BOARD COMPOSITION AND FIRM PERFORMANCE OF QUOTED COMMERCIAL BANKS IN NIGERIA

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A B S T R A C T

Banks world over are expected to operate within acceptable standards of governance for consistent operational performance. They depend on customer deposits, which are confidence–driven. Since the quality of governance is critical to winning and retaining customer confidence and patronage, the imperative for good governance practices in banks cannot be overemphasized. The aim of this study is to empirically explore the relationship between board composition and firms' performance of quoted commercial banks in Nigeria. Data on different variables of board composition and firm market value from 2011-2021 were collected from the annual financial reports of all the fourteen quoted commercial banks in Nigeria. Ordinary least square regression analysis, descriptive statistics, Hausman specification test, likelihood ratio test, panel stationarity test, Lagrange multiplier test, lag length selection criterion, and panel auto-regressive distribution lag brand test was used in analyzing the data. The empirical results indicate that board composition significantly relates to firm performance, explaining about 85.1% of the total variation of firm market value. The study concludes that board composition contributes significantly to firm performance and recommends that a strong and mandatory corporate governance structure should be put in place to ensure that the board of directors consists mostly of members that are independent of the firm, both directly and indirectly.

K E Y W O R D S

Board Composition, Firm Performance, Board Size, Board Independence and Firm Market Value.

Introduction

The current financial crisis in the banking sector of Nigerian economy which has been credited to the abuse of corporate governance practices is identified as one of the factors responsible for the failure of many banks in Nigeria financial health and performance of banks are important for the growth and development of Nigeria. (Faleye., Hoitash & Hoitash, 2021; Owolabi., Banisaye & Efuntade, 2021; Nwaiwu & Joseph, 2021), banks play three crucial roles to the development of any nation. Firstly, banks have an overwhelmingly dominant position in the financial systems and e extremely important engines of growth. Secondly, banks in these developing economies are typically one of the most important sources of finance for the majority of firms. Also, banks are the main depository for the economy's savings and provide the means for payments. Therefore, the banking industry in Nigeria has a significant role to play in the development of the country's economy. Banks have been the main sources of financing in the Nigeria financial market and bank loans were the predominant sources of debt financing in the economy (Central Bank of Nigeria Annual Report, 2006).

It is widely accepted that the composition of the corporate board could play a vital role in determining firm performance. Scholars, accountancy professional bodies and practitioners as well as policy makers have for the last two decades debited on the role of boards of directors as one of the key pillars of corporate governance. Some scholars (Somathiloke, 2018; Assenga., Aly & Hussainey 2018; Morimath, 2019), argued that the different board of directors' attributes have impact on organizational performance owing to different orientations. In recent years, board independence has become an emerging issue within corporate governance practice and research. There has been an increasing focus on studies about board composition such as board size, and board independence (Rafinda., Rafinda., Witiastuti; Suroso. & Trinugroho, 2018; Ganbo; Bello & Rimanshung, 2018; Furhan; Tabash., Almagtari & Yahya, 2020). Several studies tried to relate board diversity with organizational performance (Okiro 2016; Mohammed., Ahmod and Khai (2018). Nesseem., Xiaoming., Riaz and Rehman, (2021), indicated that ethnic diversity in board of director could lead to better corporate governance which leads to the more profitable business (Bairathi, 2019; Bhayat & Black, 2012; Priya & Nimakathasan, 2013).

Some countries already set the rule for board composition. Norway is also the first country in the world implementing this regulation since, 2006. Norwegian government has decided a minimum of 40 percent of the board members must be woman (Alfuma., Musa, Gold & Usman, 2021;). Similar to the Scandinavian countries, Spain, Leland and France also posed regulation to require a quota for number of female board members (Ibaboga & Ashakofo, 2021; Kochen, 2021; Ogboi & Enilolobo, 2021). In addition to the study of womenaords, the role of foreign board member is also widely discussed. For example, Choi., Park and Yoo (2019) found that foreign investor participation on board enhanced firm performance in Korea. Then, Ruigrok., Peck, and Techeva (2017) indicted that foreign directors in Swiss corporations tend to be more independent. Bairathi (2019), Priya and Nimakthasan (2013), Gary (2021) also reports that racial or ethnic diversity in board of director increases value and finally contribute to company performance and competitive advantage. As a matter of fact, most countries in Asia do not have gender quota regulation. However, Asian companies have a significant number of female board members and this number is increasing. Besides, Asia-Pacific economy is emerging and involving huge amount of foreign direct investment.

Studies have been conducted on the effect of board composition on performance of firms using different measures like return on asset, return on equity, earnings per share. For example, Radinda., Refinda; Witiastuti., Suroso and Trinugroho (2018) found a significant negative relationship between board size and return on asset. However, Gambo., Bello and Rimanshung, (2018) did not find any significant relationship between board size and firms. Bairathi (2009), Okiro (2016), Yermack (2021) in board diversity and financial performance (Panel Data Evidence from quoted deposit money banks in Nigeria) concluded that foreign directorship do not impact significantly on the financial performance of quoted banks in Nigeria noting that the presence of foreigners' on the board of banks in Nigeria will not add value to their financial performance. Recent poor corporate performance is sequential to spill over effects of the recent global economic crises. The effective adoption of strategic management and heterogeneous board creates an environment that minimizes group thinking thereby enhancing greater information processing, creativity and innovative ideas leading to higher quality decision making. Most studies that have been conducted have been on financial firms like banks and insurance firms. This study extends the period of the quoted commercial banks in Nigeria using the period 2011-2021. This is the gap in knowledge that this empirical study intends to fill.

Literature Review and Hypotheses Development
Theoretical Framework

Theoretically, the theoretical framework for the understanding of board composition and firm performance is underpinned by the agency theory. Jensen and Meckling (1976) define the agency relationship as "*a contract under which one or more persons (the principal(s) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent*". In their 1976 article "Theory of the firm: Managerial Behavior, Agency Costs and Ownership Structure", Jensen and Meckling (1976) helped establish the agency theory as the dominant theoretical framework of the corporate governance literature, and position shareholders as the main stakeholder, Agency theory as postulated by Smith & Verner, (2006). The agency theory is predicated on the distinction between owners of a company and those who are hired to manage the company. This principal-agent relationship often brings about crisis of conflict of interest that arises because of the disparity of their desired goals, thereby resulting in additional costs to the firm and depletion of the shareholders wealth. These days, more attention is given on directors and executives pursuing their own interests, by investing in expanding their own asset in contrast to increasing the return to their shareholders. Since agency problem has influenced on the structure and composition of boards, it continues to be important in governance terms, on the requirements for disclosure, and on the balance of power between shareholders and directors (Cadbury, 2012). Agency theory explains the conflict of interests between the shareholders-principal and managers-agent and the separation of ownership and control. This has been one of the most controversial issues in the financial literature (Morimathu, 2019).

An entrepreneur, or a manager, raises funds from investors either to put them to productive use or to cash out his holdings in the firm. The financiers need the manager's specialized human capital to generate returns on their funds. The manager needs the financiers' funds, since he either does not have enough capital of his own to invest or else wants to cash out his holdings. But how can financiers be sure that, once they sink their funds, they get anything but a worthless piece of paper back from the manager Somathilake (2018). Bonazzi and Islam (2007) argued that a well-developed market for corporate controls is assumed to be non-existent in agency theory, and leads to market failures, asymmetric information and incomplete contracts. As a result a gap exists between the

information the manager and the shareholders have. The principal prevented from perfectly monitoring the agent where there is asymmetric information, and the incomplete contract makes it impossible to determine what will occur in all possible contingency (Li., Pincas & Payo, 2021)

It is being advocated that there are numerous governance mechanisms which include monitoring by financial institutions, prudent market competition, executive compensation, debt, markets for corporate control, and concentrated holdings, developing an effective board of directors. For an optimal corporate governance mechanism, developing an effective board of directors stays an important and feasible alternative among all these mechanisms (Yermock, 2021). Most literature on the theory of the firm and corporate governance suggest that the agency problem that arises with absentee ownership can be reduced by a firm's board of directors (BOD) which is an important institution for mitigating the conflict. The agency problem in this context is that the interests of management may differ from the interests of the shareholders for whom the BOD work (Kang., Ding & Charoanwong, 2021). In addition, there are several mechanisms which can reduce these agency problems. Among the many are, managerial shareholding that is an obvious one, concentrated shareholdings by institutions or by block holders that can increase managerial monitoring and so improve firm performance, as an outsider representation on corporate boards (Fich & Shirdami, 2021)). According to Donaldson and Davis (2016) agency theory argues that shareholder interests require protection by separation of board chair and CEO roles (Donaldson & Davis, 1991).

Where CEO duality is retained, shareholder interests could be protected by providing suitable incentive scheme-the long-term compensation which aligns the interests of the CEO and the shareholders. "Any superiority in shareholder returns observed among dual CEO chairs over independent chairs would be explained away by agency theory as being due to the spurious effects of financial incentives (Sharifah & Adliana 2015)." Free market economists assume that the aim of any corporation is to maximize its shareholders' wealth, which means that a firm should only make an investment based on sound financial decisions and with the goal of making an economic profit (Faleye etal, 2021), Based on the corporate system in the United Kingdom and the United States, corporate governance mechanisms and features are managed in a manner that complies with the wishes of the owners, with a focus on the shareholders of listed corporations, who appoint a board of directors to manage the company's resources to maximise their wealth (Faleye etal, 2021). This relationship, between shareholders and the board of directors is called the agent-principal relationship.

According to Jensen and Meckling (1976), an agent-principal relationship exists when one party, who is the principal, engages another party, the agent, to perform some services on their behalf. Berle and Means (2002) stressed that a transfer of corporate control from individual owners to professional managers in companies has resulted from the dispersion of equity ownership. Fich etal (2021), also argued that, when control is distinct from ownership, managers could deploy assets for their own benefit rather than the owner's. However, Shleifer and Vishney (2015) stressed that the agency problem in large firms in most countries is not only the conflict of interests between outside investors and managers but also the conflict between outside investors and controlling shareholders. They suggested that this problem might also occur between shareholders and creditors, and between shareholders and other stakeholders. Therefore, ownership structure may be one of the crucial factors in shaping corporate governance systems around the world Darayseh and Chazi (2018). Chuanrommanee and Swierczek (2007), the significant aspects of corporate ownership are

concentration and composition. The degree of concentration indicates the distribution of power within the corporation, whether it is concentrated or dispersed. La Porta and Luca (2015) argue that, when ownership is dispersed control by shareholders tends to be weak because of poor monitoring; there will be a high cost of monitoring for a small amount of benefits in proportion to their shares. On the other hand, with concentrated ownership, shareholders have the incentive to monitor management decisions and to reduce agency costs (Shleifer &Vishney, 2014).

Studies on ownership structure within an agency theory framework have found that concentration of ownership differs between countries, depending on the development level of these countries. For example, Shleifer and Vishney (2015) stressed that concentrated ownership is relatively more beneficial in less developed countries, where the system does not provide clear definition or well protection to property right.

The proportion of shares held by managers is also being important. According to Berle and Means (2017), when managers hold a small percentage of equity in the corporation, and when shareholders are too dispersed to enforce value maximization, the corporate assets may be deployed to the good of the managers rather than their shareholders because managers become "*entrenched*" by virtue of their control of votes. Therefore, the separation between ownership and control can be considered the main problem that is analyzed in agency theory.

Jensen and Meckling (1976), as mentioned earlier, defined the concept of agency costs by investigating the nature and relationship of agency costs to the issue of the separation between control and ownership. The consequences and impacts of the separation between the ownership of corporations and management, in terms of achieving the objectives of modern firms, have been an important subject for many studies starting with Smith (2014), when he argued that this problem reduces the managers' motivation to manage the companies professionally, unless they are the owners.

Berle and Means' work in the early 1930's also argued that, when directors are stakeholders in the firm, and shareholders have been unsuccessful in improving value maximisation, then directors are more likely to manage the corporation's assets for their benefit rather than for the benefit of the shareholders. However, the main issue for the shareholders is how to ensure the achievement of the company's objectives.

Ilbaboya and Ashakeofe (2021), declared that the cause of the agency costs is the impracticality of creating a full contract that applies to every single possible action of directors from which they may directly benefit, and which will protect the shareholder's welfare throughout all these decisions. Furthermore, the increase of management enthusiasm to increase corporate value had led to diminished inefficiency for several corporations (Darayseh& Chazi, 2018), Kochen(2021) argued that an increase in agency problem could encourage shareholders to spend more time trying to control the company and using their voters' rights in the Annual General Meeting, therefore, this could increase the possibility of the shareholders becoming more active. Musa (2019) discussed the possibility that a decrease in financial performance could take place when there is an added equity ownership among managers.

They clarified this conclusion by stating that managers with large shares can be very powerful, and this indicates that his/her behaviour may not add any value for shareholders. Moreover, directors

may be very wealthy that they have no intention of maximising profits in the long term, because if the management team is satisfied then they are more likely to follow a specific goal, which if achieved will then keep shareholders satisfied, rather than following the more general target of maximisation. Agency theory assumes that shareholders respond to the problems they face in two ways.

Firstly, they may increase monitoring to reduce information asymmetry and to ensure that managers are making as great an effort as possible to maximise the company's wealth. Secondly, they may introduce an incentive scheme for management that will align the interests of managers and shareholders and encourage managers to perform to their optimum as it in their best interests, which at the same time maximise shareholder wealth. In addition, there are many reports on the topic of corporate governance that aim to "monitor" the firms and therefore to promote the directors and make a number of recommendations which will force the management team to be more accountable (Dzingai & Fakoya, 2017). Many published reports have suggested a number of ways to align the acts of senior management with the interests of shareholders. These acts include linking rewards to company profits by offering directors and other senior managers' shares options (a method used extensively in UK companies). Another method is to remove directors, who will run the risk of consequences being imposed on them in the event of poor performance. Reports such as the Cadbury, the Greenbury and the Hampel reports on corporate governance include guidelines relating to relationships between directors and shareholders, designed to encourage directors to act in the shareholders' best interests.

These reports have aimed to develop accountability and transparency in corporations. In terms of corporate governance literature, many ways in which agency problem conflicts can be reduced, were suggested. According to Nasseem et al (2021), agency problems can be mitigated through internal and external mechanisms, where internal mechanisms include compensation contracts and monitoring within the firm, and external mechanisms includes monitoring activities by representatives of the capital market, including legislators, investment professionals and investors. Despite these mechanisms being different in nature, they share a common objective, which is to align the utility and interests of the managers with those of the shareholders (Osterland, 2016).

Ruth and Korolo (2021), shareholders can play an effective role in encouraging and/or pursuing managers to work in shareholders' interests and maximise their wealth by actively monitoring the board of directors. Shareholder activism describes the actions taken by shareholders in order to put pressure on managers to work for the best interests of the company; one of the main tools used by shareholders to put into practice activism is by voting on proposals, or voting in and appointing new managers. Furthermore, large shareholders may interact directly with the Chairman and the board to improve the dialogue between the two parties(Sener & Korate, 2021)

The board of directors can be also considered as one of the main effective mechanisms that can be used to reduce agency problems Herdjiono and Mega (2017). This can be achieved by ensuring that the board includes independent, skilled, experienced, and committed non-executive directors who can effectively monitor the actions and decisions of executive directors and ensure that they are working in the interests of the shareholders. Therefore, it is debatable whether directors will do their best to maximise shareholders' wealth. This means that directors will act partially to keep the shareholder pleased because their capital is increasing, but at the same time will try to pursue their individual objectives.

Conceptual Framework

Firm performance is a measure of how well or poorly an entity is putting its resources into use. It measures the level at which financial objectives are being met (Kang., Ding & Charoenwong, 2021; Yermack, 2021). It measures the efficiency applied by firm in the use of its assets to create profits. Strikingly, there are two reasons for the widespread use of firm performance measure as a tool to measure performance. The first reason being that profit articulates directly with the organization's long-term objectives which are almost always purely financial. The second reason is that property chosen firm performance measures provide an aggregate view of an organization's performance (Thomen & Pedersen, 2000). These results are reflected in the firms return on equity, return on assets and earnings per share. Among other firm measures, return one equity is more superior measure on profitability and good indicator of corporate health since it indicates how well the management is doing as it shows much profit each naira of common stock holders' equity generates (Aggei-Mensah, 2018; Nwaiwu & Amah, 2019; Nwaiwu & Joseph, 2020).

Firm Market Value

The Market value of an asset or an item is the price that such asset or item of monetary value would fetch in the market place. Market value is also commonly used to refer to the market capitalization of a publicly-traded company, and is obtained by multiplying the number of its outstanding shares by the current share price. Market value is easiest to determine for exchange-traded instruments such as stocks and futures, since their market prices are widely disseminated and easily available, and is a little more challenging to ascertain for over the-counter instruments like fixed income securities. A company's market value is a good indication of investors' perceptions of its business prospects. The range of market values in the marketplace is enormous, ranging from a company with the smallest capital base to the biggest and most successful company operating in the stock market. Market value is determined by the valuations or multiples accorded by investors to companies, such as price-to-sales, price-to-earnings, enterprise value -to- Earnings before Interest Tax and Dividend, and so on.

The higher the valuations, the greater the market value of the firm. Market value can fluctuate a great deal over periods of time, and is substantially influenced by the business cycle. Market values plunge during the bear markets that accompany recessions, and rise during the bull markets that are a feature of economic expansion. Market value is also dependent on numerous other factors, such as the manner in which the company is being governed that is the corporate governance put in place in the company's structure; the sector in which the company operates Company's profitability, Debt load and the broad market environment. Market value for a firm may diverge significantly from book value or shareholders' equity. A stock would generally be considered undervalued if its market value is well below book value, which means the stock is trading at a deep discount to book value per share. This does not imply that a stock is overvalued if it is trading at a premium to book value, as this again depends on the sector and the extent of the premium in relation to the stock's peers (Pantamee & Ya, 2018).

Board Composition

Board composition refers to the distinction between inside and outside directors, and this is traditionally measured as the percentage of outside directors on the board. Gambo., Bello and Rimanshung (2018), composition may be easily differential into inside directors, affiliated directors and outside directors. This distinction is derived from the extent of their participation in firm

management. Inside directors are those directors that are also managers and/or current officers in the firm while outside directors are non-manager directors. Among the outside directors (also known as external or non-executive directors), there are directors who are affiliated, and others that are independent. Affiliated directors are non-employee directors with personal or business relationship with the company while independent directors are those that have neither personal non business relationship with the company. Although inside and outside directors have their respective merits and demerits, most authors favour boards that are dominated by outside directors (Rafinda., Refinda., Witiastuti., Suroso & Trinugroho, 2018). It is argued that outside directors provide superior performance benefits to the firm as a result of their independence from firm's management (Nwaiwu & Joseph, 2021). They can bring to the board a wealth of knowledge and experience, which the company's own management may not possess. They can increase the element of independent supervision of the company's management.

Board of director literature tells us, board composition can impact organizational performance. In this study, four conceptual board composition drivers are developed to explain the factors' impacting on firm's performance. Namely board size, board independence, and board member gender and board competency.

Board Size

Determinants of corporate boards' sizes become significant especially when corporate boards have been the focus of attention for some time now and is considered as tip to the head of the governance structure of any corporate entity (Kyereboah-Coleman & Biekpe, 2007). Much evidence supporting both points of view-small and large sided board was collected during review of our literature. It is ambiguous to define what small or large board is. Herdjiono and Mega (2017), the average number of board is around thirteen in Europe. These averages conceal huge variations among companies and across countries, since one size does not fit all. Alfuma etal (2021), have made research and argued that large corporate boards may be less efficient due to the difficulties in solving agency problem among members of the board.

Large board creates less value than small boards. When boards become too big, director free riding increase within the board and the board becomes more symbolic and less a part of the management process. That means for a board with few directors, each board member may feel to add more effort, as they each become conscious that there are only a few others monitoring the firm.

On the other hand, each member of larger boards may simply assume that the many other members are monitoring. Additionally with regard to large boards, it is difficult to reach common understanding and thus is hard to get anything meaningfully done. Therefore, smaller board can be seen as more flexible and more active. But it should not be eliminated that having a large board size is a benefit to corporate performance as a result of enhancing the ability of the firm to establish external links with the environment, securing more rare resources and bringing more exceptional qualified counsel (Franoye & Olatumji, 2019). Evidence from Belkhir (2009) also shows idea which is in favor of large board. The study was investigated to analyze the relationship between board size and performance in a sample of 174 companies in US. Their finding was in favor of a positive relationship between board size and performance. The higher the number of directors sitting on the board the more performance is. From an agency perspective, it can be argued that a larger board is more likely to be watchful for agency problems because a greater nrumber of qualified people will add their expertise in reviewing management actions (Imade, 2019). Farhan et al., (2020) recommended that the board size to consist of no more than six directors. But, boards can be larger than this though it would

not be the general case. In addition, Ibaboy & Ashakofe, (2021) argued the requirement for a large board certainly increases as the size of the organization increases. This occurs due to the following reasons; first, large organizations are typically more diversified, and consequently have a need to deal with relatively more sectors of the environment. Second, large organizations have a greater impact on society and the economy because of their size, and therefore there is again a greater need to have more members who can relate and legitimate the organization to its external environment.

Board Independence

There is a general consensus that when a board has a higher fraction of non-insider referred as outside or independent director (Mohamed et al. 2016)),Farhan et al., (2020) defined independent directors as directors who apart from receiving a director's remuneration do not have any other material pecuniary relationship or transactions with the company, its promoters, its management or its subsidiaries, in which the judgment of the board may affect their independence of judgment. Whereas inside director is individual on the board of directors who is an employee of the company (Siegel & Shim, 2006).

Independence is not only a function of the proportion of inside to outside directors, rather it includes whether the board has dual leadership role and the degree of director share ownership. Like boards with heavy share ownership, boards with dual leadership are considered less independent (Kochen, 2021). Starting the 90s the concept of board independency became popular and globally many countries started to follow the guide line that stipulates the minimum level for the representation of outside director on boards of publicly traded companies. As a result, in most countries, these minimum standards represented a dramatic increase in outside director representation. The movement towards more outside directors is believed that, boards with more outside directors will lead to better board decisions and better corporate performance. This belief rests in large on faith rather than evidence (Musa, 2019). OECD broadly stated that, there should be an adequate number of independent non-executive directors and it is also defined what an independent board mean. For example, "they should not be engaged in business relationships with the company or its subsidiaries, or with the executive directors or shareholders or group of shareholders who control the company in such a way as would influence their own judgment.

They should not be immediate family members of the executive directors of the company. In terms of owning shares, they may win shares but not such a quantity that would enable them to have control over the company or to exercise significant influence." Independent directors´ presence is recognized as representing the interest of all shareholders including the minority (Mohamed et al., 2016). "From a stewardship theory perspective, it is the ratio of inside to outside directors that is of relevance, since inside directors can bring superior information to the board on decisions (Kiel & Nicholson, 2003)".

According to Bhagat and Black (2016), Ogbo and Enilolobo, (2021), board of directors of American public companies and EU with majority of independent directors behaves differently, in many ways, than boards without such a majority. Some of these differences appear to increase firm value while others may decrease firm value. There is no convincing evidence that shows the presence of majority of independent directors correlates with greater firm profitability or faster growth in large public companies. Particularly, no empirical evidence for current proposals supports for firms to have majority independent boards with only one or two inside directors. In contrast, some evidence also shows that firms with majority-independent boards are less profitable than other firms. Therefore, it can be recommended for firms to have a moderate number of inside directors.

Research Question & Hypotheses Development

Considerable amount of empirical studies have been conducted between board composition and firm performance of quoted commercial banks in Nigeria. The follow research questions (RQ) guided the study as thus:

RQ1: What is the relationship between board size and firm market value of quoted commercial banks in Nigeria?

RQ2: How does board independence relate to firm market value of quoted commercial banks in Nigeria?

In line with the research questions, the following hypotheses stated in the null form were tested.

H01: There is no significant relationship between board size and firm market value of quoted commercial banks in Nigeria.

H02: Board independence does not relate to firm market value of quoted commercial banks in Nigeria.

Research Methods

The data for this research were generated through secondary source. Explanatory research design was used as it has to do with studying a situation or a problem in order to explain the relationship between variables. The variables considered in this study include board size and board independence as independent variables, while firm market value is the dependent variable (Ruth & Korolo, 2021; Sener, & Karate, 2021). Data on these variables were collected from annual financial reports of all the fourteen quoted commercial banks as at December 2021 covering the period of ten years from 2011-2021 and were analyzed using correlation and ordinary least square regression analysis. Owing to the fewness of quoted commercial banks in Nigeria, the population also makes up the sample for the study. We choose to start in 2011 since it is last year after mandatory compliance with the international financial reporting standards in Nigeria. Similarly, 2021 was chosen as the end year because it is the most recent year for which data were available.

Model Specification

The research constructed econometric model as basis to ascertain the degree of relationship between the explanatory variables and the dependent variable in the study. The criterion variable is represented by firm market value and matched against the independent variables; board size and board independence to enhance the probe into a likely or unlikely relationship between both metrics. The functional form stated as thus:

$$FMV_{it} = f(BOS_{it}, BOI_{it}) - \quad - \quad - \quad - \quad - \quad (i)$$

For the purpose of estimation, the models are restated econometrically to incorporate the error terms; as follows:

$$FMV_{it} = \lambda_o + \lambda_1 BOS_{it} + \lambda_2 BOI_{it} + \mu_{it} \quad - \quad - \quad - \quad - \quad (ii)$$

Where: FMV_{it} = Firm Market Value for the period of time

BOS_{it} = Board Size for the period of time

BOI_{it} = Board Independence for the period of time

λ_o = Constant regression coefficient for the period of time

$\lambda_1 - \lambda_2$ = Coefficient slope for the period of time

Apriori Expectation

The apriori expectation is that there is a positive relationship among board size, board independence and firm market share. In summary, the apriori expectation is represented as thus:

$\beta_1 > 0, \beta_2\ 0 <$

Empirical Results and Discussion

The output generated from the analysis of board composition and firm performance of quoted commercial banks in Nigeria.

Descriptive Statistics of Data

Aggregating the Quoted deposit money banks in Nigeria, the descriptive statistics of the various economies are presented as follows;

Table 1: Board size (BOS), Board independence (BOI), and Firm Market Value of selected deposit money banks in Nigeria over the period of 2010 to 2020.

	FMV	BOS	BOI
Mean	10.14279	6.227273	0.935065
Median	7.315000	6.000000	1.000000
Maximum	49.50000	7.000000	1.000000
Minimum	0.500000	5.000000	0.000000
Std. Dev.	9.962923	0.478597	0.247215
Skewness	1.711470	0.556135	-3.531210
Kurtosis	6.330661	2.918495	13.46944
Jarque-Bera	146.3630	7.980961	1023.375
Probability	0.000000	0.018491	0.000000
Sum	1561.990	959.0000	144.0000
Sum Sq. Dev.	15186.75	35.04545	9.350649
Observations	154	154	154

Firm Value (FV) shows a mean score value of 10.14 shows that the market value of firms is roughly around 10.14 local currency unit. The Board size value of 6.23 which can be approximated to 6 shows the presence of a6 board members in every sitting annually across the various deposit money banks. Mean board independence of 0.93 shows a significant level of board independence close to 1.

The skewness statistics is positive for all various except for board independence. This shows that, while other variables possess tendencies of increasing, board indepndence has been decremental overtime. All employed variables shows very highJarque-Bera statistics with low p-value. This shows distortions in the employed panel trend, and therefore mandates the use of the stationarity test to determine the viability and trends of employed data.

Panel Stationarity Test

Within the panel unit root-testing framework, there are two generations of tests. The first generation of tests assumes that cross-section units are cross-sectionally independent; whereas the second generation of panel unit root tests relaxes this assumption and allows for cross-sectional dependence. In this context, we summarize the first and second generation of panel unit root tests that are often used in panel studies. The summary is presented as follows;

Table 2: Panel Stationarity Test Summary of Employed Variables At Level (0)

Variable		Levin, Lin & Chu t*	Im, Pesaran and Shin W-stat	ADF - Fisher Chi-square	PP - Fisher Chi-square	Decision
FMV	Stat	0.45549	1.37406	23.3401	40.4015	Presence of Unit Root at Level (0)
		(0.6756)	(0.9153)	(0. 8010)	(0.0973)	
BOS	Prob	0.11373	3.54888	63.1462	79.0582	Presence of Unit Root at Level (0)
		(0.5453)	(0.9998)	(0.9859)	(0.7884)	
BOI	Stat	-3.30726	-2.49991	130.758	179.786	Stationary at Level (0)
		(0.0056)	(0.0062)	(0.0021)	(0.0000)	

The study employs the summary stationarity test of Levin, Lin and Chu, Im, Pesaran and Shin W-stat, ADF - Fisher Chi-square, and PP - Fisher Chi-square. The summary statistics values of the employed variables at their respective probability levels are used as a yardstick to determine the presence or absence of unit root in the panel trends. The probability values show that; Firm market value (FV), Board size (BOS), there is no significant stationary trend in this data. In light of this, the study proceeds to estimate stationarity at first level (1).

Firm market value (FV)
Table 3: Pooled Effects Regression Output for model 3– Firm market value (FV).

Dependent Variable: FV
Method: Panel Least Squares

Date: 10/11/21   Time: 23:29

Sample: 2011 2021

Periods included: 10

Cross-sections included: 15

Total panel (unbalanced) observations: 150

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	26.60042	1.036296	25.66876	0.0000

BOS	-0.170042	0.032978	-5.156227	0.0000
BOI	0.005589	0.019726	0.283316	0.7770
R-squared	0.271732	Mean dependent var		22.02354
Adjusted R-squared	0.668171	S.D. dependent var		14.69053
S.E. of regression	13.39845	Akaike info criterion		8.033275
Sum squared resid	208780.0	Schwarz criterion		8.059266
Log likelihood	-4689.449	Hannan-Quinn criter.		8.043078
F-statistic	48.22689	Durbin-Watson stat		0.048603
Prob(F-statistic)	0.000000			

From the pooled effect as presented in Table 3 above, it can be seen that Board size (BOS), showed negative relationship with Firm market value which is against our apriori expectation. All employed predictor variables had significant influence on Firm market value (FV), with the exception of Board independence (BOI). This therefore shows consequential effect of the various board composition operations in the selected Commercial banks. The model is seen to be generally dysfunctional as the R-squared is very low (0.271732 i.e. 27.17%). The f-statistics is significant based on its probability level of 0.00000 which is less than the 0.05 significance level, but the Durbin Watson test shows presence of positive serial correlation based on its statistical value of 0.048603. We therefore proceed to other models.

Firm market value (FV)
Table 4: Fixed Effects Regression Output for model 3– Firm market value (FV)

Dependent Variable: FV
Method: Panel Least Squares

Date: 10/11/21 Time: 23:29

Sample: 2011 - 2021

Periods included: 10

Cross-sections included: 15

Total panel (unbalanced) observations: 150

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	21.86610	0.783297	27.91545	0.0000
BOS	-0.120013	0.030949	-3.877773	0.0001
BOI	0.007074	0.012230	0.578449	0.5631

	Effects Specification			
Cross-section fixed (dummy variables)				
R-squared	0.894223	Mean dependent var		22.02354
Adjusted R-squared	0.889591	S.D. dependent var		14.69053

S.E. of regression	4.881356	Akaike info criterion	6.050553
Sum squared resid	26663.12	Schwarz criterion	6.267144
Log likelihood	-3486.548	Hannan-Quinn criter.	6.132247
F-statistic	193.0574	Durbin-Watson stat	1.657389
Prob(F-statistic)	0.000000		

Similar to the pooled model, Table 4 above shows that the fixed effect contravenes the apriori expectation in the light of the negative effect of Board size (BOS) on the Firm market value (FV). Overall, this model appears richer than the pooled effect model, as the predictor variables jointly account for up to 89.42% of variation in Firm market value (FV) followed by the significant f statistics value of 0.00000 which is lower than the 5% (0.05) significant level. The Durbin Watson statistics value of 1.657389 is substantially within acceptable range and within the negative autocorrelation realm. We further proceed to the Random effect to check for the common mean value of employed variables and their influence on the criterion variable.

Firm market value (FV)
Table 5: Random Effects Regression Output – Firm market value (FV).

Dependent Variable: FV

Method: Panel EGLS (Cross-section random effects)

Date: 10/11/21   Time: 23:30

Sample: 2011 2021

Periods included: 10

Cross-sections included: 15

Total panel (unbalanced) observations: 150

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	22.06792	2.120869	10.40513	0.0000
BOS	-0.125483	0.030031	-4.178482	0.0000
BOI	0.006721	0.012134	0.553896	0.5798
BOG	0.029003	0.016920	1.714102	0.0868
FSZ	0.608086	0.132916	4.574948	0.0000

	Effects Specification		
		S.D.	Rho
Cross-section random		13.25521	0.8806
Idiosyncratic random		4.881356	0.1194

<div align="center">Weighted Statistics</div>

R-squared	0.098430	Mean dependent var	1.587064
Adjusted R-squared	0.094554	S.D. dependent var	5.126357
S.E. of regression	4.877993	Sum squared resid	27673.37
F-statistic	25.39446	Durbin-Watson stat	0.344666
Prob(F-statistic)	0.000000		

<div align="center">Unweighted Statistics</div>

R-squared	0.124013	Mean dependent var	22.02354
Sum squared resid	220808.3	Durbin-Watson stat	0.043196

The random effect similarly shows poor viability of its model as seen from the R-Squared output of 0.098430 i.e. 9.8430, followed by the low Durbin Watson statistics value of 0.043196. The idiosyncratic random Rho shows a value of 0.1194. This value is observed to be relatively low and as such shows a disconnect between employed variables and their inherent residuals. And it is discovered that Board size (BOS) shows a negative effect on Firm market value (FV).

Diagnostic test

The need therefore arises to determine which of the model is most efficient i.e., whether the pooled, random or fixed effect.

Likelihood Ratio Test

To compare the pooled regression model with the fixed effects model. The null hypothesis favors the pooled model i.e. Unobserved sectional differences are not significant.

Firm market value (FV)
Table 6: Likelihood ratio test output for model – Firm market value (FV).
Redundant Fixed Effects Tests

Equation: Untitled

Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	173.706728	(44,1119)	0.0000
Cross-section Chi-square	2405.801671	44	0.0000

The above likelihood ratio test which shows the predominance between the pooled and fixed effect is seen to show a cross-section F-statistics of 173.706728 at a probability level of 0.0000 which is seen to be below the 0.05 significance level. This leads to the rejection of the null hypothesis (the null hypothesis supports the pooled model). The alternate hypothesis which is accepted favors the fixed effect. The study therefore upholds the fixed effect over the pooled effect. We therefore proceed to evaluate the better model between the fixed and random model.

Firm market value (FV)
Table 7: Hausman Specification Test– Firm market value (FV).

Correlated Random Effects – Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	8.399680	5	0.0086

Cross-section random effects test comparisons:

Drawing from Table 7 above, the Hausman specification test output via its cross section random chi square statistics of 8.399680 at a probability level of 0.0086 leads to the rejection of the null hypothesis (the null hypothesis supports the random effect). The alternate hypothesis thus upholds the effect of the fixed model. Therefore, the validity of empirical output of the fixed model stands and is binding on employed variables in the short run.

Lagrange Multiplier Test

To decide between the random effect and a simple OLS regression, we carry out the Lagrange multiplier test below;

Firm market value (FV)
Table 8: Lagrange Multiplier Tests – Firm market value (FV).

Lagrange Multiplier Tests for Random Effects

Null hypotheses: No effects

Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided

(all others) alternatives

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	10726.75	10.05124	10736.80
	(0.0000)	(0.0015)	(0.0000)
Honda	103.5700	-3.170370	70.99328
	(0.0000)	--	(0.0000)
King-Wu	103.5700	-3.170370	59.81014
	(0.0000)	--	(0.0000)
Standardized Honda	110.2834	-3.086099	69.00430
	(0.0000)	--	(0.0000)
Standardized King-Wu	110.2834	-3.086099	57.06320
	(0.0000)	--	(0.0000)

Gourierioux, et al.*	--	--	10726.75
			(< 0.01)

*Mixed chi-square asymptotic critical values:

1%	7.289
5%	4.321
10%	2.952

The above probability levels at all Lagrange types show probability level less than 0.05, we therefore reject the null hypothesis. And conclude that random effect is more superior (which supports our even more superior fixed effect). This is evidence of significant differences across firms. Based on these findings, our fixed effect still stands supreme.

Lag Length Selection

To determine the suitable lag for subsequent estimations in the study, the Lag length selection criteria is employed and presented as follows;

Firm market value (FV)
Table 9: Panel ARDL/ Bound Test output for model – Firm market value (FV).

Dependent Variable: D(FV)

Method: ARDL

Date: 10/11/21   Time: 06:35

Sample: 2011 2019

Included observations: 150

Dependent lags: 1 (Fixed)

Dynamic regressors (1 lag, fixed): BOSBOIBOG FSZ

Fixed regressors: C

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
		Long Run Evaluation		
COINTVLR01	-0.187876	0.030285	-6.203680	0.0000
D(BOS)	-0.169541	0.055767	-3.040196	0.0024
D(BOI)	-0.003385	0.000881	-3.841571	0.0001
D(BOG)	0.078729	0.035797	2.199287	0.0281
D(FSZ)	2.575981	0.289546	8.896635	0.0000
		Short Run Evaluation		

BOS	0.113525	0.110718	1.025349	0.3055
BOI	0.017840	0.012276	1.453201	0.1464
C	2.970814	0.700104	4.243392	0.0000

Mean dependent var	-0.215142	S.D. dependent var	2.829468
S.E. of regression	2.536609	Akaike info criterion	3.695936
Sum squared resid	5758.775	Schwarz criterion	4.882856
Log likelihood	-1886.275	Hannan-Quinn criter.	4.143617

*Note: p-values and any subsequent tests do not account for model

selection.

In the long run, Board size (BOS) and board independence show negative coefficient values of -0.169541and -0.003385 fails the a priori expectation test as a result of their negative influence on Firm market value (FV), while all other variables showed positive influence on the firm market value. All variables show significant long run influence on firm market value (FV). This shows a large level of influence on the level of board composition on their economies.

Hypotheses Testing

H01: There is no significant relationship between Board size and Firm market value of Quoted commercial banks in Nigeria.

From the Pane ARDL/Bounds test in Table 1, the Panel Bounds Test, it can be observed that Board size showed a negative coefficient value of -0.169541 and a t-statistics value of -3.040196 which is seen to be greater than the standard tabulated value of ± 1.98/2. This is also confirmed by the probability value of 0.0024, which can be observed to be less than the 0.05(5%) significance level. This, therefore, leads to the rejection of the null hypothesis and the acceptance of the alternate hypothesis that, there is a significant relationship between Board size and Firm market value in selected Quoted commercial banks in Nigeria. This finding is in consonance with that of Okiro (2016) who posited that there is no significant relationship between board size and financial performance.

H02: Board independence has no significant relationship with Firm market value of selected Quoted Commercial banks in Nigeria.

From Table 2, the Panel Bounds Test shows that Board independence showed a negative coefficient value of -0.003385 and a t-statistics value of -3.841571 which is seen to be greater than the standard tabulated value of ± 1.98/2. This is also confirmed by the probability value of 0.0001, which can be observed to be less than the 0.05(5%) significance level. This, therefore, leads to the rejection of the null hypothesis and the acceptance of the alternate hypothesis that, Board independence has a significant relationship with Firm market value of selected Quoted commercial banks in Nigeria. This finding is also in agreement with that of Gambo et al, (2018) who found a positive relationship between board independence and firm market value of quoted commercial banks in Nigeria.

Conclusion and Recommendations

The study empirically examined the relationship between board composition and firm performance of quoted commercial banks in Nigeria. the finding revealed that there is a significant relationship

between board size and board independence significantly and positively related with firm market value of quoted commercial banks in Nigeria, therefore, conclude that the exist significant and positive relationship between board composition and firm performance of quoted commercial banks in Nigeria.

Based on the findings and conclusion, the study recommends that;

i) A strong and mandatory corporate governance structure should be put in place to ensure that board of directors consist mostly of members that are independent of the firm, both directly and indirectly.

ii) There is need to rethink the dominance of outside director, the prescription that corporate boards should be dominated by outside director as contained in the Nigerian Securities and Exchange Commission Code of Best Practice for Nigerian quoted commercial banks, and the central bank of Nigerian Code of good governance for Nigerian Consolidated Bank is influence by the agency theory, which argues that because managers are not owners but agents of owners, they have the incentive to pursue self-serving behaviour to the detriment of shareholders. This has necessitated the call for a board dominated by non-executive directors.

iii) The study asserts that increased bank profitability significantly derives from good governance and, therefore, recommends maintaining and equity governance mechanisms to ensure that banks are profitability managed. For instance, the requirement for a substantial equity stake by directors of banking institutions should be sustained. By their unique nature, banks are highly levered institutions because of massive deposit liabilities in their portfolio.

Limitation and Suggestion for Further Studies

This empirical study investigated the relationship between board composition and firm performance of quoted commercial banks in Nigeria, using sub-variables like board size, board independence and firm market share spanning from 2011-2021. Further comparative empirical studies should be conducted between Nigeria and Ghana, using different variables and spanning from 2018-2021.

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