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Board Diversity and Firm Performance: Panel Data Evidence from 12 Selected Commercial Banks in Nigeria

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Abstract

Motivated by the continuous but inconclusive and ambiguous evidence on the relationship between board diversity and financial performance, this study aimed at providing new evidence that will enhance the state of knowledge by establishing if board diversity affects the financial performance of listed Banking institutions in Nigeria. The key dependent variables of interest were Return on Assets (ROA) and Return on Equity (ROE) and the independent variables of interest were board gender diversity and board independence. The study sampled 12 listed banks from the Nigerian stock exchange and relied on secondary data from the Bloomberg database and the annual reports of the banking institutions. Panel data methodology was used to analyse the data for the period under review (2015-2019). The results of the study indicated that board gender diversity has a significant positive impact on both ROA and ROE of the banking institutions. Conversely, the findings of the study indicated that board independence has a significant negative impact on both ROA and ROE of banking institutions. The findings of this study are related to Agency and Resource dependence theories and will contribute to meaningful policy reforms that can improve corporate governance, especially in the banking industry. The results of the study strongly recommend the need to increase the number of female directors on the boards of banking institutions. The study further recommends ways in which the contributions of both female and independent directors can be promoted in other to benefit from their presence on the board.

Keywords: Board Diversity, Female directors, Panel Data, Firm Performance, Nigerian Banks

1. Introduction

Is organisational performance impacted by the composition of the Board of Directors? This question has been at the centre of the corporate governance debate. Directors are generally charged with the responsibilities of advising Chief Executive Officers (CEOs) and executive managers, setting strategies, assessing the performance of management, guiding the appointment and retrenchment of top managers and improving shareholder interests (Taljaard, Ward and Muller, 2015). It has been widely documented that the main purpose of the board is to promote organisational success by managing its affairs to achieve the aspiration of shareholders (Denis and McConnell, 2003). Board structures typically differ and have varying impacts on organisational decisions. This study aims to examine the impact of board diversity on the financial performance of listed banking institutions in Nigeria.

1.1. Background of Study

Agency theory accords that in the modern corporation, control is vested in the hands of management as owners contract managers to control the organisation on their behalf (Rashid et al., 2010). This relationship is referred to as the agency relationship. The separation of ownership from management gives rise to a conflict of interest between the owners and managers, known as the agency problem. This arises due to the tendency of managers to maximize their self-interest at the expense of maximizing shareholder interest (Jensen and Meckling, 1976). Corporate Governance is a concept that has been widely used to reduce the agency problem (Ibid). A significant proportion of corporate governance research aims at understanding how to effectively monitor managers to avoid acting in their interest, to protect shareholder interest (Ujunwa, Nwakoby and Ugbam, 2012). The board of directors is an important governance

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mechanism and is at the apex of the internal corporate governance mechanism of firms (Gillan, 2006). Thus, it is argued that optimal board composition is necessary to serve as an adequate corporate governance mechanism.

Board diversity has been advocated by different policies, systems and organisations due to the potential benefits that arise from it, such as more effective utilisation of talent pool, enhanced decision making and better investor relations amongst other things (Rajeha, 2015). It is for these reasons that various countries around the world are paying considerable attention to the diversity of boards concerning professional codes and regulations. For example, Terjesen, Couto and Francisco (2015) report that 16 countries recommend the presence of female directors on the board and 14 countries have established a quota for the number of women on the board. As such, it is imperative to use empirical evidence to decipher whether these recommendations impact positively on firm performance.

A review of the literature in this area shows that there is no clear consensus on how a diverse board improves financial performance. Existing studies have used various measures of diversity such as gender, nationality, ethnicity, age, skills, independence, expertise and experience among others (Ibrahim, Ouma and Koshal, 2019). This study aims to assess the impact of diversity by focusing on gender and the independence of directors.

1.2. Problem Statement

The question as to whether highly diversified boards do better in discharging their fiduciary duties to shareholders in comparison to boards with lower levels of diversity has been widely debated in both the academic and business world (Taljaard et al., 2012). However, psychological and behavioural theories argue that a more diverse board gives room for a broader perspective as well as enhanced fiduciary roles of the board (Ibid). More so, there has been a wide range of benefits associated with board diversity that has been identified by scholars, such as enhanced creativity and innovation, improved problem solving and decision making, better exchange of ideas and a better understanding of the marketplace of the firm among others (Erhardt, Werbel and Shrader, 2003; Salim, 2010; Shehata et al, 2017). A different line of thinking has however identified some disadvantages associated with board diversity such as delayed decision making, increased likelihood of conflict and negative impact on group dynamics (Erhardt et al., 2003).

In Nigeria, the board of directors have been blamed for the fall in shareholders' wealth and many corporate collapses (Adesanmi et al., 2019). Furthermore, evidence from other jurisdictions suggests that board of directors are responsible for high-profile corporate scandals of companies due to less cautious monitoring function, their inability to detect questionable accounting practices, lack of diversity and independence and the tendency of board members to give up control to corporate managers with self-serving interest (Moghalu, 2015). A case in point was the 2009 banking sector crisis, which led to the near-collapse of 8 Nigerian banks. This was also evident with the US case of Enron, the Italian case of Parmalat, the Australian case of HIH Insurance, the UK case of Barings Bank and the Indian case of Satyam (Mallins, 2011). Consequentially, a variety of corporate governance reforms have advocated for necessary changes to be carried out in board of directors composition and structure among other things (Adesanmi et al., 2019).

1.3. Aim and Objectives of the Study

This study aims to investigate if ROA and ROE are influenced by board diversity in terms of gender diversity and board independence. The main objectives of the study are:

- To assess the effect of board gender diversity on the financial performance of banking institutions
- To evaluate the impact of independent directors on the financial performance of banking institutions

1.4. Methodological Approach and Data Sources

This study employed a deductive methodology. The existing theory was used to develop a hypothesis, which was then tested to confirm or refute the theory. The deductive methodology is appropriate as it can be used in explaining the causal relationships between variables (Saunders, Lewis and Thornhill, 2009). A functionalist paradigm, which is the dominant paradigm in business and management research is employed. The functionalist paradigm falls under the objectivist and regulatory dimension of research paradigms and is associated with the positivist research philosophy (Collis & Hussey, 2009).

This study largely relies on secondary data. The data were collected from the annual report of the selected companies. However, some data were obtained from the Bloomberg database that computes and makes available the financial information of listed companies around the world.

The review of the literature showed that panel data has been widely applied to the study of this topic; thus, this research adopted panel data analysis. There were two vital parts to the analysis. The first was the correlation analysis, while the second part was the regression analysis. A correlation analysis is necessary to provide an insight into the type of relationship exhibited by all the explanatory variables in question with the dependent variables. It will also reveal whether or not there is a problem of multicollinearity among the explanatory variables.

The second part of the analysis as noted earlier was regression analysis. By this, the exact impact that the chosen board diversity variables have on financial performance were derived. Drawing from Onyekwere, Wesiah and Danbatta (2019), the research paid close attention to two board diversity variables, which are gender and board independence. However, other variables such as board size, firm size and firm age were added as controls. Hence, board diversity variables were employed as independent variables whilst the financial performance was used as the dependent variable in the regression.

1.5. Scope of the Study

The study focused on the 16 commercial banks listed on the Nigerian stock exchange. Nevertheless, a total of 12 banks were included in the analysis due to the non-availability of data on key variables for 4 banks for the 2015-2019 time period under analysis. This study focused on the banking sector due to the various corporate governance reforms that occurred following several accounting improprieties recorded in the banking sector (Adesanmi et al., 2019). This was a result of poor corporate governance practice as over 60% of companies and banks failed to recognise the existing codes of corporate governance (Uwana, 2015). Moreover, seeing as the banking sector is the foundation of the financial industry and arguably the bedrock of the economy, it is crucial to investigate the factors that impact its performance to ensure sound financial health. This study covers 5 years, from 2015- 2019.

1.6. Significance of the Study

This study has abundant significance since relatively few studies have examined the impact of gender diversity and board independence on firm performance for African countries and other less developed countries (Adesanmi et al., 2019; Onyekwere et al., 2019). In addition, this study adds to the growing body of literature that identifies optimal board composition and the effectiveness of corporate governance in mitigating the agency problem and improving the value of the firm. This study would be of great significance due to the dearth of literature on the topic in Nigeria. Moreover, it will contribute immensely to the reservoir of knowledge in the field of management sciences and public policy.

1.7. Outline of the Study

Against this background, section two reviews the relevant literature and develops the research hypothesis. This is followed by a discussion of the methodology and methods of the analysis in section three. Section four analyses the results of the empirical study. Section five then discusses the results of the study. Finally, section six provides concluding remarks and discusses the limitations of the study and recommendations for future research.

2. Literature Review

2.1. Introduction

This section reviews the existing literature on board diversity and company performance, which has been carried out across different countries and sectors around the world. The section begins with a conceptual review before moving on to discuss a range of corporate governance theories and a sample of related empirical studies. Finally, a summary of the section is presented, and a research gap is identified.

2.2. Conceptual Review

The conceptual review aims to provide a way of understanding how board diversity affects financial performance. This section will specifically define the board diversity variables (gender and board independence) under investigation and explain how they link with financial performance (ROA and ROE). Nonetheless, to appreciate the idea of board diversity, it is important to first explain and understand the purpose and functions of a board.

2.2.1. Board of Directors

The board of directors is the highest decision-making body in an organisation that is charged with the responsibility of guiding and governing an organisation on behalf of its shareholders (Taaljard et al., 2015). Pfeffer and Salancik (1978) contend that the board links the corporation to outside organisations to enable environmental dependencies. Moreover, the board serves as a link between managers and investors and is crucial to effective corporate governance and investor relations (Mallins, 2011). The role of the board involves four key functions, namely: strategy formulation, policy development, monitoring and supervising as well as providing leadership and accountability (Tarigan, Hervindra and Hatane, 2018). It has been widely argued that the composition of a board impacts the effectiveness of the board, which in turn affects performance (Ibid). Therefore, optimal board composition is necessary to ensure adequate governance of organisations.

2.2.2. Board Diversity

Board diversity is a corporate governance mechanism that has been defined in several ways. Kang, Cheng and Gray (2007) view board diversity as the dissimilarities in both the observable (age, gender and nationality) and non-observable (experience, attitude and education) variables in the composition of the board. Similarly, Nho, Pham and Luu (2019) state that diversity involves having people with different socio-economic characteristics as well as backgrounds to ensure that consumers and stakeholders from different groups are better represented. The diversity of board members can influence the quality of the board's oversight and resource provision roles, and hence the financial performance of the organisation (Shehata, Salhin and El-Helaly, 2017).

2.2.3. Board Gender Diversity

Campbell and Minguez-Vera (2008) reported that gender diversity is the most contested diversity issue both in terms of board diversity as well as female involvement in economic activity and society at large. Board gender diversity can be defined as the presence, number or percentage of female directors in the board room (Kweh et al., 2019). Board gender diversity is a key aspect of board composition as it is considered a value generator in corporate strategy and corporate governance (Marinova, Platenga and Remery, 2010). A large number of scholars have advocated for further investigation on board gender diversity and organisational performance (Terjesen and Couto, 2015).

2.2.4. Board Independence

Board independence has been defined as the ability of directors to take independent and unbiased decisions (Kang et al., 2007). Uwana (2015) suggests that the aim of appointing independent directors is to guarantee that the board is made up of directors that will adequately apply their outstanding judgement for the sole interest of the organisation. The idea of board independence mostly arises in cases of dispersal of ownership (Rashid, 2018). It has been widely argued that board independence could be employed as a mechanism for good corporate governance (Kang et al., 2007; Kweh et al., 2019).

2.2.5. Financial Performance

Financial performance is a method of measuring how well a firm is making use of its assets to generate revenue and value for various stakeholders (Atrill and McLaney, 2016). It is also defined as the overall financial health of a firm over a given period (Ibid). Financial performance can be assessed using accounting-based measures such as ROA, ROE and Return on Capital Employed (ROCE) or marketing-based measures, such as Tobin's Q and Share price (Onyekwere et al., 2019).

2.3. Theoretical Review

The theoretical framework of this study is from several corporate governance theories such as agency theory, resource dependence theory, and stakeholder theory. Each of these theories would be discussed in turn.

2.3.1. Agency Theory

The literature on corporate governance has thrived through the provision of theoretical underpinning by agency theory (Sanda, Garba and Mikail, 2011). Agency theory argues that the separation of ownership from management gives rise to a conflict of interest between the principles and the agents due to the likelihood of the agents to pursue their self-interest (Jensen and Meckling, 1976). This agency problem could take the form of adverse selection or moral hazard. Adverse selection arises when an agent falsifies his capability to carry out the functions assigned and as such gets selected as the agent (Ujunwa et al., 2012). On the contrary, moral hazard arises if the selected agent avoids the responsibilities or performs badly due to poor decisions in carrying out the assigned duties (Ibid). This suboptimal performance of agents gives rise to a residual cost, termed agency cost (Jensen and Meckling, 1976). Consequently, the board of directors is charged with mitigating the agency cost by aligning the interest of the principles and the agents.

2.3.2. Resource Dependence Theory

Resource dependence theory provides a theoretical foundation for the role of the board in the organisation (Ujunwa et al., 2012). This theory sees the board of directors as strategic resources and argues that the main function of the board is to provide resources (Ibid). As such, different directors will provide different resources in addition to the unique human capital, which will consequently lead to improved organisational performance (Shehata et al., 2017). Resource dependence theory further suggests that the size and composition of a board are neither random nor independent variables but are impacted by the external environment (Ibid). This means that the composition of the board will depend on the external environment of the organisation and thus becomes a function of the resources necessary for the organisation to succeed. Hillman et al., (2002) opine that board members bring four benefits to the organisation through external linkages such as (i) providing information through advice and counsel (ii) creating channels of communication between the organisation and its external environment (iii) generating support from influential organisations and (iv) creating legitimacy for the firm.

2.3.3. Stakeholder Theory

This theory argues that a board should have representatives of all parties that are crucial to the success of the organisation (Shehata et al., 2017). Thus, rather than treating shareholders as the only group whose interest should be protected, stakeholder theory argues that other groups such as creditors, customers, employees, government, etc also have an equally important stake in the organisation's performance. This was evident in the corporate frauds of Enron, Parmalat and Worldcom, which led to thousands of job losses, decreased tax revenue and huge mitigation costs for stakeholders (Sanda et al., 2011).

2.4. Empirical Review

The impact of corporate board structure on firm decisions and performance is among the most widely researched topics in corporate finance (Liu et al., 2015). However, despite the extensive research on the topic that has spanned over two decades and has focused on US and European firms, the studies have failed to find a robust relationship between board diversity and firm performance. The discussion below reviews the empirical findings on board diversity and firm performance.

2.4.1. Board Gender Diversity and Financial Performance

Marinova et al., (2010) discussed several theoretical underpinnings that support the case of board gender diversity. Firstly, it has been argued that women are more likely to have a better understanding of specific market conditions than their male counterparts, which could bring about improved decision making. Secondly, a better public image could be generated from a more gender-diverse board. Thirdly, there is the possibility that the external talent pool for board members grows when women are appointed to certain executive roles. Moreover, it has been widely documented that the proportion of female top executives may positively impact the career development of women in lower roles, hence improving the productivity of the organisation both directly and indirectly.

(1) Argument for Positive Impact of Gender Diversity on Financial Performance

Empirical studies on the effect of board gender diversity on financial performance have produced mixed results. While there has been a growth in the research in this area, the majority of the studies focus on developed nations. Many argue that there is a significant positive relationship between board gender diversity and firm performance. For example, Nguyen and Faff's (2007) preliminary analysis of the effect of gender diversity on firm value revealed that gender diversity has a positive effect on firm value for the 500 largest listed firms in Australia. The result of this study is resonated by the later study of Taaljard et al., (2015) who similarly reported a positive impact of gender diversity on firm performance albeit using a graphical time-series approach. Their study however differed from Nguyen and Faff's (2007) as it used a smaller sample of 40 companies and examined share price as opposed to firm value.

The studies of Adesanmi et al., (2019) and Ibrahim et al., (2019) also investigated the impact of board gender diversity on firm performance for Banking and Insurance firms in Nigeria and Kenya respectively. Adesanmi et al., (2019) revealed that gender diversity has a positive impact on profit margin. Correspondingly, Ibrahim et al., (2019) reported that gender diversity has a positive impact on ROA and ROE. Although the former used Pooled Ordinary Least Squares (OLS) regression and the latter used descriptive and inferential statistics to analyse their data, both studies concluded that board gender diversity has a positive impact on financial performance. Ngo, Phan and Luu (2019) went further in their analysis by employing Pooled OLS regression, Fixed Effect Model (FEM), Random Effect Model (REM), and Generalised Method of Moments (GMM). The authors also reported that board gender diversity significantly improved firm performance in Vietnamese listed firms.

On a similar note, Erhardt et al., (2003) revealed that there was a significant positive association between board gender diversity and firm performance measured in terms of ROA and ROI for 127 large US companies. However, their results must be treated with caution as the authors employed a simple regression analysis. Liu, Wei and Xie (2014) provided the first empirical evidence of the impact of female directors on Chinese boards. The study also documented that gender-diverse boards are beneficial to firm performance. The study further revealed that the impact of gender board diversity on firm performance is more significant in organisations that are predominantly controlled by legal owners as opposed to firms that are predominantly controlled by state owners. Kiliç and Kuzey (2016) likewise investigated the impact of gender diversity on firm performance in Turkey by employing instrumental variable regression analysis. Their study documents that board gender diversity enhances firm performance. The findings of the aforementioned studies concur with Onyekwere et al., (2019) who also report a positive impact of board gender diversity on the financial performance of banking institutions in Nigeria.

(2) Argument for Insignificant Impact of Gender diversity on Financial Performance

Another line of the literature suggests that gender diversity has an insignificant impact on firm performance. A prominent paper by Campbell and Minguez-Vera (2008), which employed panel data analysis and further controlled for endogeneity reported that having one or more women on the board has an insignificant effect on firm value. The finding of Campbell and Minguez-Vera (2008) of an insignificant impact is buttressed by the study of Marinova et al., (2010) for 186 Dutch and Danish companies. The authors also controlled for joint endogeneity by employing a two-stage least square estimation technique and reported that board gender diversity has no impact on financial performance as measured by Tobin's Q. However, the study only analysed data for one financial period, hence questioning the quality and reliability of the study.

Similarly, Rose (2007) used a sample of Danish listed firms in a cross-sectional analysis using four financial periods to investigate the relationship between board diversity and firm performance. The author did not find a significant relationship between board gender diversity and financial performance as measured by Tobin's Q. Moreover, an investigation into the relationship between the proportion of female directors and firm performance by Carter et al., (2010) also reported an insignificant relationship between gender diversity and firm performance for S&P 500 index firms in the US. The more recent study of Hassan and Marimuthu (2016), which employed a panel data analytical approach found results that similarly support the line of literature that shows an inconsequential effect of board gender diversity on firm financial performance.

(3) Arguments for Negative Impact of Gender diversity on Financial Performance

Whilst the papers discussed above argue a positive and, in some cases, the insignificant effect of board gender diversity on firm performance, the third line of literature argues that board gender diversity has a negative impact on the financial performance of firms. For example, Salim (2011) used cross-sectional regression models and a financial period of one year to determine the impact of gender diversity on firm performance. The author reported a strong

negative relationship between board gender diversity and financial performance (ROA and Tobin's Q) for Indonesian firms. The result of this study can however not be generalised for other financial periods as only one time period was investigated. Ujunwa et al., (2012) similarly reported a significant negative relationship between board gender diversity and firm performance, although the authors used fixed effects generalised least square regression and a much longer period of seventeen years for Nigerian firms.

Shehata et al., (2017) likewise contend that board gender diversity has a significant negative association with ROA. Their study used the fixed effect vector decomposition method of analysis and focused their analysis on UK small-medium enterprises, which differed from the aforementioned studies that sampled larger firms. The more recent study of Tarigan et al., (2019) that employed multiple regression tests and focused on Indonesia also revealed that board gender diversity has a significant negative relationship with ROA and firm value. Moreover, using a simultaneous equation approach, Boubaker, Dang and Nguyen (2014) found that gender diversity is negatively associated with firm performance for 105 French listed firms. From the empirical arguments discussed above, this study tests if board gender diversity has a positive impact on firm performance. The following research hypothesis is stated:

H1: Increase in the number of women on the board has a positive impact on firm performance.

2.4.2. Board Independence and Financial Performance

Board independence became one of the main criteria for evaluating the competence of board composition from the mid-1980s (Rashid et al., 2010). Nevertheless, there has been no consensus about the nature of the relationship between board independence and financial performance.

(1) Argument for Positive Impact of Board independence on Financial Performance

Prior studies have documented that organisations with independent boards tend to achieve better performance (Alshetwi, 2017). A linear regression analysis undertaken by Ameer, Ramli and Zakaria (2010) showed that firms with a higher proportion of outside directors performed better than firms with a lower proportion of outside directors in the Malaysian context. On a similar note, Sanda et el., (2010) investigated the relationship between board independence and firm financial performance for Nigerian firms and revealed that board independence had a significant positive impact on firm performance. Liu et al., (2015) also examined the effect of board independence on the financial performance of firms in China. Their study, which was the first most comprehensive and strong evidence in China was robust to several tests such as fixed effects, difference-in-differences, two-stage least squares with IV as well as dynamic GMM. More so, the study examined fourteen years and included data for the majority of the listed companies on the Shanghai and Shenzhen stock exchanges. The authors reported that board independence has a significant positive effect on ROA and ROE and this relationship is even more significant in government-controlled organisations and organisations with lesser acquisition costs.

A 2016 study by Zhu et al., which examined the relationship between board hierarchy, independent directors and firm value revealed that empowering independent directors promotes firm value as it increases efficient monitoring. Correspondingly, Adesanmi et al., (2019) found that board independence positively impacted firm performance for deposit money banks in Nigeria. Nevertheless, their study made use of only pooled OLS, thus the issue of endogeneity was not properly addressed. Luan and Tang (2007) likewise reported that boards with a higher number of outside directors have better financial performance. On a similar note, Qadorah and Fadzil (2018) also discovered that board independence had a significant and positive association with firm performance for 64 Jordan firms. The study employed multiple linear regression and cross-sectional data for their analysis. However, the results of this study cannot be generalised as only one financial period was analysed.

(2) Argument for Insignificant Impact of Board independence on Financial Performance

In their study of the influence of Board composition on firm economic performance in Bangladesh, Rashid et al., (2010) discovered that independent directors fail to add potential value to firm economic performance. The authors interpret their results to the underlying institutional and cultural differences in a developing country such as Bangladesh. Rashid (2018) correspondingly investigated the effect of board independence and firm performance in Bangladesh, although using a longer period. The study similarly reported that board independence has no impact on firm performance. On a similar note, Zabri, Aham and Wah (2015) revealed that there was no relationship between board independence and firm performance in their investigation of corporate governance practices on firm performance, using descriptive and correlation analysis. The study of Haldar et al., (2018) resonate these findings in the Indian context albeit utilising panel regression models.

Alshetwi (2017) similarly examined the relationship between board independence and firm performance for Saudi Arabian firms. The author who analysed two financial periods by employing a combination of between- and- within firm's variation analysis found that board independence is not related to firm performance. The author suggested that the board of directors in Saudi Arabia lack real independence due to the business structure in the country where a tribal system dominates, hence greater attention is given to personal relationships in the board of director selection rather than skills and competency. Onyekwere et al., (2019) used panel data analysis in investigating the relationship between board independence and firm performance for 5 deposit money banks in Nigeria. The authors similarly concluded that board independence does not have a significant influence on ROA and ROE for the selected banks. The result of this study can however not be generalised due to the very small sample size used. Al-Qudah et al., (2019) correspondingly documented that board independence has an insignificant impact on the financial performance of Jordan banks. The study however utilised OLS regression as their method of analysis, thus questioning the reliability of the findings. The work of Muchewma, Padia and Callaghan (2016) reported similar findings to the above studies.

(3) Arguments for Negative Impact of Board Independence on Financial Performance

Several studies contradict the above by arguing that board independence has a negative impact on firm performance. For example, a robust study by Cavaco et al., (2016) that accounted for both heterogeneity and dynamic endogeneity issues documented a significant negative relationship between board independence and performance in their study of the relationship for French listed companies. The authors thus argue that the cost of independence exceeds the benefits of independence. Kweh et al., (2019) similarly employed a wide range of analytical techniques such as OLS, two-stage least squares and GMM to examine the influence of board independence on the performance of firms. The authors report a strong negative relationship between the variables under investigation for Malaysian firms.

On a similar note, Kumar and Sivaramakrishan (2008) found that a board with a larger proportion of independent directors might perform worse as independent directors with various board memberships often do not devote sufficient time and resources in fulfilling their fiduciary duties. Similarly, Laux (2008) suggested that boards with high levels of independence do not always enhance corporate governance structure. The author's model predicted that greater board independence leads to greater CEO turnover, higher severance packages and greater stock option grants, which could lead to a detrimental impact on firm performance. Using panel data for 120 listed firms in Saudi Arabia and 42 listed firms in Bahrain, Hamdan and Al-Mubarak (2017) documented that board independence is adversely associated with firm performance. In line with the above, Hsu and Wang (2014) report that greater board independence is related to an increase in the possibility of corporate failures.

In contrast to all the aforementioned studies, Alsartawi (2019) examined the topic in question from an Islamic perspective. The authors' study sampled only listed Islamic Banks within the Gulf Cooperation Council and employed a multiple linear regression model in carrying out the analysis. The author similarly reported a significant negative relationship between board independence and firm performance measured in terms of ROA. The earlier studies of Bhagat and Bolton (2008), as well as Fauzi and Locke (2012), reported the same negative relationship between board independence and firm performance for firms in the US and New Zealand respectively. In addition, Martin and Herrero (2018) studied the structure of the board of directors and their respective impact on firm performance. Their study reveals an adverse impact of board independence on firm performance. Following the review of the relevant literature, this study adopts this hypothesis:

H2: There is a significant positive relationship between board independence and firm financial performance.

2.4.3. Summary of Literature Review and Research Gap

From the review of the literature, there is still insufficient evidence to justify if board diversity has a positive impact on firm performance. It is also evident that the relationship between the variables of interest continues to be a theoretical and empirical debate. Although it is widely believed that a more diverse board benefits from different perspectives and thus in theory generates better decisions, the empirical evidence from a wide range of studies have shown an insignificant relationship (Campbell and Minguez Vera, 2008; Marinova et al., 2010; Rashid et al., 2010; Zabri et al., 2015, Marimuthu, 2016; Muchewma et al., 2019; Alshetwi, 2017; Haldar et al., 2018; Rashid, 2018; Al-Qudah et al., 2019; Onyekwere et al., 2019) and in some cases, a negative relationship between board diversity and firm performance have been established (Bhagat and Bolton, 2008; Kumar and Sivaramakrisha, 2008; Laux, 2008; Salim, 2011; Fauzi and Locke, 2012; Ujunwa et al., 2012; Boubaker et al., 2014; Cavaco et al., 2016; Hamdan and Al-

Mubarak, 2017; Shehata et al., 2017; Alsartawi, 2019; Kweh et al., 2019 and Tarigan et al., 2019; Martin and Herrero, 2018).

The inconsistent results suggest the need for more evidence to better ascertain the nature of the relationship between board diversity and firm performance. This is further buttressed by the absence of a clear theoretical link between the variables of interest (Shehata et al., 2017). Nho (2019) further highlight that the inconsistency in prior studies could be attributed to differences in institutional, cultural and economic factors of the different countries analysed. As such, it is crucial to undertake research for different contexts as the result for a single country cannot be generalised. The result of such studies will be particularly helpful in structuring the composition of executive boards.

3. Data and Methodology

This section maps out the approaches followed in the generation and transformation of data into the information required for providing answers to the research questions posed. This research will follow similar approaches followed by Onyekwere et al., (2019). However, the present research improves on their work by sampling more banks and incorporating control variables for board diversity.

3.1. Research Design

This research aims to analyse if board diversity influences the financial performance of banking institutions. Thus, the research is an explanatory study. Moreover, the study draws on the premises of the positivist research paradigm. The positivist paradigm views reality as being independent of researchers and asserts that the objective is to discover theories based on empirical research (Collis and Hossey, 2009). Furthermore, positivist studies rely on theories to explain or predict a social phenomenon. This involves determining causal relationships between the variables by developing causal laws and relating them to a deductive or integrated theory (Collis and Hossey, 2009) as is the case with this study. Moreover, this study will adopt the dominant paradigm in business and management research, which is the functionalist paradigm (Saunders et al., 3009). This paradigm is associated with the positivist research philosophy and evolves from the objectivist and regulatory dimension of the research paradigm (Ibid).

This research will be deductive as opposed to inductive research. Thus, existing conceptual and theoretical structures would be developed, which would then be tested using empirical observation (Collis and Hossey, 2009). The deductive methodology is suitable for this research as it can be used in explaining causal relationships between variables (Saunders et al., 2009). Using the process of deduction, the theoretical framework is based on agency theory, resource dependence theory and stakeholder theory. These theories would be used to develop some hypotheses, which would then be tested using quantitative data to confirm or refute the theories. Finally, this study adopted a quantitative research design. This is because quantitative methods are often associated with positivism as well as the deductive approach, which focuses on the use of data to test existing theory (Collis and Hossey, 2009). More so, the nature of quantitative research involves the use of statistical techniques to analyse relationships between variables that are measured numerically. Thus, this method is the most appropriate in addressing the research questions posed.

3.2. Population and Sampling

The research focuses on Nigeria's banking sector thereby sampling all the Nigerian commercial banks quoted on the Nigerian stock exchange. However, due to incomplete data, only 12 out of the 16 quoted banks are employed in the analysis.

3.3. Data

The relevant data for this study were obtained from secondary sources. The data was collected from the Bloomberg database, which provides financial information on listed companies across the world as well as the annual reports of the banks. The observation runs from 2015 to 2019, which is 5 years and with a total of 12 banks, the observations will be sufficient to produce meaningful results. This is an improvement from the work of Onyekwere et al., (2019) and Adesanmi et al., (2019) who sampled only 5 and 10 banks respectively from the Nigerian stock exchange. Following previous research, two sets of data were obtained, one category measures board diversity dimension and the other category measures financial performance dimension. The board diversity variables of interest to this present research are gender (measured as % of women on the board) and board independence (measured as % of independent

directors on the board). For financial performance, the popular accounting variables on this topic are ROA, which is calculated as the ratio of net income before tax to total assets, and ROE, which is calculated as the ratio of net income before tax to shareholder equity. Thus, these variables are also adopted in this research. Nevertheless, some studies use marketing measures such as Tobin's Q when investigating this topic. Finally, all variables are expressed in their natural logarithm form to provide a single unit of measurement and to simplify interpretations.

Following recommendations from previous researchers (Campbell and Minguez-Vera, 2008; Terjesen and Couto, 2015; Shehata et al., 2017; Ngo et al., 2019) this study controls for firm size, firm age and board size. Empirical evidence from previous studies reveals that there is a mixed relationship between firm size and the financial performance of firms. However, this study predicts that firm size has a positive relationship with financial performance due to the advantages larger firms have over smaller firms. This study also predicts that firm age has a positive relationship with financial performance, owing to their experience as well as the influence of branding (Ngo et al., 2019). The relationship between board size and firm financial performance has also provided mixed results. Nonetheless, this study predicts that board size has a negative association with firm performance due to bureaucratic and communication problems as well as a slower decision-making process (Shehata et al., 2017).

3.4. Method of Analysis

The review of the literature showed that panel data analysis has been the dominant approach employed in the study of this topic thus; this research will also adopt panel data analysis. There are two vital parts to the analysis. The first is the correlation analysis, while the second part will be a regression analysis. A correlation analysis is necessary to provide an insight into the type of relationship exhibited by all the explanatory variables in question with the dependent variables. It will also reveal whether or not there is a problem of multicollinearity among the explanatory variables.

The second part of the analysis will be a regression analysis. By this, the exact impact of the chosen board diversity variables on financial performance can be estimated. Like Onyekwere et al (2019), this research pays close attention to two board composition variables which are, gender and board independence. However, other variables such as board size, firm size and firm age are added as controls. Hence, board diversity variables will be used as independent variables while financial performance will be used as the dependent variable in the regression. See equation 1 below

$$\mathbf{Y_{it} = \beta_0 + \beta_1 X_{it} + \varepsilon t} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where:

it = denotes panel of bank i at time t
Y = denotes financial performance variables used (ROA or ROE)
β_0 = denotes the constant
β_1 = denotes the coefficients
X_1 = denotes the explanatory variables, board dependence (BD), gender (G), and set of controls such as Board size (BS), Firm size (FS) and Firm age (FA)
εt = denotes the error term

The equation (1) above states the effect of the right-hand side variables on the left-hand side variable. It is further decomposed into two separate equations to reflect the use of two dependent variables, and addition of the control variables as follows:

$$\mathbf{ROA_{it} = \beta_0 + \beta_1 Gender_{it} + \beta_2 Independence_{it} + \beta_3 board\_Size_{it} + \beta_4 Age_{it} + \beta_5 Firm\_Size + \varepsilon t} \quad \ldots\ldots\ldots\ldots\ldots (2)$$
$$\mathbf{ROE_{it} = \beta_0 + \beta_1 Gender_{it} + \beta_2 Independence_{it} + \beta_3 board\_Size_{it} + \beta_4 Age_{it} + \beta_5 Firm\_Size + \varepsilon t} \quad \ldots\ldots\ldots\ldots\ldots (3)$$

The coefficients of interest to this research are $\mathbf{\beta_1}$ **and** $\mathbf{\beta_2}$, which represent impacts for gender and board independence respectively. Panel data analysis is highly beneficial as it takes into consideration both the time-series dimension as well as the cross-section dimension of the data. Nevertheless, caution needs to be applied as a wrongful application of panel data can lead to its loss of good reputation. For instance, Onyekwere et al., (2019) advise against the use of pooled panel data results. This is because by running a pooled OLS regression, one ignores the individuality of the banks in question and treats the data as if they have come from the same company (Onyekwere et al, 2019). This is by definition; no different from running a normal time series regression hence, the name pooled Ordinary Least Squares Estimation. Thus, the favoured approach on this topic remains the fixed effects approach. The fixed effects approach is more realistic as it takes the individuality of all the banks into account. It does this by automatically assigning

dummy variables into the regression to control for the individuality of each bank as it assumes that such differences are correlated with explanatory variables across different banks and with their error terms (Gujarati and Porter, 2010). It is for this reason that the fixed effects method is also referred to as Least Square Dummy Variable (LSDV) model (Gujarati and Porter, 2010). In essence, what the fixed effects approach does is similar to running pooled OLS but assigning dummy variables to control for differences from each bank. These differences could be their location, technology, industry etc., which need to be controlled to improve results.

Nonetheless, a third panel data approach that is rarely used is the random effect model. This method assumes that the effects of the individuality of the banks occur at random and not constant thus, relaxes the assumption of correlated error terms with explanatory variables across different banks. Fortunately, there is a simple test to determine whether to accept the result from the fixed effect or random effect. The test is known as the Hausman test, which tests the null hypothesis that the random-effects model is the most suitable (Gujarati and Porter, 2010). Obtaining p-values greater than 0.05 means that the null hypothesis should be accepted in favour of the random effects, otherwise, fixed effects result is used.

4. Results and Analysis

It is a tradition to begin this part of research with the understanding of the distribution of the data and the nature of the trends in the data. To this end, the study presents a graph showing a historic trend in the data. Following this, the author proceeds to calculate the descriptive statistics as well as correlations before the data is subjected to regression analysis. However, table one below present's evidence of sampled banks.

Table 1. Tabulation of Sampled Banks

Value	Count	Percent	Cumulative Count	Cumulative Percent
Access Bank	5	8.33	5	8.33
Eco Bank	5	8.33	10	16.67
Fidelity Bank	5	8.33	15	25.00
First Bank	5	8.33	20	33.33
First City Monument Bank	5	8.33	25	41.67
Guaranty Trust Bank	5	8.33	30	50.00
Stanbic IBTC Bank	5	8.33	35	58.33
Sterling Bank	5	8.33	40	66.67
Union Bank	5	8.33	45	75.00
United Bank for Africa	5	8.33	50	83.33
Wema Bank	5	8.33	55	91.67
Zenith Bank	5	8.33	60	100.00
Total	60	100.00	60	100.00

Table 1 shows that a total of 12 banks were sampled, generating 60 observations for the study. The first column, named value gives the names of the banks. The count column indicates that only five years were covered for each bank. Adding the total years from each bank for the twelve banks gave the 60 observations seen on the table.

4.1. Historic Trend in Data

This section observes the historic trend of the data. This is to fully understand the behaviour of the data across time

Figure 1. Return on Assets

Figure 1 provides a graphical view of ROA for the 12 Banks. A glance reveals four Banks: Zenith Bank, Guarantee Trust Bank, First Bank and Stanbic IBTC Bank that have experienced consistent upward trend (growth) in return on assets. Nonetheless, Fidelity Bank, Union Bank, Eco Bank and First City Monument Bank have also shown some form of good performance. The set of Banks, which have performed poorly, are Access Bank, United Bank for Africa, Sterling Bank, and WEMA Bank. Another observation is that majority of the Banks had their worst ROA performance around 2016-2017. This was as a result of the 2016 recession as well as strict currency policies and a plunge in Nigeria's foreign reserve due to falling global oil prices (Kazeem, 2018).

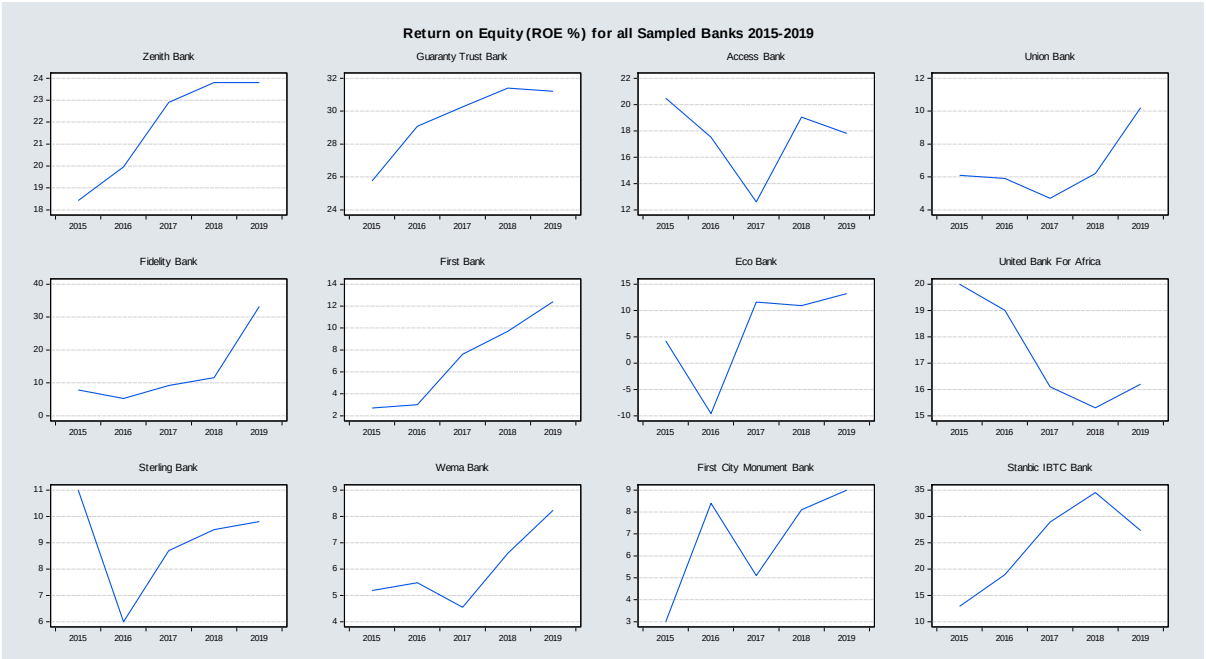

Figure 2. Return on Equity

A glance at ROE in figure 2 shows no clear difference from that seen for ROA. That is to say that similar trends observed for ROA are replicated on ROE. However, a higher performance seems to have occurred in ROE than that seen on ROA.

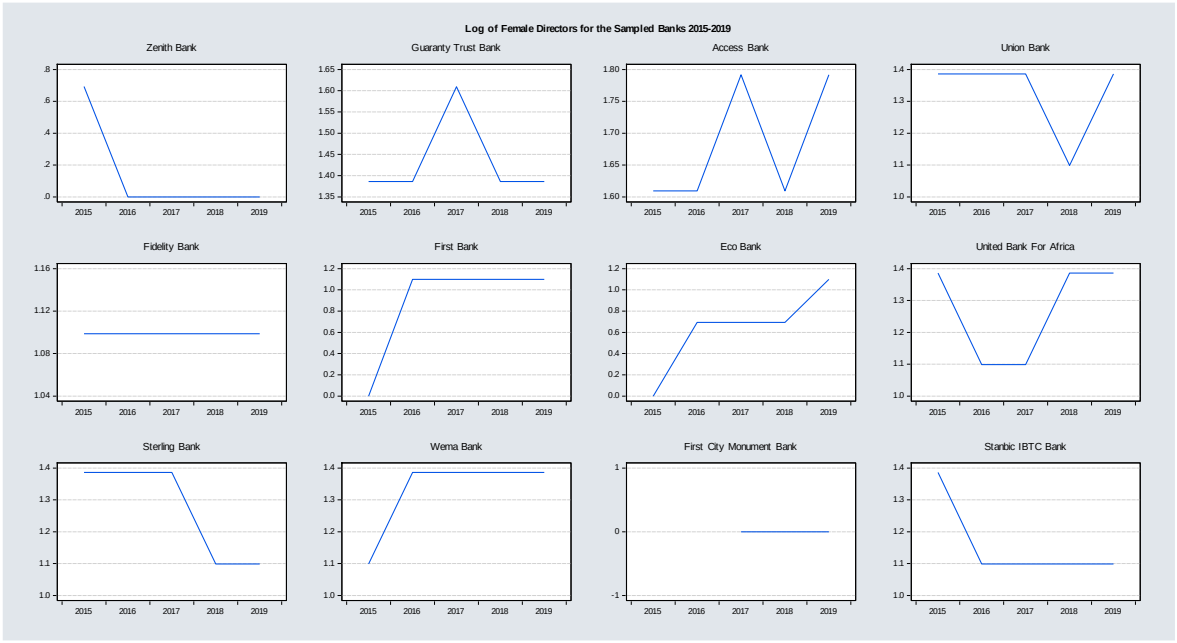

Figure 3. Female Directors

Graph of female directors in figure 3 shows that different banks have had different representations of females on the board throughout the observation period. The banks that have preferred to keep the number of females on the board somewhat stable are Zenith Bank, Fidelity, First Bank First City Monument Bank and Stanbic IBTC bank. Other banks have preferred to vary the representation of women on yearly basis. These patterns reflect a possible conflict of opinions on gender representations at workplaces in Nigeria.

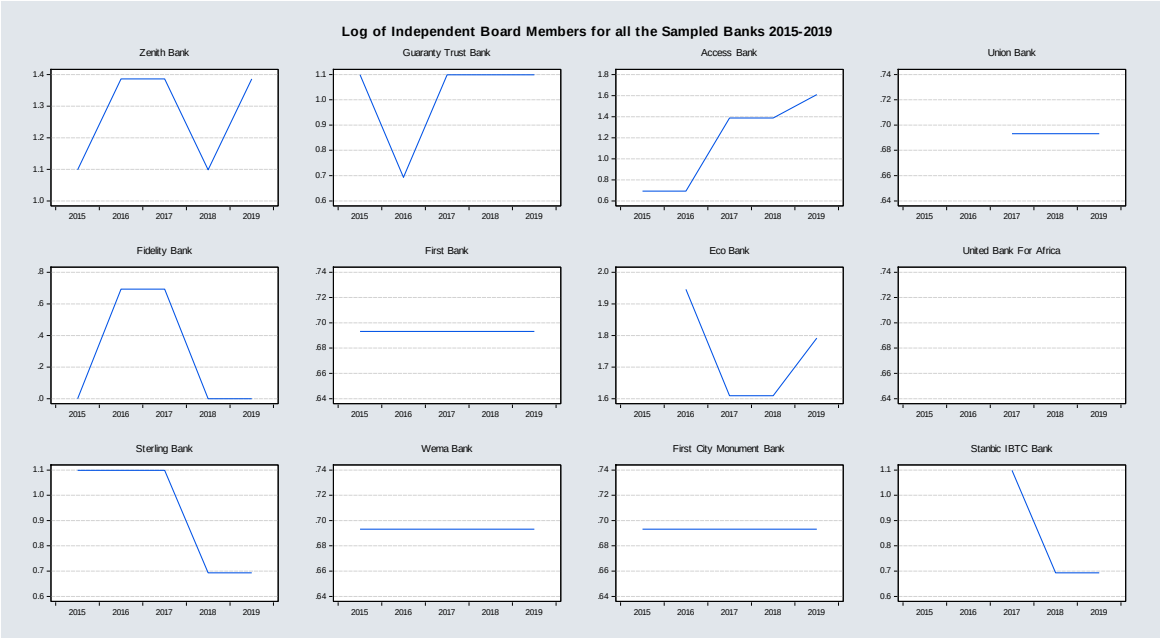

Figure 4. Independent Directors

Like the picture is shown for female directors, figure 4 shows that different Banks have also included a varying number of independent directors. Surprisingly, three Banks such as First Bank, Wema Bank, Union Bank and First City Monument Bank have kept the same number of independent directors throughout the observation period. Another surprising fact is that United Bank for Africa has had no independent board members until 2019. These differences are also a clear indication of different levels of understanding of the need for independent board members among Nigerian Banks.

4.2. Descriptive Statistics, Normality Assumptions and Correlations

Table 2. Descriptive Statistics

	BOARD_INDEPEDENCE	FEMALE_GENDER	ROA	ROE
Mean	2.283333	3.083333	1.865167	13.79417
Median	2.000000	3.000000	1.365000	11.29500
Maximum	7.000000	6.000000	5.600000	34.50000
Minimum	0.000000	0.000000	-0.900000	-9.600000
Std. Dev.	1.496795	1.369048	1.422244	9.302090
Skewness	0.669125	-0.350907	1.030910	0.452694
Kurtosis	3.942765	2.786646	3.445701	2.748918
Jarque-Bera	6.699298	1.345154	11.12439	2.206925
Probability	0.035097	0.510392	0.003840	0.331721
Sum	137.0000	185.0000	111.9100	827.6500
Sum Sq. Dev.	132.1833	110.5833	119.3439	5105.204
Observations	60	60	60	60

Descriptive statistics provide useful information on the nature of the data obtained. For instance, the mean of 2 calculated for board independence reveals that on average, the Banks have kept just two independent board members throughout the observation period. The mean of 3 calculated for the female gender also shows that on average; only three members of the board were women throughout the observation period. The value for minimum and maximum gives us an idea of the highest and lowest figures that ever appeared on that particular data. For instance, a maximum of 7 that appeared for board independence shows that no bank has had more than seven independent board members. Moving on to ROA and ROE, it can be seen that ROE has a higher mean value, 13% in comparison to 1.87% for ROA. It suggests that Banks have performed better concerning ROE.

Finally, it is common practice to check for normality from descriptive statistics using the value of skewness and kurtosis. For normally distributed data, skewness must be zero and kurtosis 3 (Gujarati & Porter, 2010). Evidence from the calculation shows values, which are very close to the set criteria. Thus, one can infer that although data may not follow a normal distribution, it is very close to it.

To further investigate the normality of the data, this study employs the use of a histogram as depicted in figure 5.

A rule of thumb for normally distributed data is for the histogram to have a bell-shaped structure or pattern. From figure 5 above, one can notice that only the data for ROA meets this criterion by possessing a bell-shaped structure. By this, it becomes evident that the data has a normality problem. Nonetheless, the famous central limit theorem permits the use of data for parametric analysis even though they are not normally distributed (Onyekwere et al., 2019). The theorem argues that if a larger sample were obtained, or a different sample was used, the data may eventually become normally distributed.

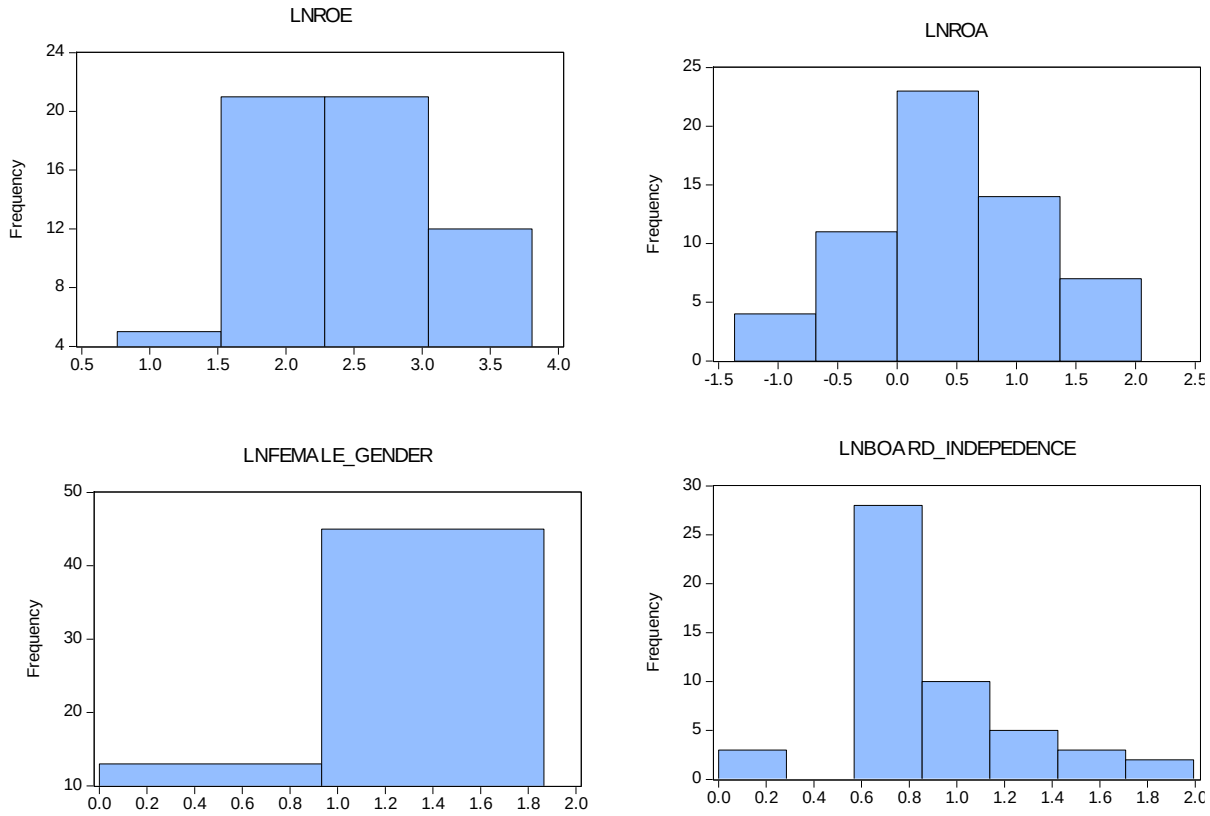

Figure 5. Histogram of variables

Table 3. Correlations Table

Covariance Correlation	BOARD_INDEPEDENCE	FEMALE_GENDER	ROA	ROE
BOARD_INDEPEDENCE	2.203056 1.000000			
FEMALE_GENDER	-0.106944 -0.053073	1.843056 1.000000		
ROA	0.039536 0.018887	0.346236 0.180833	1.989065 1.000000	
ROE	0.230986 0.016871	2.525486 0.201672	12.30863 0.946137	85.08673 1.000000

Correlations assessment placed in table 3 gives the nature of the relationship between all the variables. Interest is on how the independent variables (board independence and female gender) correlate with the dependent variables (ROA and ROE). A glance at the table shows that both female gender and board independence have a positive relationship with ROA and ROE. However, the correlation of board independence is weaker, almost close to zero (0.019 for ROA and 0.017 for ROE). Meanwhile, the correlation for female gender is more reasonable with 0.18 for ROA and 0.20 for ROE. What this means is that while the female gender can explain a greater proportion of the changes in banks financial performance, board independence may have little or nothing at all to do with the changes in banks financial performance in Nigeria. To get a solid grasp of the size of these changes that can be attributed to these variables, a formal regression analysis is required. This has been done in the next section.

4.3. Regression Analysis

As discussed in the methodology section, the right estimation technique to adopt between the fixed effect and random effect is decided by the Hausman test. Since two equations are specified for the two dependent variables in this research (one for ROA and the other for ROE), two Hausman tests are also required.

Furthermore, to test the effect of the control variables on the regression, the study first estimates the equations without the control variables and then re-estimates them in the presence of the control variables. Additionally, the study presents the assessment for multicollinearity, heteroscedasticity, autocorrelation and normality of residuals.

4.3.1. Choosing a Panel Estimation Model with Hausman Test

As can be observed from tables 4 and 5, the probability values are less than 0.05. Thus, the null hypothesis of random effects is rejected in favour of the fixed effects method. By this, the study proceeds with the estimates from the fixed effects as chosen by the Hausman test.

Table 4. Hausman Test for Equation 2 (ROA)

Correlated Random Effects - Hausman Test
Equation: EQ01
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	16.725708	5	**0.0051**

Table 5. Hausman Test for Equation 3 (ROE)

Correlated Random Effects - Hausman Test for Equation 3
Equation: EQ01
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	27.893870	5	**0.0000**

4.3.2. Post Regression Residual Diagnostics Tests

Table 6. Multicollinearity Diagnosis using Variance Inflation Factor (VIF)
Variance Inflation Factors

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	45.56071	26971.87	NA
LNBOARD_INDEPEDENCE	0.060987	29.79502	**1.411472**
LNFEMALE_GENDER	0.047244	31.59832	**1.025472**
LNBOARD_SIZE	0.483631	1841.580	**1.359783**
LNTOTAL_ASSET	0.198440	87521.36	**4.131136**
LNFIRM_AGE	5.073439	40830.85	**4.111909**

Table 6 presents the calculated VIF for the assessment of multicollinearity. According to Gujarati & Porter (2010), a VIF below 5 means that there is no problem with multicollinearity. The column of interest is the centred VIF and as

evident from the table, all variables have VIF values between 1 and 4. Thus, it can be inferred that the variables are free from the problem of multicollinearity.

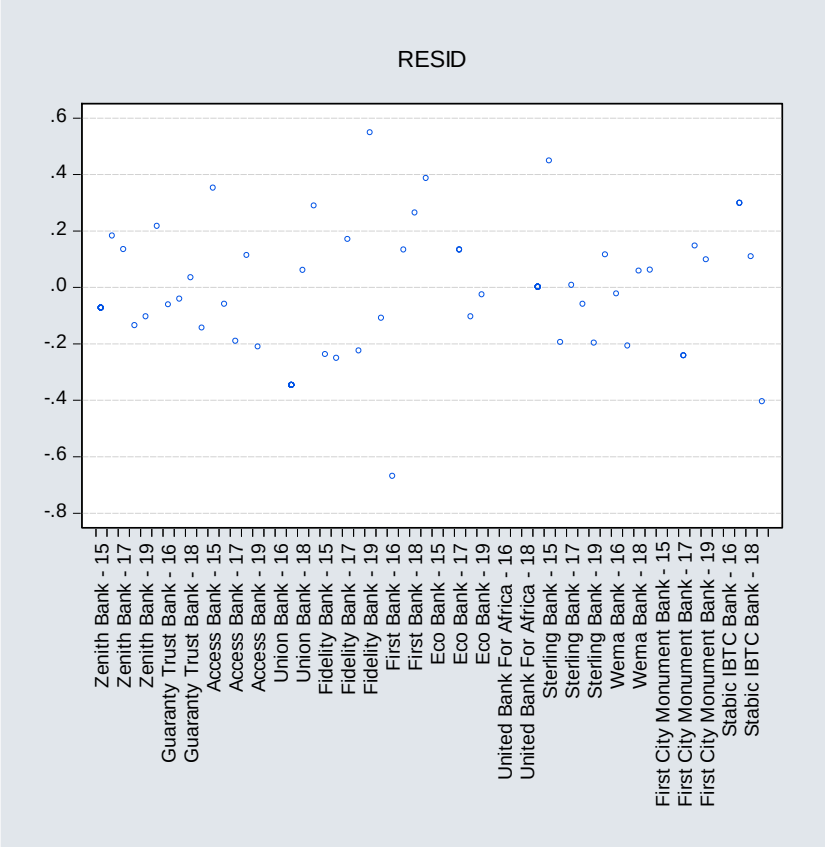

Figure 6. Assessment for Heteroscedasticity Using Scatter Plot

For regression residuals to be heteroskedastic, the dots or points on the plot would have a funnel-like resemblance (Gujarati and Porter, 2010). That is, the behaviour of the residuals would be systematic and follow a particular pattern. From the graph in figure 8, one can see that this is not the case. There is no particular pattern or order that can be attributed to the behaviour of the residuals, they are scattered at different points. Thus, it can be inferred that the residuals are homoscedastic.

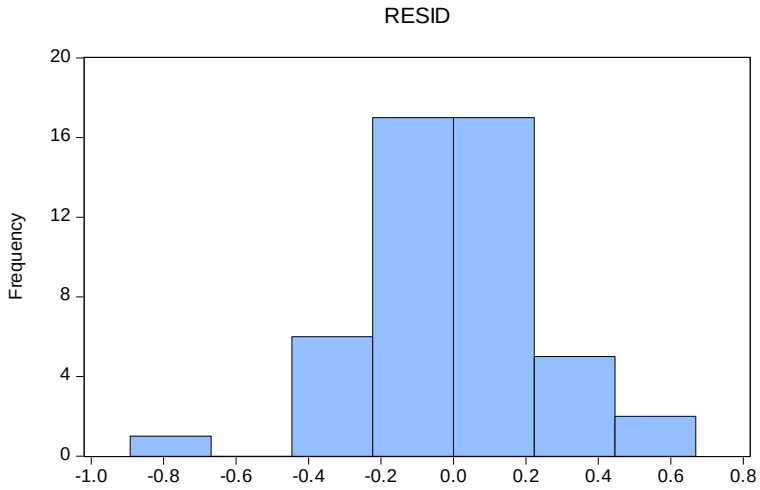

Figure 7. Histogram of Residuals for Normality

From figure 7, it is evident that the residuals have a shape that can be attributed to a bell shape. Hence, it can be presumed that the residuals follow a normal distribution.

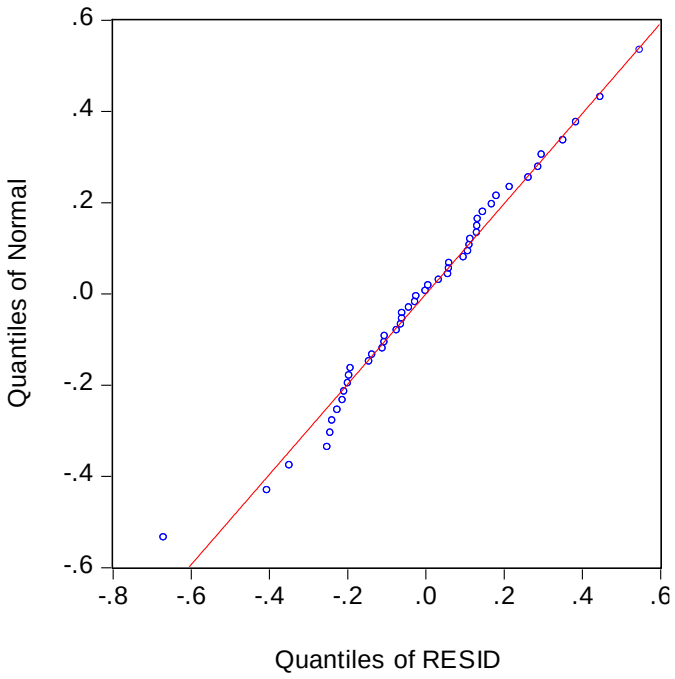

Figure 8. Q-Q Plot of Residuals for Normality

Q-Q plot is another method of assessing the normality of residuals. Normally distributed residuals would have all the dots lying along the straight line. The graph of figure 10 shows that a few dots lie outside the straight line. However, since most of the dots lie on the straight line, there is an indication that the residuals are very close to a normal distribution.

4.3.3. Presentation and Explanation of Regression Estimates

Table 7. Estimate without control variable for ROA
Dependent Variable: **LNROA**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.424185	0.272459	1.556874	0.1288
LNBOARD_INDEPEDENCE	-0.457237	0.205046	-2.229925	0.0325
LNFEMALE_GENDER	0.386563	0.211729	1.825743	0.0767

Table 8. Estimate without control variable for ROE
Dependent Variable: **LNROE**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.385892	0.347331	6.869211	0.0000
LNBOARD_INDEPEDENCE	-0.466618	0.261392	-1.785123	0.0832
LNFEMALE_GENDER	0.487082	0.269912	1.804594	0.0800

Table 9. Estimate with control variable for ROA

Dependent Variable: LNROA

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-8.170111	5.742219	-1.422814	0.1648
LNBOARD_INDEPEDENCE	**-0.649894**	0.210089	-3.093431	**0.0042**
LNFEMALE_GENDER	**0.378573**	0.184909	2.047353	**0.0492**
LNBOARD_SIZE	0.533017	0.591618	0.900948	0.3746
LNTOTAL_ASSET	-0.432734	0.378965	-1.141883	0.2622
LNFIRM_AGE	5.216668	1.916177	2.722435	0.0105

Table 10. Estimate with control variable for ROE

Dependent Variable: LNROE

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-22.71848	6.749868	-3.365767	0.0020
LNBOARD_INDEPEDENCE	**-0.733345**	0.246955	-2.969550	**0.0057**
LNFEMALE_GENDER	**0.430687**	0.217357	1.981478	**0.0565**
LNBOARD_SIZE	0.549687	0.695435	0.790422	0.4353
LNTOTAL_ASSET	0.459510	0.445466	1.031526	0.3103
LNFIRM_AGE	3.109457	2.252430	1.380490	0.1773

Tables 7-10 present the regression estimates for this research. Before the final regression, it is common practice to assess the performance of control variables, in other words, the effect of control variables on the regression. Additionally, it is important to mention that the calculated Durbin-Watson statistic for all the regressions remain approximately 2, which means that the regressions are free from autocorrelation.

From tables 7- 8 and 9-10 it can be noticed that without the control variables, estimates for board independence and female gender were generally higher. This means that if these control variables were not introduced, the research would have reported estimates higher than their true values. Thus, with the important control variables used for this research, the results presented in tables 9 and 10 are the true estimates that can be relied upon for policy formulation. Thus, the study progresses with results from tables 9 and 10.

Tables 9 and 10 present the Eviews estimate output for the two specified equations. An interesting observation is that the two equations present similar results. A glance at the signs following female gender and board independence on the two tables shows that while the female gender has maintained a positive sign, board independence has consistently assumed a negative sign. Given that these two equations have calculated probability values that are both less than 0.05, one can confidently make conclusions using the estimated results. The value of the Adjusted R-squared for the two estimates presents very high values, evidence that inclusion of the control variables (firm age, board size and firm size) was a good step.

Going back to the estimated coefficients for the female gender and board independence, one can observe a similar pattern. For ease of comparison, consider table 11.

Table 11. Extracted Eviews Estimates

Independent Variable	**Return of Assets (ROA)**	**Return on Equity (ROE)**
Female Gender	0.38**	0.43**
Board Independence	-0.64*	-0.73*

From table 11, two patterns are observed. Firstly, when ROE is used to assess the financial performance of Nigerian banks, the impact of the independent variables increases. Secondly and very obvious, while the female gender has a positive impact on both financial performance measures, board independence maintains a negative impact.

By this, one can conclude that while the female gender has a significant positive impact of around 0.38 - 0.43 on the financial performance of Nigerian banks, board independence has a significant negative impact of around -0.64 - -0.73 on the financial performance of Nigerian Banks. What this means in simple words is that increasing independent board members by 1% will reduce the financial performance of banks by about 0.64% - 0.73 % (depending on the financial performance measure considered). On the other hand, increasing female board members by 1% will increase the financial performance of banks by about 0.38% - 0.43% (depending on the financial performance measure considered).

5. Discussion

5.1. Introduction

This section discusses the results of this study and compares the results with previous literature. This is followed by a discussion of the implications of the findings to managers and decision-makers

5.2. Discussion of Findings

5.2.1. Board Gender Diversity and Financial Performance

Recently, a wide number of countries have formulated guidelines and, in some cases, compulsory laws to increase gender diversity in the board rooms (Alvarado, Fuenles and Laffarge, 2015). In Nigeria for instance, a regulatory directive was issued by the Central Bank of Nigeria to include at least 30% females on boards (Uwana, 2015). Nevertheless, a large proportion of the board room is still dominated by males.

One of the aims of this study was to examine the impact of board gender diversity on the financial performance of listed banks in Nigeria. The result of this study revealed that board gender diversity has a significant positive effect on firm performance measured in terms of ROA (0.38) and ROE (0.43). Thus, the results indicate that banks with more female board members perform better than firms with lesser female board members. The findings of this study concur with the studies of Liu et al., (2014), Onyekwere et al., (2019) and Terjesen and Couto (2015), who all found a positive correlation between board gender diversity and firm performance measured in terms of ROA and ROE. The result of the present study is also consistent with the studies of Ngo et al., (2019) and Nguyen and Faff (2007) who report a positive relationship between board diversity and financial performance albeit using Tobin's Q as a measure of firm performance. The result of the current study also supports the studies of Taaljard et al., (2015) and Adesanmi et al., (2019) who reveal that board gender diversity has a positive impact on financial performance as measured in terms of share price and profit margin respectively. This study, therefore, supports the line of literature that purports a positive impact of board gender diversity on firm performance.

The findings of this study however contradict the study of Shehata et al., (2017) who found a significant negative relationship between board gender diversity and firm performance measured in terms of ROA. The difference in results could be because their study only sampled SME's as opposed to this study and other previous studies that sampled larger firms. Thus, the authors inferred that resources brought to firms by female board members such as enhanced decision making, and external linkages may take up time before they affect financial performance measures such as ROA. The result of this study is also in contrast to the study of Salim (2011) who found that gender diversity is negatively associated with firm performance measured in terms of ROA and Tobin's Q. This could however be due to the use of the OLS method of estimation, which fails to control for unobservable heterogeneity and also employing cross-sectional for only one financial period. Ujunwa et al., (2012) and Boubaker et al., (2014) similarly found a negative impact of gender diversity on ROA, which also contradicts the findings of the present study.

The result of this study also contradicts the findings of Tarigan et al., (2018), Marinova et al., (2010), Rose (2007) and Hassan and Marimuthu (2016) who all failed to find any significant relationship between board gender diversity and firm performance measured in terms of both accounting-based measures such as ROA and ROE and the marketing-based measure, Tobin's Q.

The result of this study is in line with Agency theory (Kiliç and Kuzey, 2016). This theory states that the functions of the boards in monitoring and controlling managers and suggests that diverse boards could help mitigate the agency problem between managers and shareholders. It has been documented that female directors tend to raise more questions in comparison to other directors and tend to be more active and vigorous monitors (Boubaker et al., 2014). The finding of this study is also in line with Resource dependence theory (Kiliç and Kuzey, 2016). The theory, which considers the firm as an open system that relies on external firms and environmental factors suggests that the inclusion of female directors on board enables firms to have enormous access to critical resources through their competence, skills and experiences that often differ from their male counterparts (Boubaker et al., 2014).

Various reasons could lead to the positive impact of board gender diversity on financial performance from prior literature. Carter et al., (2003) for example stated that female presence on the board enhances corporate governance structure. The author's further state that female presence on the board promotes the effectiveness of decision-making procedures by contributing various perspectives to board meetings and discussions. Rose (2007) stated that the presence of women contributes positively to firm performance due to their ability to develop excellent relations and communications with female clients. Moreover, Luckerath-Rovers (2013) affirm that females improve the corporate image of their firms. Alvarado et al., (2015) suggest that women differ from men in various aspects as they tend to be more risk-averse and often opt for minimally aggressive strategies as well as tenable investment criteria.

This study recommends banks and other firms increase the presence of women in the board room. Enhancing board gender diversity will enable firms and the society at large to gain noticeable ethical and social development as this promotes adequate equality between males and females (International Finance Corporation, 2019). Hence, the involvement of women in decision-making processes such as in the board room is crucial in alleviating the social and labour injustice commonly experienced by women whilst at the same time boosting economic performance for firms. Firms can also promote the positive impact gender diversity has on firm performance by removing tokenism; which is appointing females for fulfilling a quota or satisfying investors or even to portray them as being diverse or progressive (International Finance Corporation, 2019). Firms can alleviate the risk of tokenism by appointing females based on their skills, qualifications and competence and making sure that their contributions are not dismissed (Ibid). Firms should also ensure that female board members are provided with legitimate avenues to make contributions. This can include making them part of key committees as well as involving them in strategic planning and decision-making procedures. Failure to do this could fail to take complete advantage of the skills and perspectives that women bring to the board.

5.2.2. Board Independence and Financial Performance

Independent directors are considered as being more effective at monitoring and supervising the management on behalf of shareholders (Ameer et al., 2009). This may consequently promote firm performance (Rashid et al., 2010). However, the findings of this study indicate that board independence has a significant negative impact on financial performance measured in terms of ROA (-0.64) and ROE (-0.73). This implies that greater board independence leads to a decline in financial performance. The findings of this study corroborate the study of Kweh et al., (2019) who found that board independence has a significant negative association with the financial performance of Malaysian firms measured in terms of ROA and ROE. The result of this study also concurs with the study of Alsartawi (2019), which revealed a negative relationship between board independence and financial performance proxied as ROA for Islamic Banks in the Gulf Cooperation Council.

Another study that assents with the finding of the present study is that of Cavaco et al., (2016) who documented a significant negative association between board independence and firm performance measured in terms of ROA and ROE for French listed companies. The authors suggested that the inefficiencies that arise as a result of board independence outweigh the expected benefits of board independence. The study of Hsu and Wu (2014) is closely in line with the findings of this study as their study reveals that the likelihood of corporate failure is lower in firms that have greater numbers of executive directors as opposed to independent directors. Hence, their study documents a significant positive relationship between board independence and corporate failures. In line with the findings of this study is that of Laux (2008) who states that shareholder interest is better protected when the board lacks some independence. The author states that greater board independence leads to greater CEO turnover and larger severance packages, which consequentially lead to a negative impact on the firm. The findings of this study likewise confirm the studies of Hamdan and Al-Mubarak (2017) as well as Martin and Herrero (2018).

The results of this study however contradict the findings of Luan and Tang (2007), Sanda et al., (2011) and Alshetwi (2017), where a significant positive relationship between board independence and firm performance was recorded.

The studies of Ameer et al., (2009) and Adesanmi et al., (2019) also counter the findings of this study as their studies document that board independence leads to an improvement in financial performance measured in terms of Tobin's Q and profit margin respectively. Liu et al., (2015) also contradict the findings of the present study as they report a significant positive relationship between board independence and firm performance measured in terms of ROA and ROE for Chinese listed firms. Similarly, the study of Qadorah and Fadzil (2018) negate the findings of the present study as they discover a significant positive association between board independence and firm performance.

Several studies carried out on this topic failed to find a significant negative or positive relationship of board independence on financial performance, which also differs from the result of this study. Rashid et al., (2010) documented that board independence does not add any economic value to firms in Bangladesh. This finding was corroborated by the studies of Rashid (2018), Onyekwere et al., (2019), Zabri et al., (2015) and Haldar et al., (2018) who all fail to find any significant impact of board independence on financial performance and hence counter the findings of the present study. Al-Qudah (2019) and Muchewma (2016) also document an insignificant impact of board independence on firm performance, thus contradicting the findings of this study.

A wide range of corporate governance codes has suggested that board room composition should be balanced and should be made up of independent directors (Fuzi, Abdul Halim and Julizaerma, 2016). Nonetheless, evidence from other jurisdictions reveals that abiding by such recommendations are not sufficient if the independent directors neglect to carry out their functions effectively (Ibid). Following the findings of the present study, several recommendations are suggested to potentially improve the benefits of independent directors on the performance of banking institutions. First, the appointment of independent directors should be dependent on factors such as qualifications, experience and expertise (Martin and Herrero, 2018). Rashid (2018) asserts that to enable independent directors to carry out their intended purpose, their appointments must be transparent and autonomous to avoid the appointments being controversial. Second, Zhu et al., (2016) revealed that empowering independent directors improves performance. This is because by empowering independent directors, they are better able to monitor financial reporting. Thirdly, although there are multiple benefits of having independent board members, their appointments should be comparable with the business environment and the prevailing culture in the society (Hamdan and Al-Mubarak, 2017). This is because some societies have some socio-economic conditions that do not favour independent directors.

6. Conclusion

6.1. Summary of Research Findings

Diversity of board members has been one of the most critical corporate governance problems faced by managers, directors and shareholders of the modern corporation (Carter, Simkins and Simpson, 2003). This study aimed at providing evidence on the association between board diversity and financial performance of banking institutions in Nigeria. As a result of the continuous theoretical and empirical debate on the nature of the link, the present study assessed the relationship between board gender diversity as well as board independence in firm performance. The dependent variables of interest were ROA and ROE, which are both accounting-based measures of measuring firm performance while the independent variables of interest were board gender diversity and board independence. The study however controlled for other variables such as board size, firm size and firm age. The study relied on majorly secondary data obtained from the Bloomberg database and the annual reports of listed banks in Nigeria, whilst correlation analysis and multi-linear regressions of panel data were employed to analyse the data. The study found that board gender diversity has a positive and significant impact on ROA and ROE of listed commercial banks in Nigeria. Conversely, the study found that board independence has a significant negative impact on the ROA and ROE of the banks.

6.2. Implications of Research Findings

The results of this study are in line with agency and resource dependence theories as well as stakeholder theory, which emphasize having a diverse board of directors. Based on the findings of this study, some policy implications concerning board composition are proposed below.

The results of this study could be used as a guide in the appointment of board members. However, policymakers should make sure that policies developed concerning board diversity should have long-term sustainability as well as performance benefits to the firm. In addition, policymakers must use different studies on board diversity to understand the costs and benefits associated with it to enable them to come up with informed policies and regulations. Moreover,

the results of this study can be beneficial in providing further understanding to policymakers in their pursuit of harmonising corporate governance practices in Nigeria with international best practices. This study suggests that diversity among boards should be encouraged in terms of not just gender but also skills, experiences and background to enrich the quality of perspectives developed by the board and the quality of decisions made. In addition, the study suggests that boards of banks should be evaluated periodically in other to improve board effectiveness (Moghalu, 2015). The evaluation of the board could bring about significant benefits to the board and the organisation at large.

As regards gender diversity, a crucial policy implication of this study is that gender-diverse boards are beneficial to firm performance especially in a country with weak corporate governance practices such as Nigeria. As such, this study highly recommends that Nigerian banks and other institutions increase the number of females on their boards. Firms should endeavour to develop a fair environment for women in the selection of board members. Nevertheless, board members need to attain a certain level of knowledge to enable them to function effectively (Moghalu, 2015). Thus, the continuous improvement and development of the qualifications of board members should be imperative.

On the other hand, decisions regarding board independence in banking institutions in Nigeria should be made with caution. The appointment of independent directors should be based on competence, qualification and experience rather than family ties or political patronage to avoid a detrimental impact on the organisation. More so, Rashid (2018) states that a large proportion of independent directors may lack the competence in carrying out their assigned tasks because some of them are part-timers and lack internal information about the firm. This form of information asymmetry could consequentially hinder the control function of the independent directors and hence affect performance. As such policymakers must try to mitigate the information asymmetries between independent directors and other executive directors. Moreover, it should be ensured that board members have sound knowledge of the business, risk management and financial matters of the banks in addition to possessing the necessary experience to enable them to contribute adequately to board decisions. Finally, independent directors should be appointed depending on their corporate track record to enable them to become invaluable assets to their respective firms.

6.3. Limitations of the Study

The present study has several limitations, which are discussed below. The analysis is restricted to Nigeria, which is an emerging market with weak corporate governance mechanisms. As such, the results of the analysis cannot be generalised for other countries. Second, the sample size was limited to only the 12 listed banks on the Nigerian stock exchange that had complete data. Although this was an improvement on the previous studies that employed a smaller sample size, the limited sample could likewise affect the generalizability of the study, as larger sample sizes are always encouraged in the positivist study (Collis and Hossey, 2009). Third, this study only employed accounting-based measurement of firm performance; namely ROA and ROE due to the absence of market-based measures. It has been argued that accounting-based measurements of firm performance are prone to a lack of accuracy as they involve estimations that tend to be subject to management control (Alshetwi, 2017). Another limitation of the present study is that other factors of board diversity such as age, experience, ethnicity, education were not examined due to the unavailability of data and the short time frame.

6.4. Recommendations for Further Research

This study suggests many promising avenues for subsequent research. Future researches should increase the sample size both longitudinally and in cross-section. Secondly, marketing-based measures of accounting performance such as Tobin's q and Earnings per share should be used. Moreover, firm performance can also be measured in non-financial terms such as corporate social responsibility practices as well as environmental sustainability practices. Future researches should also consider using other observable (age, ethnicity) and non-observable (education, experience) diversity variables. Future studies should also utilise primary data such as interviews, questionnaires and case studies to further understand corporate governance practices and their relationship with financial performance. Finally, future studies can include more corporate governance variables as controls in their analysis.

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