EMPIRICAL NEXUS BETWEEN CORPORATE GOVERNANCE ATTRIBUTES AND DIRECTORS REMUNERATION: NIGERIAN EVIDENCE

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ABSTRACT

This study is aimed at investigating the relationship between corporate governance attributes and director’s remuneration in Nigerian quoted firms. Specifically the study attempted to proffer answers to questions as it relates to the impact of board size, firm size, board independence, chief executive officer duality on directors’ remuneration. Secondary data were extracted from the financial statements and accounts of the sampled firms for a 25-years period spanning 1997-2021. And analyzed using Ordinary Least Squares Regression (OLS) E-views version 10 The study revealed that Board size, firm size, and board independence exerted positive effect on directors' remuneration, whereas the presence of a chief executive officer duality had negative influence on directors' remuneration. It was recommended that the position of Companies and Allied Matters Act (CAMA) 2020 as it concerns directors’ remuneration should be carefully adhered to and that the directors' remuneration must not be altered by any director irrespective of their positions in the organization. It is concluded that the chief executive officer duality should not be used as a yardstick in the determination of directors’ remuneration rather the board size, firm size, board independence should be used as a measure for fixing directors’ remuneration.
INTRODUCTION

Background to the Study
Internal firm dynamics are the principal drivers of excellent corporate governance, which aims to maximize shareholders returns on investment. It specifies the responsibilities of corporate stakeholders (board, management, shareholders,). It institutes the mechanism for making corporate choices. Within these limits, the entity operates, forms objectives, and establishes procedures to track and access performance. Studies in corporate governance focuses on the accountability of a firm’s board of directors in their dealings with the firm’s stakeholders. Multiple objectives drive corporate governance. Good corporate governance is often perceived as a luxury by certain businesses. Corporate governance, refers to the framework of rules, regulations, and laws that corporations uses to regulate their operations. To guarantee smooth operation, corporate governance specifies that all members of an entity adopt transparent and straightforward processes in decision making. The ultimate goal of good corporate governance aims to promote conditions that encourage financial stability, long-term investment and the highest standards of business ethics all of which impact positively social development and economic growth.

In corporate governance, shareholders, management, and the board of directors play essential roles. Employees, suppliers, consumers, purchasers, lenders, regulators, environmentalists, and the general public are all examples of other stakeholders. Scholarly interest is growing in conducting research on a diverse set of themes related to corporate governance. The rights and treatment of shareholders, especially minority owners, and the duties of independent and non-independent directors are among the most pressing concerns. Therefore, it would be dishonest to say that director remuneration is independent of good corporate governance.

Rationale for the Study
In recent times, the appropriateness of the high remuneration received by corporate board directors has been called into question, which has necessitated a lot of debate among practitioners and academics as they argue that some directors, notably in the banking sector, are receiving excessive remuneration at the expense of other employees and even shareholders. With this in mind this research will concentrate on four focal areas viz (i) the overall level of directors’ remuneration and the role of share options, (ii) the suitability of performance measures linking directors’ remuneration with performance and corporate size, (iii) the role played by the remuneration committee in the setting of directors ‘remuneration, (iv) the influence the shareholders are able to exercise on directors’ remuneration. Specifically this study aims to address the following questions:

i. To what extent does Board size impact on Directors’ Remuneration (REM) of quoted firms in the Nigerian exchange group?

ii. To what extent does Firm Size (FSIZE) affect Directors’ Remuneration (REM) of quoted firms in the Nigerian exchange group?

iii. What is the influence of Board Independence (BIND) on Directors’ Remuneration (REM) of quoted firms in the Nigerian exchange group?

iv. What is the impact of Chief Executive Officer Duality (CEOD) on Directors’ Remuneration (REM) of quoted firms in the Nigerian exchange group?
Statement of Hypotheses

The hypotheses of this study are stated in the null form as follows;

**H01:** Board size has no significant influence on directors’ remuneration of quoted firms in the Nigerian exchange group.

**H02:** Firm Size (FSIZE) has no significant effect on Directors’ Remuneration (REM) of quoted firms in the Nigerian exchange group.

**H03:** Board Independence (BIND) has no significant effect on Directors’ Remuneration (REM) of quoted firms in the Nigerian exchange group.

**H04:** Chief Executive Officer Duality (CEOD) has no significant effect on Directors’ Remuneration (REM) of quoted firms in the Nigerian exchange group.

CONCEPTUAL REVIEW

Corporate Governance

Corporate governance includes a firm's internal controls and procedures. Everyone in an organization, from the chief executive officer to the board of directors to the stockholders, has a specific set of duties and responsibilities that are outlined in the corporate charter (Imala, 2017). For corporate governance to be successful, it must ensure that top-level management is concerned about the interests of those who have a stake in the firm (including financiers, lenders, clients, and citizens). If we think about corporate governance as being primarily concerned with the foundations from which an organization draws its most fundamental goals and purposes, we can better grasp what it is trying to do.

The Securities and Exchange Commission (SEC) of Nigeria established a National Committee to Review the 2003 Code of Corporate Governance for Public Firms in September 2008 as part of its efforts to improve corporate governance in Nigeria and to fulfil the regulatory and oversight responsibility over the securities of public firms in Nigeria assigned to it by Section 13 of the Investment and Securities Act, 2007. The Nigerian Companies and Allied Matters Act, 2004, contains extensive descriptions of directors’ duties and the value they bring to a firm. When dealing with a firm, the significance of Corporate Governance cannot be overstated.

Directors’ Remuneration

A director is a trained manager, he or she cannot act in an impartial capacity when representing shareholders and making decisions on their behalf, hence their choice may not be the best available option. (Wallace, Zinkin (2016). A firm’s Directors are the people it has chosen and appointed to oversee its day-to-day activities in accordance with Section 224(1) of the Corporations Act, 2004. This is the primary obligation and responsibility that the law places on corporate executives. On the other hand, firm directors are largely needed to keep an eye on how things are run on a daily basis. Still, the Board of Directors plays a role in formulating policy, and it is reasonable to assume that directors will get pay for the work they do in fulfilling their roles and obligations. All of the money that an employee receives for doing their job falls under the umbrella concept of "remuneration," which also includes things like salary, allowances, incentives, and bonuses. (Oviantari, 2020, Ebiaghan,2020) The CEO is compensated in a variety of ways, including a salary and bonuses tied to short- and long-term success, as well as a stock-based remuneration plan (CEO). Directors' remuneration is defined as the compensation that a corporation or organisation provides to individuals serving as directors in exchange for those individuals' services. All remuneration, both monetary and in-kind, received by the executive throughout their employment is included.
Board Size (BSIZE) and Directors’ Remuneration

The size of the board is essential in fixing the directors’ remuneration. Board size refers to the total number of directors in a firm (Abdullah 2021). The number of directors in a board of directors of a firm range from a small number to a large number. Kajola (2018), examined the relationship between Corporate Governance and Directors’ Remuneration. He examined the relationship between four corporate governance mechanisms (board size, board composition, chief executive status and audit committee) and two firm measures (return on equity, (ROE), and profit margin, (PM), using a sample of twenty Nigerian quoted firms between 2000 and 2006 based on panel data and Ordinary Least Square as a method of estimation, he found a positive significant relationship between Return on Equity and board size as well as chief executive status. Meanwhile, Yermack (2021) found that small boards give CEOs larger incentives and force them to bear more risks than large board firm. Holthausen and Larker (2013) argue that board size might influence directors’ pay, also Core, Holthausen & Larker (2013) established a positive association between board size and executive remuneration. Ozkan (2021) evidence a positive and significant association between CEO remuneration and board size. Also Yatim (2013) employed across-sectional analysis of 428 quoted firms on the quoted firms in the Nigerian exchange group for the financial year ended 2020 and found that board size is positively and significantly related to directors remuneration.

Firm Size (FSIZE) and Directors’ Remuneration

The number of board members plays a significant role in deciding director remuneration. The number of directors working for a certain business is referred to as its "board size" (Abdullah 2021). Depending on the firm's size, the board of directors may include as few as one member or as many as twenty. This study looked into the relationship between Corporate Governance and Directors' Remuneration Kajola (2018). Twenty publicly traded Nigerian firms were utilised to examine the connection between four corporate governance mechanisms (board size, board composition, chief executive status, and audit committee) and two firm indicators (return on equity [ROE] and profit margin [PM]). He looked into how these six elements were related to one another. By utilising panel data and Ordinary Least Square for estimation, he discovered a positive and statistically significant relationship between ROE and the number of board members and the title of CEO. They saw value in maintaining that connection for the firm's sake. Yermack (2021) found that firms with small boards offer CEOs greater incentives and encourage them to take greater risks than those with large boards. Core, Holthausen, and Larker (2013) and Holthausen and Larker (2013) both discovered a positive relationship between the number of board members and the amount of money executives made. According to Holthausen and Larker (2013), there may be a correlation between the number of board members and remuneration. Ozkan (2021) shows that the size of the board of directors is correlated positively and statistically significantly with the pay of the chief executive officer. Yatim (2013) also conducted a cross-sectional study of 428 firms in the quoted firms in the Nigerian exchange group for the fiscal year ending in 2020 and found that the size of the board of directors was positively and significantly correlated with the amount of remuneration given to the board's members.

Board Independence (BIND) and Directors’ Remuneration

Designed to foster superior corporate governance, the firm's independence board is a dynamic part of the organisation. The Nigerian model calls for a mix of executive and non-executive directors, with the latter making up the bulk of the board. This prudent measure ensures that the non-executive directors can monitor the performance of the executive directors. As per the Code's requirements, the Board must have at least one independent member, and board members are allowed to receive remuneration beyond that which is directly related to their service on the board. The Code
additionally provides a suggested organisational framework for the Board. Firms with larger board sizes and a higher proportion of non-executive directors on their boards pay their CEOs higher remuneration, according to the results of an empirical study of the influence of corporate governance mechanisms on the level of CEO remuneration for a sample of 414 large UK firms during the fiscal year 2019/2020 conducted by Ozkan (2021). Specifically, the research was done in the UK. The impact of corporate governance on CEO pay was also studied by Sapp (2017). Using a sample of 400 publicly traded Canadian firms and a wide range of internal and external variables pertinent to corporate governance, he studied the correlation between pay for the top five executives and factors related to good corporate governance. They conclude that the CEO's remuneration, in particular, is affected by disparities in internal governance, which in turn are related to differences between organisations in the characteristics of the CEO, remuneration committee, and board of directors. The chief executive officer is especially vulnerable to this.

**Chief Executive Officer Duality (CEOD) and Directors’ Remuneration**

Multiple studies have examined the schism between the chief executive officer and the chairman of the board. Some people believe that the Chief Executive Officer (CEO), who is usually also the Chairman of the Board of Directors, has too much power. As there are no regulatory constraints, shareholders can have faith in management's ability to act unilaterally (Quadric, 2010 Orits et al 2021). Ryan and Wiggins (2021) conducted studies that pinpointed exactly who was picking pockets. The dual job of CEO and COO is counterproductive to effective administration and monitoring of corporate governance, as is the high remuneration of directors. They concluded that having two CEOs lowers total director remuneration.

**Theoretical Framework**

This research is anchored on the agency theory which had its beginnings in the early 1970s (Ross 1973, Jensen & Meckling 1976), had by that time matured into the dominant institutional logic of corporate governance (Zajac & Westphal 2004). The concept of agency seeks to offer an explanation for the phenomenon that occurs when management acts as an agent for the purpose of looking out for the owners’ or shareholders' best interests (the principal). The findings of Mohammad, Abdullah, and Md. Shukor (2020) indicate that the agency theory can be used to provide a first explanation for the link between corporate governance and the remuneration of directors.

**REVIEW OF EMPIRICAL STUDIES**

The impact of directors’ remuneration on the corporate governance of thirteen (13) commercial banks listed on the Nigerian exchange group between 2010 and 2017 as examined by Edeh (2021). Finding a correlation between directors’ involvement in corporate governance and their salary was the focus of this research. The study used methods including descriptive statistics, correlation matrices, and ordinary least square regression to undertake an in-depth examination of the relevant data set. The study concluded that there is no statistically significant link between directors’ remuneration (proxy as directors' salary and bonus share) and corporate governance in terms of the value supplied to shareholders in publicly traded banks in Nigeria. This result means that, despite receiving a hefty pay raise, the performance of these directors has not significantly improved. This implies that the large sums of money given to banking industry board members have had a negative effect on industry performance, but that this effect is very little. This empirical evidence also implies there may be an agency problem within the Nigerian banking industry, as directors may benefit themselves by maximizing raw earnings without sufficient regard for market performance. Research suggests that, in addition to a pay-for-performance strategy, a strong framework and an adequate contractual arrangement should be used to steer the payment of the board of directors. This study concludes that
better corporate governance practices will spread throughout the Nigerian banking industry as a result of this, Magaji Ahmed (2021) answered the question of whether or not people would be driven if they were to believe that high levels of effort would result in desirable outcomes. Studies on this topic have shown conflicting findings. This research set out to answer the question, "What factors, if any, affect the remuneration of directors of publicly traded deposit money banks in Nigeria?" by looking at variables such executive salaries and share ownership. Variables related to executive remuneration were utilised as stand-ins. The CEO's salary, the chairman's salary, and the highest-paid director's salary were the relevant factors. Executives' share ownership was reflected by the percentage of the firm's stock they owned. A financial indicator known as the "net interest margin" was applied to the situation. An advanced form of ordinary least squares regression was used for the estimation, while Stata 13 was used for the data analysis.

**RESEARCH METHODOLOGY**

This study applied an ex-post facto research design using secondary data to determine the cause and effect relationship between the dependent and independent variables. This research is a longitudinal survey spanning 25 years (1997-2021) of a population 177 quoted firms in the Nigerian Exchange Group.

**Sample and Sampling Technique**

The sample size was calculated using the statistical method for a diverse population, with a margin of error of 5% set as the upper bound. Okeke (2018) explains how to calculate a suitable sample size using the Taro Yamani formula, which stipulates that: 

\[ n = \frac{N}{1 + N(e)^2} \]

where:
- \( n \) = Sample Size
- \( N \) = Population of the study
- \( e \) = Co-efficient of confidence or margin of error

Therefore, using \( n = \frac{N}{1 + N(e)^2} \)

\[ n= \frac{177}{1+177(0.05)^2} \]
\[ n= \frac{177}{1+177(0.0025)} \]
\[ n= \frac{177}{1+0.4425} \]
\[ n= \frac{177}{1.4425} \]
\[ n= 122 \text{ firms.} \]

Even so, a sample of 12 firms was used for the analysis. This was after firms with incomplete records for the time period and those that had been delisted along the way were taken out of the running. The filter method was used to figure out the sample size for this particular research project. The Nigerian exchange group website was used to get the information needed for the study. On the stock exchange, there are 177 firms that are traded often. We left out of this total the firms whose directors don't get raises every year. Because of this, this study only looked at 12 firms whose directors' pay goes up by a lot and regularly.

**Method of Data Analysis**

This study used panel data Ordinary Least Square (OLS) regression technique in analyzing the data. In doing this, computer package of E views version 10.0 was used. The results of the analysis were extracted and presented in tabular form.

**Model Specification**

The relationship between directors’ remuneration and corporate governance was analyzed. The model basically relates to directors’ remuneration with the measures of corporate governance, Board Size (BSIZE), Firm Size (FSIZE), Board Independence (BIND), Chief Executive Officer (CEO) Duality (CEOD), This provides a crude test of the relationship between directors’ remuneration and
corporate governance. A control variable was included to account for certain factors that might affect both corporate governance and directors’ remuneration. The control variable is firm size.

**Functional Model**

REM = f (BSIZE, FSIZE, BIND, CEOD, )...MODEL 1

Mathematical equation:

REM = β₀ + β₁BSIZE + β₃BIND + β₄CEOD + + β₂FSIZE + T...Equation 1

Where:

BSIZE = Board Size
FSIZE = Firm Size
BIND = Board Independence
CEOD = Chief Executive Officer (CEO) Duality
T = Error Term or Stochastic Term
β₀ = Constant Term or Intercept
β₁-4 = Coefficient of parameters of tax productivity

A priori expectation = β₁-4 > 0

**RESULTS AND DISCUSSION**

**Data Presentation of Descriptive Statistics**

Table 1. Below presented the descriptive result of the variables employed in this study. It shows the summary of the descriptive statistics of the dependent, independent and control variables. The dependent variable (Directors’ Remuneration) had a mean value of 979,643,865,737.304 for the period under review. The independent variables which are Board Size, Firm size, Board independence and Chief Executive Officer (CEO) Duality had mean values of 1,665,111.4088,909,986,491.1372, 39,842,089.7143, 3,637,690,158,422.60 and respectively. The control variable which is firm size had a mean value of 88,909,986,491.1372. The minimum value of Directors’ remuneration was ₦75,689,491,876,387.82 while the maximum value was ₦96,437,592,402,748.40. The minimum and maximum values of Board Size was 1,454 and 1,851 respectively. Board independence had a minimum value of 1,568,949,120,387.82 and a maximum value of 6,437,592,402,748.40. The minimum and maximum values of Chief Executive Officer Duality was 2,367,891.00 and 146,267,156.00 respectively. Firm size had a minimum value of 31,567,364,087.00 and a maximum value of 184,596,629,926.57.

<table>
<thead>
<tr>
<th>Summary of Descriptive Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>(000,000) Directors’ Remuneration (REM)</td>
</tr>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>Minimum</td>
</tr>
<tr>
<td>Maximum</td>
</tr>
<tr>
<td>Std. Deviation</td>
</tr>
<tr>
<td>Jarque-Bera</td>
</tr>
<tr>
<td>Skewness</td>
</tr>
</tbody>
</table>
The above Table 1, shows the Board Size, Board independence, Chief Executive Officer (CEO) Duality, Firm size is the control variable. It shows that the probability of each variable and the number of observations was 300. All the variables, Board Size, Board independence, Chief Executive Officer (CEO) Duality are positively skewed.

Data Analysis
Preliminary Test: Diagnostic Tests
For good inference to be drawn from the analysis, some diagnostic tests were conducted. These diagnostic tests included test for Stationarity, random effects test, multicollinearity, endogeneity test, panel analysis test and Hausman fixed test.

Test for Stationarity
Stationarity is a time series property that asserts that the value of a variable does not change with time, i.e., temporal variation does not function as a factor that causes changes in the value of a variable. In this study, the Levin-Lin-Chu Panel unit root test was performed to check for stationarity, and the findings are shown below:

<table>
<thead>
<tr>
<th>Variables</th>
<th>Levin, Lin &amp; Chu Statistic (Panel data)</th>
<th>Prob (At level) at 5 percent sig. level.</th>
<th>Levin, Lin &amp; Chu Statistic (Panel data)</th>
<th>Prob (At first difference at 5 percent sig. level.</th>
<th>Order of integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>REM</td>
<td>1.1492</td>
<td>0.1252</td>
<td>2.3084</td>
<td>0.0454</td>
<td>I(1)</td>
</tr>
<tr>
<td>BIND</td>
<td>0.8554</td>
<td>0.8038</td>
<td>2.5759</td>
<td>0.0050</td>
<td>I(0)</td>
</tr>
<tr>
<td>BSIZE</td>
<td>1.8154</td>
<td>0.9653</td>
<td>2.9979</td>
<td>0.0408</td>
<td>I(1)</td>
</tr>
<tr>
<td>CEOD</td>
<td>9.22</td>
<td>0.0000</td>
<td>2.2456</td>
<td>0.0124</td>
<td>I(0)</td>
</tr>
<tr>
<td>FSIZE</td>
<td>10.2806</td>
<td>0.0000</td>
<td>3.9830</td>
<td>0.0000</td>
<td>I(0)</td>
</tr>
</tbody>
</table>

Source: E-Views Output, version 10.0 (2022)

From the table 2 above, it can be seen that the variables of this study were all stationary at I(0) at 5 percent significant level except for REM and BSIZE which were found stationary at level i.e. at the order I(1). Hence the stationarity condition here is of a mixed order of integration. Generally, the stationarity of the variables implies that the variables of the study change with time i.e., temporal variation does not function as a factor that causes changes in the value of a variable and so the movement of the variables has stable over time.

Test of Hypotheses 1
Multicollinearity Test of Hypothesis 1
H01: Board size has no significant influence on directors’ remuneration of quoted firms in the Nigerian exchange group.
One of the assumptions of OLS regression model is that the explanatory variables are not perfectly correlated (absence of multicollinearity). According to Gujarati (2004) Tolerance less than 0.1 and the VIF value 10 and above imply the presence of multicollinearity in the estimates. However, the results from Table 3 suggests that there is no existence of excessive correlation among the independent variables (Board Size and firm size), because the smallest Tolerance Value (TV) is 0.65, while the highest Variance Inflation Factor (VIF) is 1.61.

Table 3
_Multicollinearity Test_

<table>
<thead>
<tr>
<th>Variables</th>
<th>VIF</th>
<th>Tolerance value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board Size</td>
<td>1.61</td>
<td>0.65</td>
</tr>
<tr>
<td>Firm size</td>
<td>1.52</td>
<td>0.68</td>
</tr>
</tbody>
</table>

Source: E-Views Output, version 10.0 (2022)

**Endogeneity Test**

There is presence of endogeneity when the explanatory variables in an OLS regression model are correlated with error term. As shown in Table 4 the coefficients of the Board Size (β = 0.6462; p<0.01) and firm size (β = -0.9828; p<0.01) were statistically significant at 1% level of probability. Since the two explanatory variables (Board Size and Firm size) are statistically significant, it is therefore accepted that the explanatory variables are endogenous.

Table 4
_Endogeneity Test_

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board Size</td>
<td>0.6462***</td>
<td>0.1219</td>
<td>5.21903</td>
<td>0.0000</td>
</tr>
<tr>
<td>Firm size</td>
<td>-0.9828***</td>
<td>0.2843</td>
<td>-3.49209</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Source: E-Views Output, version 10.0 (2022)

***significant at 1%

**Hausman Test**

Due to panel nature of the data, panel analysis was conducted by the instrument of the Hausman specification test. The objective of this was to make a decision relating to the choice of either of fixed model or random effect model. The result is presented in Table 5 below. It shows that at 1% level of significance, the \( \chi^2 \) is 8.40415 and the prob=\( \chi^2 \) is 0.0005 which is significant. This significance of the p-value shows that Hausman test favours the interpretation of the Random effect model. Hence, the study had to interpret the OLS.

Table 5
_Hausman Test_

<table>
<thead>
<tr>
<th>Correlated Random Effects - Hausman Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equation:Untitled</td>
</tr>
<tr>
<td>Test cross-section and period random effects</td>
</tr>
<tr>
<td>Test Summary</td>
</tr>
<tr>
<td>Chi-Sq. Statistic</td>
</tr>
<tr>
<td>Cross-section random</td>
</tr>
</tbody>
</table>

Source: E-Views Output, version 10.0 (2022)

***significant at 1%
Table 6

*Least Squares Analysis on Board Size and Firm Size (Control Variable)*

<table>
<thead>
<tr>
<th>Dependent Variable: Directors’ Remuneration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method: Least Squares</td>
</tr>
<tr>
<td>Date: 08/08/22   Time: 1:15</td>
</tr>
<tr>
<td>Sample: 1997-2021</td>
</tr>
<tr>
<td>Included observations: 300</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board Size</td>
<td>1.8420***</td>
<td>0.4955</td>
<td>3.6977</td>
<td>0.0002</td>
</tr>
<tr>
<td>Firm size</td>
<td>1.6576**</td>
<td>0.7183</td>
<td>2.3480</td>
<td>0.0196</td>
</tr>
<tr>
<td>C</td>
<td>-4.8635</td>
<td>3.0239</td>
<td>-1.6083</td>
<td>0.1014</td>
</tr>
</tbody>
</table>

R-squared: 0.951001  Mean dependent var: 9.79E+11
Adjusted R-squared: 0.941521  S.D. dependent var: 7.90E+07
S.E. of regression: 190.4375  Aikake info criterion: 13.55356
Sum squared resid: 0.112663  Schwarz criterion: 14.13174
Log likelihood: -456.3746  Hannan-Quinn criterion: 13.78322
F-statistic: 102.4226  Durbin-Watson stat: 1.586108
Prob(F-statistic): 0.00000

Source: E-Views Output, version 10.0 (2022)

**Interpretation of Regression Result on Table 6**

Based on the relationship between Board Size and Directors’ remuneration, the result in Table 6 reveals a positive coefficient of 1.8420 and a p-value of 0.0002 implying significance at 1% level. Therefore, the null hypothesis which stated that Board Size does not have any significant influence on directors’ remuneration of quoted firms in the Nigerian exchange group is hereby rejected. In essence, Board Size influences Directors’ remuneration of the quoted firms Nigerian exchange group is positive.

**Impact of Board Independence on Directors’ remuneration: Test of Hypothesis 3**

H0: Board Independence (BIND) has no significant relationship with Directors’ Remuneration (REM) of quoted firms in the Nigerian exchange group.

**Multicollinearity Test**

The results in Table 7 suggest that there is no existence of excessive correlation among the independent variables (Board Independence and firm size), because the smallest Tolerance Value (TV) is 0.74, while the highest Variance Inflation Factor (VIF) is 1.77.

<table>
<thead>
<tr>
<th>Variables</th>
<th>VIF</th>
<th>Tolerance value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board Independence</td>
<td>1.44</td>
<td>0.79</td>
</tr>
<tr>
<td>Firm Size</td>
<td>1.77</td>
<td>0.74</td>
</tr>
</tbody>
</table>

Source: E-Views Output, version 10.0 (2022)

**Endogeneity Test**

As shown in Table 8, the coefficients of the of Board Independence ($\beta = 0.7408; p<0.01$) and firm size ($\beta = -0.9870; p<0.01$) were statistically significant at 1% level of probability. Since the two
explanatory variables (Board Independence and firm size) are significant at 1% level of probability, it is therefore accepted that the explanatory variables are endogenous.

Table 8  
Endogeneity Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board Independence</td>
<td>0.7408***</td>
<td>0.1141</td>
<td>6.4053</td>
<td>0.0000</td>
</tr>
<tr>
<td>firm size</td>
<td>-0.9870***</td>
<td>0.1970</td>
<td>-4.9594</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Source: E-Views Output, version 10.0 (2022)  
***significant at 1%

Panel Analysis Test

The panel analysis was conducted by the instrument of the Hausman specification test. The result presented in Table 9 shows that at 5% level of significance, the chi² is 0. 58532 and the prob>chi² is 0.9734 which is insignificant. This non-significance of the p-value shows that Hausman test favours the interpretation of the random effect model.

Table 9  
Panel Analysis Test

<table>
<thead>
<tr>
<th>Correlated Random Effects - Hausman Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equation: Untitled</td>
</tr>
<tr>
<td>Test cross-section and period random effects</td>
</tr>
<tr>
<td>Test Summary</td>
</tr>
<tr>
<td>Chi-Sq. Statistic</td>
</tr>
<tr>
<td>Cross-section random</td>
</tr>
</tbody>
</table>

Source: E-Views Output, version 10.0 (2022)

Table 10  
Least Squares Result on Board independence and Firm size

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board independence</td>
<td>9.0227</td>
<td>2.4656</td>
<td>3.6595</td>
<td>0.0002</td>
</tr>
<tr>
<td>Firm Size</td>
<td>4.2106</td>
<td>1.5659</td>
<td>2.6889</td>
<td>0.0037</td>
</tr>
<tr>
<td>C</td>
<td>9.0227</td>
<td>2.4656</td>
<td>3.6595</td>
<td>0.1967</td>
</tr>
</tbody>
</table>

R-squared | 0.459882 | Mean dependent var | 9.79E+ 11 |
Adjusted R-squared | 0.412864 | S.D. dependent var | 7.90E + 07 |
S.E. of regression | 244.7310 | Sum squared resid | 4012848. |
Sum squared resid | 19978576 | Schwarz criterion | 14.13174 |
Log likelihood | -456.3746 | Hannan-Quinn criter. | 13.78322 |
F-statistic | 25.25977 | Durbin-Watson stat | 1.727704 |
Prob(F-statistic) | 0.000000 |

Source: E-Views Output 10.0 (2022)

Interpretation of Result  
Table 10 and Decision Reached

Based on the relationship between Board Independence and Firm Size, the result in Table 10 reveals a positive coefficient of 9.0227 and a p-value of 0.0002 implying significance at 1% level. Therefore,
the null hypothesis which stated that Board Independence does not have any significant impact on the Firm Size of quoted firms in the Nigerian exchange group is hereby rejected. In essence, Board Independence affects Firm Size, of quoted firms in the Nigerian exchange group in a positive manner.

**Chief Executive Officer Duality (CEOD) Influence on the Firm Size: Test of Hypothesis 4**

**H04:** Chief Executive Officer Duality (CEOD) has no significant relationship with Directors’ Remuneration (REM) of quoted firms in the Nigerian exchange group.

**Multicollinearity Test**

The results from Table 11 suggest that there is no existence of excessive correlation among the independent variables Chief Executive Officer Duality (CEOD) and firm size, because the smallest Tolerance Value (TV) is 0.61 while the highest Variance Inflation Factor (VIF) is

Table 11

<table>
<thead>
<tr>
<th>Variables</th>
<th>VIF</th>
<th>Tolerance value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief Executive Officer Duality (CEOD)</td>
<td>1.47</td>
<td>0.61</td>
</tr>
<tr>
<td>Firm Size</td>
<td>1.30</td>
<td>0.85</td>
</tr>
</tbody>
</table>

*Source: E-Views Output, version 10.0 (2022)*

**Endogeneity Test**

As shown in Table 12, the coefficients of the of Chief Executive Officer Duality (CEOD) ($\beta = 0.6284; p>0.01$) and firm size ($\beta = 3.3203; p<0.01$) were statistically significant at 1% level of probability. Since the two explanatory variables (Chief Executive Officer Duality (CEOD) and firm size) are insignificant at 1% level of probability, it is therefore rejected that the explanatory variables are endogenous.

Table 12

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief Executive Officer Duality (CEOD)</td>
<td>0.6284</td>
<td>0.0790</td>
<td>7.9594</td>
<td>0.8761</td>
</tr>
<tr>
<td>Firm Size</td>
<td>3.3203</td>
<td>1.0712</td>
<td>3.0997</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

*Source: E-Views Output, version 10.0 (2022)*

**Panel Analysis Test**

The result of the Hausman specification test as presented in Table 13 shows that at 1% level of significance, the $\chi^2$ is 8.298564 and the $\text{Prob}>\chi^2$ is 0.8654 which is insignificant. This insignificance of the $p$-value shows that Hausman test favours the interpretation of the fixed effect model.

Table 13

<table>
<thead>
<tr>
<th>Equation: Untitled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test cross-section and period random effects</td>
</tr>
<tr>
<td>Test Summary</td>
</tr>
<tr>
<td>Cross-section random</td>
</tr>
</tbody>
</table>

*Source: E-Views Output, version 10.0 (2022)*
Table 14

**Least Squares Result on Chief Executive Officer Duality and Firm size**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEOD</td>
<td>10.8215</td>
<td>0.3759</td>
<td>4.8455</td>
<td>0.8794</td>
</tr>
<tr>
<td>Firm Size</td>
<td>4.3442</td>
<td>8.8957</td>
<td>0.6730</td>
<td>0.5773</td>
</tr>
<tr>
<td>C</td>
<td>-2.6825</td>
<td>1.8482</td>
<td>-0.5440</td>
<td>0.6522</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.35772</td>
<td>Mean dependent var</td>
<td>9.79E+ 11</td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.37387</td>
<td>S.D. dependent var</td>
<td>7.90E+ 07</td>
<td></td>
</tr>
<tr>
<td>S.E. of regression</td>
<td>184.5328</td>
<td>Sum squared resid</td>
<td>13.49057</td>
<td></td>
</tr>
<tr>
<td>Sum squared resid</td>
<td>1770723.</td>
<td>Schwarz criterion</td>
<td>14.06875</td>
<td></td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-454.1698</td>
<td>Hannan-Quinn criter.</td>
<td>13.72023</td>
<td></td>
</tr>
<tr>
<td>F-statistic</td>
<td>109.2810</td>
<td>Durbin-Watson stat</td>
<td>1.583354</td>
<td></td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>0.000000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: E-Views Output, version 10.0 (2022)

**Interpretation of Regression Result on Table 14**

Based on the relationship between Chief Executive Officer Duality (CEOD) and Directors’ remuneration, the result in Table 14 reveals a negative coefficient of 10.8215 and a p-value of 0.8794 implying significance at 1% level. Therefore, the null hypothesis which stated that Chief Executive Officer Duality (CEOD) does not have any significant influence on the Firm Size of quoted firms in the Nigerian exchange group is hereby accepted. In essence, Chief Executive Officer Duality (CEOD) affects Directors’ remuneration of quoted firms in the Nigerian exchange group negatively.

**SUMMARY OF FINDINGS**

In this study, we analyzed data from the selected sampled banks covering 25 years from 1997 to 2021 to determine the impact of corporate governance attributes on directors’ remuneration of quoted firms in the Nigerian exchange group. Significant research has been conducted into the connection between corporate governance and director remuneration. When it comes to the management and control of firm matters, corporate governance norms place a premium on how directors’ are remunerated. Directors' remuneration is seen as more likely to be transparent under a system of corporate governance. Accordingly, the directors’ remuneration are established based on their relative importance to the organisation and its overall goals. Director remuneration should be handled in a special way and corporate governance is the practice that lays the groundwork for this. Firms should adhere to all applicable regulations regarding directors’ remuneration as set forth by the firm's corporate governance standards. Therefore, we infer that good corporate governance results, efficient use of the firm's resources and the payment of directors’ should be based in accordance with predetermined norms and practices of quoted firms in the Nigerian exchange group.

The summary of Individual variable Regression Results and the Control Variable are presented as follows:

**Hypotheses One: Board Size and Directors’ Remuneration.**

Table 6 presented the result on the influence of board size on directors’ remuneration of quoted firms in the Nigerian exchange group from year 1997 to 2021. The result reveals that the $R^2$ of 0.9510
(95%) shows the extent to which the Board Size and its control variable predicted Directors’ remuneration. The adjusted $R^2$ of 0.94152 showed that 94% of the variance in the directors’ remuneration was accounted for by Board Size and its control variable. From the result in Table 6 it could be seen that Board Size (coefficient = 1.8420; $p<0.01\%$) and firm size (coefficient = 1.6576; $p<0.05\%$) had positive influence on directors’ remuneration and were statistically significant. The statistics suggest that a percentage increase in Board Size will increase Directors’ remuneration by 184.2%. This means that any increase in board size will cause increase in the directors’ remuneration of the quoted firms in the Nigerian exchange group. This result is in line with that of Kenyoru, Kundu and Kibiwott (2021) who found out that board size enhances directors’ remuneration and that the higher the Board Size the higher the Directors’ remuneration. This refutes the result of Muhammad and Zudkefti (2021), as it finds no impact of board size on directors’ remuneration. Based on this positive significance, the alternative hypotheses which states that board size has positive influence on directors’ remuneration of quoted firms in the Nigerian exchange group is hereby accepted and the null hypotheses which states that Board size has no significant influence on directors’ remuneration of quoted firms in the Nigerian exchange group is hereby rejected.

**Hypotheses Two: Firm Size and the Directors’ Remuneration**

From Table 1 Firm size, which was used a control variable has a Jacque-Bera test value of 64.831 is positively associated with t-statistics value of -4.486972 and P value of 0.0003 % which is less than critical P-value of 5%. This indicated that firm size has significant effect on directors’ remuneration. This results supported the findings of Parthasarathy (2021), Mengistae and Xu (2021), Firth, Tam (2021), and Conyon (2021) found that firm size has positive and significant impact on directors’ remuneration and that the remuneration level increases with firm size, but deviated from the findings of Abdullah (2021); Valentine (2021). Based on this positive significance, the alternative hypotheses which states that Firm size has positive effect on directors’ remuneration of quoted firms in the Nigerian exchange group is hereby accepted and the null hypotheses which states that Firm size has no significant effect on directors’ remuneration of quoted firms in the Nigerian exchange group is hereby rejected.

**Hypotheses Three: Board independence and Directors’ Remuneration**

The result in Table 10 presents the impact of Board Independence on Directors’ remuneration of quoted firms in the Nigerian exchange group from year 1997 to 2021. The result reveals that the $R^2$ of 0.459882 (46%) shows the extent to which the Board Independence and its control variable predicted directors’ remuneration. The adjusted $R^2$ of 0.412864 showed that 41% of the variance in the directors’ remuneration was accounted for by Board Independence and its control variable. From the result in Table 10 it could be seen that Board Independence (coefficient = 9.0227; $p<0.01\%$) and firm size (coefficient = 4.2106; $p<0.01\%$) had positive influence on Directors’ remuneration and were statistically significant at 1% level of probability respectively. The positive coefficient of Board Independence and firm size implies that increase in Board Independence and firm size of the quoted firms will lead to an increase in their directors’ remuneration. The study found that board independence positively affects directors’ remuneration of quoted firms in the Nigerian exchange group, this agrees with the a priori expectations. This result is in support of the Ebire (2021) but contradict the works of Sekeme and Charles (2020), Oyedokun and Owolabi (2019). Based on this positive significance, the alternative hypotheses which states that Board Independence has positive effect on directors’ remuneration of quoted firms in the Nigerian exchange group is hereby accepted and the null hypotheses which states that Board Independence has no significant effect on directors’ remuneration of quoted firms in the Nigerian exchange group is hereby rejected.
Hypotheses Four: Chief Executive Officer Duality and Directors’ Remuneration
The result in Table 14 presents the impact of Chief Executive Officer Duality (CEOD) on Directors’ remuneration of quoted firms in the Nigerian exchange group from year 1997 to 2021. The result reveals that the R² of 0.35772 (36%) shows the extent to which the Chief Executive Officer Duality (CEOD) and its control variable predicted Directors’ remuneration. The adjusted R² of 0.37387 showed that (37%) of the variance in the Directors’ remuneration was accounted for by Chief Executive Officer Duality (CEOD) and its control variable. From the result in Table 14 it could be seen that Chief Executive Officer Duality (CEOD) (coefficient = 10.8215; p>0.01%) had negative influence on Directors’ remuneration and was statistically insignificant at 1% level of probability respectively. Firm size (coefficient = 7.3442; p>0.05) had a negative influence on Directors’ remuneration but was not statistically significant. The coefficient of Chief Executive Officer Duality (CEOD) implies that increase in Chief Executive Officer Duality (CEOD) of the quoted firms will lead to a decrease in the Directors’ remuneration. Based on the findings above, we therefore accept the null hypotheses which states that Chief Executive Officer Duality (CEOD) has no significant relationship with Directors’ Remuneration (REM) of quoted firms in the Nigerian exchange group. This result is in support of the Mohammad and Abdullah (2020); Momoh and Ukpong (2020) but deviated from the findings of Abdullah (2021); Valentine (2021). Based on this negative influence and statistical insignificance, the alternative hypotheses which states that Chief Executive Officer Duality has positive effect on directors’ remuneration of quoted firms in the Nigerian exchange group is hereby rejected and the null hypotheses which states that Chief Executive Officer Duality has no significant effect on directors’ remuneration of quoted firms in the Nigerian exchange group is hereby accepted.

CONCLUSION
This study evaluated the effects of corporate governance attributes on directors’ remuneration of quoted firms in the Nigerian exchange group. Specifically, the study sought to answer questions related to the board size, firm size, board independence, chief executive officer duality, and directors' remuneration. Data on the dependent and independent variables were extracted from the financial statements and accounts of the sampled firms over the 25 years period, from 1997-2021. Corporate governance attributes and directors' remuneration were examined for 12 quoted firms listed in the Nigerian exchange group. Ordinary Least Squares Regression (OLS) in E-view version 10 was used for the inferential analysis of the panel data. It was concluded that the position of Companies and Allied Matters Act (CAMA) 2004 and 2020 as regards to directors’ remuneration should be carefully followed. The manner in which the CAMA 2004 and 2020 has addressed the director remuneration must not be altered by any director irrespective of their positions. All the various institutions and bodies responsible for the drafting of CAMA should ensures that quoted firms in Nigeria comply with the conditions and manners in which directors’ are remunerated in the Nigerian exchange group. In light of the various findings of this study, board size, firm size and independence of the board, were found to have a substantial impact on directors' remuneration, whereas the presence of a chief executive officer duality had no influence throughout the studied periods.

Policy Recommendations
Based on the various empirical findings stated in the earlier chapter of this work, we recommend to the management of reporting entities as follows:
Board of directors’ size should be used as criteria and basis for fixing directors’ remuneration. A large board size should be assigned large amount for the payment of the directors’ remuneration
compare to when the board size is small. The size of the firm should be a vital basis for the remuneration of directors. A large firm is expected to possess more challenges, complexity, responsibility and bottleneck in terms of direction and control. An organized corporate governance practices are expected in large firms compare to small firms. As such the size of the firm should be a yardstick in fixing directors’ remuneration. The board independence of directors as a powerful corporate governance attribute charged with the responsibility of monitoring and controlling executive directors’ activities should be used as criteria for the remuneration of the directors. The Chief Executive Officer (CEO) Duality tends to have influence in the firm. One person acting as chairman and CEO of the firm should not be a yardstick in the determination of directors’ remuneration. The CEO duality as corporate governance mechanism should act within the ambit of the task responsibility and authority but not to be interfered with the directors’ remuneration. Director shareholding or ownership should not be basis for fixing directors’ remuneration irrespective of the proportion of shares held by both executive and non-executive directors. Their remuneration should be based on the predetermined norms and practices of the firm. On no account should directors of firms take advantages of the numbers of shares owned in the firm as basis for the determination of their remuneration. The corporate governance practices designed to be followed irrespective of the shares held as regards directors’ remuneration must be strictly adhered to. The performance proxy by the returns on assets should be another criterion the corporate governance practices of firms should consider in the remuneration of directors. When the firm is performing excellently well from the assessment of the returns on total assets of the firm, the directors should be well remunerated. The management, investors, and stakeholders should develop appropriate rules and standards to support good corporate governance and attractive directors’ remuneration in order to boost profitability of quoted firms. Analyst should pay more attention to the good corporate governance of the sampled firm in order to have an accurate evaluation of reported directors’ remuneration for a more reliable predictive guide for investors and others stakeholders without which, predictions made from them could have negative and misleading implication. In order to cover all excuses the management of the quoted firms should managed properly and effectively the corporate governance of the quoted firms. Quoted firms should invest more resources in technology and staff training since firm size exerts a positive effect on directors’ remuneration.

References
Ebiaghan, O. F. (2020). An Assessment of the conceptual linkages between the qualitative characteristics of useful financial information and Ethical Behavior within Informal institutions Economic Horizons, 22(2), 137-148. doi:10.5937/ekonhor2002145F


