CORPORATE BOARD STRUCTURE AND INVESTORS’ RETURNS OF LISTED INSURANCE FIRMS IN NIGERIA

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Abstract
The study examined the effect of corporate board structure on investors’ returns in insurance firms listed on the Nigerian exchange Limited. The study objectives were to; ascertain the effect of board size on performance of listed insurance firms in Nigeria, examine the impact of board diversity on the performance of listed insurance firms in Nigeria, analyze the effects of board independence on the performance of listed insurance firms in Nigeria, and examine the effects of board meetings on the performance of insurance firms in Nigeria. The study adopted ex-post facto research design. Secondary data was used. The data used were obtained from audited annual financial statements of 10 out of the 23 listed insurance firms in Nigeria. The results showed that board meeting has a negative and insignificant effect on dividend per share of listed insurance firms in Nigeria (-0.0053173, p=0.890 > 0.05), board diversity exerted a positive and significant effect on dividend per share of insurance firms in Nigeria (0.0115375, p=0.039 < 0.05), board size has a positive but insignificant effect on dividend per share of listed insurance firms in Nigeria (0.0115375, p=0.039 0.05), and board independence had a positive but insignificant effect on dividend per share of listed insurance firms in Nigeria (0.0000592, p=0.990 > 0.05). The study concluded that board of directors attributes are not to be blamed for the bad performance of Nigerian Insurance firms compared to other financial institutions in the country.

Keywords: Corporate board structure, investors’ returns, insurance firms

1 Introduction
In the recent past, more attention is being given to the effectiveness of corporations’ board of directors. The board of directors is composed of executive and non-executive directors saddled with the responsibility of providing strategic leadership to the company while acting in the best interests of shareholders. The role of board of directors is critical in ensuring good corporate governance in an organisation. As noted by Garuba and Otomewo (2015), companies’ failures and poor performance can be linked to bad corporate governance, hence, the need to ensure a properly composed board of directors in terms of size, gender diversity etc. Insurance businesses are pivotal to any economy as they form an integral part of the financial system (Pritchett & Atheam, 2012), although the awareness and patronage in emerging economies like Nigeria is low as compared to money deposit banks. This low patronage could be as a result of inefficiencies in the insurance sector in terms of lack of capacity to adequately indemnify risks and settling of claims (Obafemi, 2007). This has in no small measure impacted on the perception of investors.
and consequently the performance of insurance stocks on the Nigerian exchange. Investors’ confidence seems to be low regarding the insurance sector in Nigeria. A properly constituted board would definitely drive insurance businesses in Nigeria leading to improved performance and consequently more investment in the sector by both individual and institutional investors. Profitability is critical for the survival of insurance businesses in Nigeria. A company’s stock performance is a reflection of its corporate performance which in turn enhances investors’ returns. This implies that firm-specific factors influence the performance of companies. Irukwu (2009), Akingbola, (2010) and Soares (2014) noted other issues affecting the performance of insurance businesses in Nigeria namely; ethical related issues, inadequate premium management, poor labor standards, lack of regulation and enforcement mechanisms, lack of a proper code of conduct for insurance activities in Nigeria. An effectively composed board is expected to critically address the inefficiencies noted in the Nigerian insurance businesses.

Previous studies have been conducted on board attributes and performance of listed firms in Nigeria (Mahmud, 2017; Emeka & Agbuta; 2019, Aminu, Aisha & Mohammed; 2015, Mohammed; 2016; and Jeroh, 2020). Other studies focused on the impact of corporate governance on the performance of firms (Akeem, Terer, Temitope & Feyitimi, 2011; Ibe, Ugwuanyi, Georgina & Okanya, 2017; Abdullahi & Zechariah, 2019). Studies on corporate board structure effectiveness and investors’ returns are few. Tahir, Masri and Rahman (2020) examined corporate board attributes and dividend payout policy in line with the mediating role of financial leverage. Gugler, Mueller, and Yurtoglu (2004) examined Corporate Governance and the Returns on Investment. This study however examined the impact of corporate board structure effectiveness on investors’ returns in listed Nigerian Insurance firms. The study considered board meetings, board diversity, board size, and board independence as a measure for its effectiveness. Specifically, the objectives of this study were to: ascertain the effect of corporate board size on investors’ returns in listed Nigerian insurance firms in Nigeria; examine the effect of corporate board diversity on investors’ returns in listed Nigerian insurance firms in Nigeria; assess the effect of corporate board independence on investors’ returns in listed Nigerian insurance firms in Nigeria; and evaluate the effect of corporate board meetings on investors’ returns in listed Nigerian insurance firms in Nigeria. Findings from the study would benefit academia, analysts, policy makers and management for effective decision making and policy formulation.

2. Literature review

2.1 Conceptual review and hypotheses development

2.1.1 Board Meetings and Investors’ returns

Periodic meetings by the board members constitute one of the parameters to measure a board’s effectiveness. The board is expected to meet frequently to discuss various challenges confronting a company while evolving strategic plans capable of repositioning the company for improved productivity. An active board meets regularly. This means that board members determine operational issues through meetings by engaging with one another in order to improve the
decision-making process. Previous studies have been conducted on the link between corporate board meetings and firm performance. The study conducted by Ntim and Osei, (2011); Taghizadeh and Saremi (2013); and Oyerinde, 2014 however found out that a high number corporate board meetings does not necessary improve a company’s performance but rather the quality of such meetings. A null hypothesis was formulated to achieve this study objective thus:

\( H_{01} \) corporate board meetings has no significant effect on investors’ returns in listed Nigerian insurance firms in Nigeria

2.1.2. Board Diversity and Investors’ returns

Board diversity describes the composition of a company’s board of directors in terms of gender, nationalities, ethnicity, experience, ages, academic and professional qualifications. The purpose is to bring together individuals with diverse traits, knowledge, skills, expertise, values, and professional experiences, so as to ensure a dynamic and efficient board composition. An effective board is made up of individuals having variety of skills and experience that can be harnessed to provide timely, robust, adequate and comprehensive leadership to the company in a way that would result in improved performance as well as shareholders wealth maximization. This is in line with the position of Weir, Laing and McKnight (2012) noting that directors especially independent non-executive bring objective thoughts and experience from diverse fields of interest to the overall decision-making process of a company. To achieve this study objective, a null hypothesis was formulated thus:

\( H_{02} \) corporate board diversity has no significant effect on investors’ returns in listed Nigerian insurance firms in Nigeria

2.1.3. Board Size and Investors’ returns

Board size refers to the number of members on the board of directors in terms of executive and non-executive directors. Agency theory and resource dependence theory show that board size influences investors’ returns. Agency theory stipulates that a larger board of directors implies that an incorporated entity is required to have adequate number of executive and non-executive directors providing oversight function to monitor and regulate the firm's performance in the interests of owners of the member. A null hypothesis was formulated to achieve this study objective thus:

\( H_{03} \) corporate board size has no significant effect on investors’ returns in listed Nigerian insurance firms in Nigeria

2.1.4. Board Independence and Investors’ returns

Board independence is a key requirement for an effective board composition as it plays a vital role in reducing agency cost. The board of a company is required to be independent in order to allow for decision and policies that are void of sentiments. Such board would be composed of more independent non-executive directors compared to the number of executive directors. An independent director is a member of a board of directors with no substantial stake in the
company. The board of directors in any corporate organization is composed of executive and non-executive directors. Wachudi and Boya (2012) described executive directors as professional individuals involved in the day to day operation of the company and non-executive directors as individuals without any management affiliations or working contract with a company for their role as directors. Agency theory advocate for more non-executive directors on boards in order to reduce agency conflict. A null hypothesis was formulated to achieve this study objective thus: 

H_{04} \text{Corporate board size has no significant effect on investors’ returns in listed Nigerian insurance firms in Nigeria}

2.1.5. Insurance Business in Nigeria

Insurance is a contract in which one party, the insurer, agrees to make a payment to another party, the policy holder or a third party, if an event that is the subject of a risk occurs in exchange for a premium or an assessment. Insurance business in Nigeria faces a number of challenges namely; poor people’s perception of the industry, lack of skilled personnel, weak regulatory framework etc. There is a shortage in the required number of skilled professionals in the industry; brokers, underwriters, actuaries etc. This can be partly due to poor training and retraining program for staff members of insurance companies. This problem of lack of skilled personnel has resulted in low patronage of financial products offered by insurance companies. Also, the framework for insurance businesses in Nigeria is weak in terms of policies and regulatory oversight which needs to be aligned with global best practices. There are no standard premium rates for certain insurance products. The National Insurance Commission needs to do more in ensuring effective administration, regulation and control of insurance businesses in Nigeria. People’s perception is another challenge faced by insurance business in Nigeria in terms of getting people to sign up for insurance policies. Most people are skeptical about how insurance works. This is largely due to the slow process of settling claims or denying claims totally. There is lack of trust in the system. There is therefore need for more public engagement and awareness in order to bring about more patronage of insurance products and to correct misgivings and poor perception of people towards the industry. Clients need to be properly educated when signing up for insurance policies.

2.2 Theoretical Review

Stewardship Theory and Resource Dependency Theory

Stewardship theory was propounded by Donaldson and Davis in 1991. The theory was based on a seminar work conducted on corporate governance in 1976. The proponent of steward theory advocated that that through company performance, asteward preserves and maximizes shareholder value. Stewards are firm leaders and managers who work for the benefit of the shareholders, ensuring that they are protected and profited from. When the organization achieves success, the stewards are satisfied and driven. The theory asserted that the importance of employees or executives acting more independently in order to optimize shareholder returns. Employees take responsibility for their jobs and work hard at them. Donaldson and Davis found
a clear link between excellent management and good company performance, which protects and maximizes shareholder value. The Resource Dependency Theory was developed in 1973 by Pleffer. The theory focused on the function of board directors in ensuring that the firm has access to the resources it requires. The proponent of the theory asserted that directors play a crucial role in delivering essential resources to a company through their connections to the outside world. The provision of resources improves organizational effectiveness, as well as the firm's survival. The board of directors contributes information, skills, and access to essential stakeholders such as suppliers, customers, public policymakers, and social organizations, as well as credibility to the company. Hillman and Dalziel, (2000) noted that insiders, business experts, support specialists, and community influential are the four types of directors. The theory supports the appointment of directors to several boards as it would help them to gather information and network in a variety of ways, ensuring the firm's success.

2.3. Empirical review
Liling and Yuanting (2021) conducted empirical study of board structure and firm performance with a focus on innovative small enterprises in China spanning from 2010 to 2015. The board size, CEO duality, and ratio of independent directors were independent variables. The return on total assets, return on shareholders’ equity and earnings per share were taken as the dependent variables, and three hypotheses were tested with SPSS. The study found out that the board size was positively correlated with firm performance but was not significant. There was no significant correlation between the ratio of independent directors and CEO duality on firm performance. Zubaidah, Nurmala and Kamaruzaman (2009) examined the association between board structure and corporate performance of selected listed companies in Bursa Malaysia. The study employed Value Added Intellectual Coefficient (VAIC) methodology to measure the value-added efficiency of the firm’s total resources. The board characteristics used in the study were board composition, directors’ ownership, CEO duality and board size. The study found that board composition and board size have a positive impact on firm performance, while the effects of directors’ ownership and CEO duality on the VA efficiency of firm’s total resources are not established. The outcome of the study shows that the emphasis on the importance of outside directors on the board by The Malaysian Code on Corporate Governance and by the requirements of Bursa Malaysia is deemed pertinent to the long-term corporate performance. Kao, Hodgkinson and Jaafar (2019) empirically assessed the effects of ownership structure and board of directors on firm value using a dataset of selected listed firms domiciled in Taiwan from 1997 to 2015. The study made use of a panel estimation to exploit both the cross-section and time-series nature of the data as well as a 2SLS regression model as robustness test to mitigate endogeneity issue. Findings showed that the higher the proportion of independent directors, the smaller the board size, and together with a two-tier board system having no CEO duality, the stronger the firm’s performance. With respect to ownership structure, block-holders’ ownership, institutional ownership, foreign ownership and family ownership, are all positively related to firm value.
In the study conducted by Chalisa and Juthamon (2021), the relationship between board characteristics and capital structure was examined. Data was collected from the annual reports of listed companies in the Stock Exchange of Thailand spanning from 2015 to 2017 totaling 1,264 firm-year observations. The study employed multiple regression analysis by using board size, outside directors, managerial ownership, CEO duality, frequency of board meetings, board experience, and gender to measure board characteristics and the total debt ratio for capital structure. Research findings show that the more independent the directors are, the lower the cost of debt financing is, as they control the management team more strictly about debt financing than directors with less independence do. Additionally, the results revealed that the higher the percentage of managerial ownership, the higher the level of leverage and debt financing, whereas board size and board meetings have a negative relationship to capital structure. Further research showed that firm size, growth opportunities and corporate governance rating all had a positive significant impact on capital structure. Noor and Norraidah (2021) explored the interactive effect of board meetings on the relationship between environmental and social (ES) and firm performance in Malaysian publicly traded firms from 2013 to 2017. The study’s findings indicated that a firm’s relationship between ES and financial performance, measured by Tobin Q and return on equity, may be significantly affected by board meetings. Edirin (2018) evaluated the effect of board and ownership structure on financial performance of selected Nigerian listed firms. Analysis was done by means of canonical correlation technique and findings indicated that the combination of board and ownership structure had significant association with measures of firm performance. Specifically, individual measures of board structure exert positive effect on firm financial performance, whereas individual measures of ownership structure had no significant positive association with measures of firm performance.

The study conducted by David and Okenwa (2021), considered the effect of board attributes on performance of Nigerian quoted banks with international authorization. A sample of eight (8) banks was analyzed over a period of 5 years. From the results of the regression analysis, it was observed that all the explanatory variables had an insignificant effect on firm performance except for board meeting, which had a significant effect on firm performance. The study suggested that frequency of board meetings should be encouraged as this would create opportunity for more discuss on pertinent issues that affects the survival of the firm. Gratiela, et al. (2021), empirically evidences the role played by board characteristics (skills, diversity, structure, independence) in supporting risk management disclosure and shaping the financial performance of European companies operating in the financial services sector. Data were obtained from Thomson Reuters Eikon database for 2019 fiscal year on a longitudinal sample of 144 companies with head offices in Europe. The study used structural equation modelling (SEM) and network analysis through Gaussian graphical models (GGMs), to examine the importance of an optimal board size, enhanced management skills, upward gender diversity, and structure (mainly a two-tier type, one management board, and a distinctive supervisory board) as fundamentals of risk management strategies, leading to improved financial achievements and a higher profitability for the analyzed companies. Alashe, Raheed, and Bello (2021) investigated the influence of the Board Structure
on Financial Performance of consumers’ goods firms in Nigeria. Secondary data which spanned from 2012 to 2019 were collected from fourteen (14) firms in the consumer goods sector using judgmental sampling technique. The data were econometrically analysed using ordinary least square, highlighting pooled, fixed and random effects. Results revealed that board gender diversity has no significant influence on profit after tax margin of selected listed manufacturing firms. It was further revealed that executive directors’ numerical strength does not have a significant effect on profit after tax margin of selected listed manufacturing firms. Based on these findings, the study concluded that board structure has no significant influence of financial performance of listed consumers’ goods firms in Nigeria.

Tu and Long (2021), investigated the relationship between corporate governance mechanisms and firm performance in Vietnam. Based on a dataset of 101 HOSE-listed manufacturing firms, the results showed that CEOs’ knowledge capability, gender diversity, and board size are positively associated with firm performance, whereas firm age is negatively associated. The findings suggested that firms should consider enlarging the boardrooms, but to a certain extent to avoid an inverse-U-shaped decline of performance; furthermore, firms should promote women executives’ presence in a boardroom for it brings greater cultural-diversity benefits and inhibits information asymmetry. Erik and Jhvh (2013) assessed the role of the corporate board of directors and the relationship between the dynamics of board structure and the financial performance of listed South African companies. The research results were that the proportion of independent non-executive directors had a significant positive effect on firm performance as measured by earnings per share and enterprise value, but had no significant effect on Tobin’s Q ratio. Board ownership had a significant negative correlation with firm performance as measured by earnings per share, enterprise value and Tobin’s Q ratio. The number of directors serving on the corporate board had a significant positive effect on firm performance as measured by earnings per share, enterprise value and Tobin’s Q ratio.

3. Methodology
The study adopted ex-post facto research design. The population of the study was 23 insurance firms listed on the Nigerian Exchange. A sample size of 10 listed insurance firms was purposively selected. The data of the Insurance firms were collected from the audited annual financial statements of Insurance firms listed on the Nigerian Exchange spanning for a period of 10 years (2010-2019). The selection criterion was based on the availability of the company’s annual reports during the study period. The study adapted the model of Adigwe, Nwanna, and John as specified thus:

\[
ROA = f (BAC, BOC, DEI) \quad [1]
\]

Where: ROA = Return on Assets, BAC =Board Audit Committee, BOC = Board Composition, DEI = Directors’ Equity Interest
The model is modified by specifying dividends per share as a function of board size, board meeting, board independence and board diversity. Also, the model of this study makes use of the log total assets as the control variable. Mathematically, the models are given below:

\[ DPS = f(BOS, BME, BIN, BOD, LTOA) \]  \[\text{[2]}\]

The model is then transformed to econometric form:

\[ DPS_{it} = \beta_0 + \beta_1 BOS_{it} + \beta_2 BME_{it} + \beta_3 BIN_{it} + \beta_4 BOD_{it} + \beta_5 TOA_t + U_{it} \]  \[\text{[3]}\]

Where: DPS = Dividends per Share, BOS = Board Size, BME = Board Meeting, BIN = Board Independence, BOD is Board Diversity, TOA is Total Assets, Where: \( \beta_0 - \beta_5 \) = Intercept, \( it \) = represents the combination of time and individuality, \( U_{it} \) = error term

4. Results and discussion

4.1. Descriptive Statistics

Table 1: Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>DPS</th>
<th>BOS</th>
<th>BME</th>
<th>BIN</th>
<th>BOD</th>
<th>TOA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.30501</td>
<td>10.1</td>
<td>4.84</td>
<td>66.35542</td>
<td>14.302</td>
<td>1.99e+07</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.55427</td>
<td>2.311587</td>
<td>1.228615</td>
<td>11.71198</td>
<td>12.6594</td>
<td>2.05e+07</td>
</tr>
<tr>
<td>Minimum</td>
<td>-1.01</td>
<td>6</td>
<td>3</td>
<td>36.3636</td>
<td>0</td>
<td>3605444</td>
</tr>
<tr>
<td>Maximum</td>
<td>2.45</td>
<td>16</td>
<td>10</td>
<td>90.9091</td>
<td>44.4444</td>
<td>1.35e+08</td>
</tr>
</tbody>
</table>

Source: Author’s Computation, 2021.

Where: DPS is Dividend per Share, BOS is Board Size, BME is Board Meeting, BIN is Board Independence, BOD is Board Diversity, TOA is Total Asset.

From table 1, the descriptive statistics depicts that the average value for Dividend Per Share (DPS) is 0.30501, with a minimum and maximum values of -1.01 and 2.45 respectively. The standard deviation of 0.55427 indicates that the risk is higher because it is relatively closer to its mean figure. In the same result, the mean value of Board Size (BOS) is at 10.1 with a minimum of 6 directors and maximum of 16 directors. Unlike dividend per share and profit after tax, the standard deviation (2.311587) indicates that its risk is low because it is far from its mean value. In addition, for Board Meeting (BME), which represents the frequency of the audit committee meetings, its mean value stands at 4.84, with a minimum and maximum values of 3 and 10 times respectively. Unlike dividend per share and profit after tax, its standard deviation (1.228615) shows a lower risk, as it is far from the mean. Another result, Board Independence (BIN) has an average value of 66.35542, with a minimum and maximum value of 36.3636 and 90.9091 respectively. Its standard deviation which is 11.71198 depicts that the risk is low, because the value is further from it mean value. For Board Diversity (BOD), the mean value stood at 14.302, with a minimum and maximum value of 0 and 44.4444 respectively. The standard deviation (12.6594) shows that its risk is lower, because its standard deviation value is far from its mean. Finally, Total Asset (TOA) mean value is 1.99e+07, with a minimum and maximum values of 3605444 and 1.35e+08 assets respectively, shows the lowest and highest number of assets used to ascertain the dividend per share and profit after time for over the time period. Its standard deviation of 2.05e+07 indicates a higher risk because it is closer to the mean value.
4.2. Pooled OLS Analysis

The results of analyses utilizing the Pooled OLS estimator, fixed effect estimator, and random effect estimate were provided in this section, followed by a post estimation test using the Hausman test to assess consistency and efficiency. Emphasis is being placed on the most consistent and efficient estimator for discussion and inference.

Table 2: Pooled OLS Estimation Result for Dividend Per Share (DPS)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std Error</th>
<th>T-Test</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-2.014323</td>
<td>1.226917</td>
<td>-1.64</td>
<td>0.104</td>
</tr>
<tr>
<td>BOS</td>
<td>-0.0176027</td>
<td>0.0248243</td>
<td>-0.71</td>
<td>0.480</td>
</tr>
<tr>
<td>BME</td>
<td>0.0462037</td>
<td>0.0445707</td>
<td>1.04</td>
<td>0.303</td>
</tr>
<tr>
<td>BIN</td>
<td>-0.0021001</td>
<td>0.0046901</td>
<td>-0.45</td>
<td>0.655</td>
</tr>
<tr>
<td>BOD</td>
<td>0.0116608</td>
<td>0.0046185</td>
<td>2.52</td>
<td>0.013</td>
</tr>
<tr>
<td>TOA</td>
<td>0.1362129</td>
<td>0.0707045</td>
<td>1.93</td>
<td>0.057</td>
</tr>
</tbody>
</table>

R-square=0.1453, Adjusted R-square=0.0998, F-statistics=3.20, Prob(F-stat)=0.0104
Source: Author’s Computation, 2021.

Pooled estimation result presented in table 3 revealed that when heterogeneity effect across firms sampled in the study is not given consideration, BOS and BIN exert insignificant and negative effect on Dividend per share to the tune of -0.0176027 (p=0.480 > 0.05) and -0.0021001 (p=0.655 > 0.05) respectively. BOD on the other hand has a positive and significant effect on dividend per share, with coefficient estimate of 0.0116608 (p=0.013 < 0.05). BME and TOA both have a non-significant positive effect on dividend per share, with values of 0.0462037 (p=0.303 > 0.05) and 0.1362129 (p=0.057 > 0.05) respectively. According to the R-square statistics in table 3, BOS, BME, BIN, BOD, and TOA can jointly explain around 15% of the systematic variance in dividend per share.

4.3. Random Effect Estimation for Dividend Per Share (DPS)

Table 3: Random Effect Estimation

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>Z-Test Values</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-3.50482</td>
<td>1.732848</td>
<td>-2.02</td>
<td>0.043</td>
</tr>
<tr>
<td>BOS</td>
<td>0.0001343</td>
<td>0.0275136</td>
<td>0.00</td>
<td>0.996</td>
</tr>
<tr>
<td>BME</td>
<td>-0.0053173</td>
<td>0.0384372</td>
<td>-0.14</td>
<td>0.890</td>
</tr>
<tr>
<td>BIN</td>
<td>0.0000592</td>
<td>0.004578</td>
<td>0.01</td>
<td>0.990</td>
</tr>
<tr>
<td>BOD</td>
<td>0.0115375</td>
<td>0.0055915</td>
<td>2.06</td>
<td>0.039</td>
</tr>
<tr>
<td>TOA</td>
<td>0.2222801</td>
<td>0.1057899</td>
<td>2.10</td>
<td>0.036</td>
</tr>
</tbody>
</table>

R-square=0.1541, Wald chi2(5)=9.60, Prob> chi2 =0.0876
Source: Author’s Computation, 2021.

Random effect estimation result presented in table 5 showed that when heterogeneity effect across insurance firms and over time is incorporated into the model via the error term, BME exerts negative and insignificant effect on dividend per share with a reported estimate and
probability values of -0.0053173 and 0.890 respectively. While BOS, BIN, BOD and TOA exert positive effect on dividend per share, though the positive effect of BOD and TOA unlike that of BOS and BIN are significant to the tune of 0.0115375 \( (p=0.039 < 0.05) \) and 0.2222801 \( (p=0.036 < 0.05) \) respectively. 0.0001343 \( (p=0.996 > 0.05) \) and 0.0000592 \( (p=0.990 > 0.05) \) were the reported coefficient estimates and probability values for BOS and BIN, respectively. The reported R-square for random effect estimation in table 6 was 0.1541, implying that BOS, BME, BIN, BOD, and TOA of the sampled insurance businesses can explain around 15% of the systematic variance in dividend per share.

### 4.4. Fixed Effect Estimation for Dividend Per Share (DPS)

To account for the firm's uniqueness, the estimation systematically incorporated the heterogeneity impact across sampled firms into the model. Using a dummy technique in which each firm and year was allocated an intercept term, this study separately incorporated the insurance firm's heterogeneity effect and the period effect into the model. Table 4 shows the results of the least square dummy variable fixed effect estimations for (cross sectional and period specific).

**Table 4: Fixed Effects Estimates (Cross-sectional and Period specific)**

<table>
<thead>
<tr>
<th>CROSS-SECTIONAL SPECIFIC EFFECT</th>
<th>TIME SPECIFIC EFFECT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variables</strong></td>
<td><strong>Coefficients</strong></td>
</tr>
<tr>
<td>C</td>
<td>-4.913342</td>
</tr>
<tr>
<td>BOS</td>
<td>0.0087944</td>
</tr>
<tr>
<td>BME</td>
<td>-0.0159692</td>
</tr>
<tr>
<td>BIN</td>
<td>0.0003652</td>
</tr>
<tr>
<td>BOD</td>
<td>0.0096887</td>
</tr>
<tr>
<td>TOA</td>
<td>0.2893798</td>
</tr>
</tbody>
</table>

**Effects**

<table>
<thead>
<tr>
<th>Effects</th>
<th>Coefficients</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continental Ins. Plc</td>
<td>-0.1662165</td>
<td>0.431</td>
</tr>
<tr>
<td>Cornerstone Ins. Plc</td>
<td>0.4070925</td>
<td>0.127</td>
</tr>
<tr>
<td>Guinea Ins. Plc.</td>
<td>0.4832435</td>
<td>0.221</td>
</tr>
<tr>
<td>Lasaco Assurance Plc.</td>
<td>1.182792</td>
<td>0.000</td>
</tr>
<tr>
<td>Law Union &amp; Rock Ins</td>
<td>-0.0213139</td>
<td>0.954</td>
</tr>
<tr>
<td>Linkage Assurance Plc.</td>
<td>0.3513324</td>
<td>0.214</td>
</tr>
<tr>
<td>Mutual Benefit Assurance</td>
<td>-0.0191772</td>
<td>0.947</td>
</tr>
<tr>
<td>NEM Insurance Plc</td>
<td>0.1639895</td>
<td>0.634</td>
</tr>
<tr>
<td>Prestige Assurance Plc.</td>
<td>0.3413261</td>
<td>0.286</td>
</tr>
</tbody>
</table>

R-square=0.5096  
F-statistics=6.31  
Prob(F-stat)=0.0000

R-square=0.1986  
F-statistics=7.02  
Prob(F-stat)=0.0000

**Source:** Author’s Computation, 2021.

When the heterogeneity effect across the insurance firms sampled in the study is factored into the model, BOS, BIN, BOD, and TOA have positive effects on dividend per share. The reported coefficient estimates and probability values were 0.0087944 \( (p=0.774 > 0.05) \), 0.0003652 \( (p=0.941 > 0.05) \), 0.0096887 \( (p=0.144 > 0.05) \), and 0.2893798 \( (p=0.032 0.05) \), respectively.
results also showed that BME has a negative influence on dividend per share, though this effect is minor at -0.0159692 (p=0.685 > 0.05). The R-square value given for cross-sectional specific estimation presented in table 5 was 0.5096, indicating that the explanatory variables can explain nearly 51% of the systematic variance in dividend per share. Table 5 showed that when the heterogeneity effect over time is incorporated into the model as an intercept term, both BOS and BIN assets have a negative and insignificant effect on dividend per share, with coefficient estimates and probability values of -0.0123081 (p=0.635 > 0.05) and -0.0050818 (p=0.341 > 0.05), respectively. While BME, BOD, and TOA all have a positive effect on dividend per share, only BOD, unlike BME and TOA, has a significant positive effect of 0.0104476 (p=0.034 < 0.05). 0.0622056 (p=0.187 > 0.05) and 0.121016 (p=0.125 > 0.05) were the reported coefficient estimates and probability values for BME and TOA, respectively. According to reported R-square figures, BOS, BME, BIN, BOD, and TOA can explain around 20% of the systematic variation in dividend per share. Deviations from the intercept term (183.4493) equivalent to the reference insurance firms stood at -0.1662165, 0.4070925, 0.4832435, 1.182792, -0.0213139, 0.3513234, -0.0191772, 0.1639895 and 0.3413261 for Continental Insurance Plc, Cornerstone Insurance Plc, Guinea Insurance Plc, LASACO Assurance Plc, Law Union and Rock Assurance Plc., Linkage Assurance Plc., Mutual Benefit Assurance Plc., NEM Insurance Plc. and Prestige Assurance Plc. respectively. Deviation from the intercept term (197.1331) of the reference period stood at -0.0445779 for 2011, 0.0361946 for 2012, 0.0597971 for 2013, -0.1054171 for 2014, -0.0060268 for 2015, -0.1531789 for 2016, 0.1371143 for 2017, 0.3430805 for 2018 and -0.071079 for 2019.

4.5: Post estimation Test for Dividend per Share (DPS)
Table 5: Hausman Test
<table>
<thead>
<tr>
<th>Null hypothesis</th>
<th>Chi-square stat</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difference in coefficient not systematic</td>
<td>4.07</td>
<td>0.5397</td>
</tr>
</tbody>
</table>

Source: Author’s Computation, 2021

Table 6 revealed chi-square statistic of 4.07 and probability value of 0.5397. The findings revealed that there is insufficient evidence to reject the null hypothesis that there are no significant variations in coefficients between fixed and random effect estimation. As a result, the random effect estimation, as shown in table 5, provides the most consistent and efficient estimation. As a result, it is clear that the random effect estimation presented in table 5 best explains the effect of corporate board structure on investors’ return of listed insurance firms in Nigeria, as measured in terms of dividend per share, revealing that BME have a negative and insignificant effect on dividend per share with a reported estimate and probability values of -0.0053173 and 0.890 respectively. While BOS, BIN, BOD and TOA exert positive effect on dividend per share, though the positive effect of BOD and TOA unlike that of BOS and BIN are substantial to the tune of 0.0115375 (p=0.039 < 0.05) and 0.2222801 (p=0.036 < 0.05) respectively. Reported coefficient estimates and probability values for BOS and BIN stood at 0.0001343 (p=0.996 > 0.05) and 0.0000592 (p=0.990 > 0.05) respectively.

Table 6: Other Post Estimation Test for Dividend Per Share (DPS)
<table>
<thead>
<tr>
<th>Post Estimation Test</th>
<th>Null hypothesis</th>
<th>Statistics</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wald test</td>
<td>Panel homoscedasticity</td>
<td>12.63</td>
<td>0.7790</td>
</tr>
<tr>
<td>Pesaran test</td>
<td>No cross-sectional dependence</td>
<td>0.690</td>
<td>0.4902</td>
</tr>
<tr>
<td>Wooldridge test</td>
<td>No AR (1) panel autocorrelation</td>
<td>16.796</td>
<td>0.4332</td>
</tr>
</tbody>
</table>

**Source:** *Author’s Computation, 2021*

Given the reported probability statistics of 0.7790 > 0.05 for Wald test, 0.4902 > 0.05 for Pesaran test, and 0.4332 > 0.05 for Wooldridge test, there is no evidence to reject the null hypothesis of panel homoscedasticity, null hypothesis of no cross-sectional dependence, and null hypothesis of no AR (1) panel autocorrelation (table 7). As a result, the validity of the assumptions of equal variance of residual terms, cross sectional independence, and lack of serial autocorrelation for the estimated panel-based model can be established in the study.

**4.6 Discussion of Findings**

The study examined the effect of corporate board structure on investors’ returns adopting listed insurance firms in Nigeria as a case study. The discussion of this study is based on random effect model estimation results. It was discovered that board meeting has a negative and insignificant effect on dividend per share of listed insurance firms in Nigeria to the tune of -0.0053173 (p=0.890 > 0.05). This implies that a 1% increase in board meeting could engender an insignificant decrease in the dividend per share of listed insurance firms in Nigeria. By inference, it connotes that board meetings could reduce investors’ returns of insurance firms in terms of dividend per share. This might be due to the fact that boards of directors discuss more of other relative issues aside the issues affecting shareholders’ wealth maximisation. The finding gave credence to the submission of Araoye and Olatunji (2019) that board meeting has negative and insignificant effect on the financial performance of Deposit Money Banks in Nigeria. Board diversity exerted a positive and significant effect on dividend per share of insurance firms in Nigeria (0.0115375, p=0.039 < 0.05). This implies that a 1% increase in board diversity would lead to 0.012% increase on dividend per share of insurance firms in Nigeria. This might be because the boards of director are composed of individuals that contribute a range of ideas, thoughts, skills and knowledge to generate higher market value for the insurance firm. This finding supports the findings of Hassan (2016) that the performance of banks is influenced by the board size, board diversity, and ownership dispersion. In addition, board size has a 0.0115375 (p=0.039 0.05) positive and insignificant effect on dividend per share of listed insurance firms in Nigeria. This means that a 1% increase in board size would have no effect on the dividend per share of listed insurance companies in Nigeria. This could be that board members were elected based on friendship and nepotism rather than expertise and abilities. This disagreed with the findings of Vincent, Peter, Martin, and Eric (2015) that board size had an inverse relationship with performance. Furthermore, it was observed that board independence had a positive but insignificant effect on dividend per share of listed insurance firms in Nigeria (0.0000592, p=0.990 > 0.05). This means that a 1% increase in board independence would result in a 0.01 percent increase in the dividend per share of Nigeria's listed insurance companies. This could be due to the boards' inefficiency in monitoring the manager's behavior in order to cut
agency costs and improve the firm's performance. This contradicts Muhammed, Sun, Sulman, and Ramiz (2017) findings, which found a positive and significant association between board size, board independence, and financial performance of listed firms in Pakistan.

5. Summary and Conclusion
From the study results we can deduce that corporate board structure including board size, board diversity, board independence and board meetings affect investors’ returns but the effect were not statistically significant. The study recommended that members of the board should be appointed based on skills, experience and qualifications rather than based on friendship, bias or nepotism. The board of insurance firms should equally focus on issues that bother on maximizing investors’ returns. Also, board meetings should focus more on issues affecting the performance of the insurance firms rather than on other relative issues which may not necessarily affect the firm.

References


