROCK INS. PLC
6.	LINKAGE ASSURANCE PLC
7.	MUTUAL BENEFITS ASSURANCE PLC
8.	N.E.M. INSURANCE PLC
9.	NIGER INSURANCE PLC
10.	PRESTIGE ASSURANCE CO. PLC
11.	STANDARD ALLIANCE IND PLC
12.	UNIC INSURANCE PLC