



EFFECT OF BOARD ATTRIBUTE ON PROFITABILITY OF QUOTED FINANCIAL SERVICE FIRMS IN NIGERIA

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ABSTRACT

Corporate governance practices over the years, especially in the Nigerian financial services firms have come under a sharp focus as a topic for investigation, both by regulators and researchers. This is because, despite the Central Bank of Nigeria (CBN) control measures in the Nigerian financial service firms, the industry still shows symptoms of financial instability which affect profitability. The main objective of this research work is to examine the effect of board attribute on profitability of quoted financial services firms in Nigeria. The population of the study comprised of 43 financial services firms listed in the Nigeria exchange group before 31st December 2024. The period covered in this research is 2014 - 2023, purposive sampling was employed in arriving at the 34 sample size of the study. The study adopts an ex-post facto and correlational research design, and data used were generated from annual reports of the financial services firms for the period of ten years from 2014 to 2023. Ordinary least square regression models were employed to analyze data obtained. The findings of the study revealed that board gender diversity (BGD) exhibits a positive and significant influence on ROA. This indicates that gender diverse boards contribute meaningfully to firm performance, supporting the view that inclusion of women enhances board effectiveness and decision quality. Based on the findings, the study recommends, that firms are strongly encouraged to intentionally recruit more qualified women to serve on boards, Regulators (e.g., SEC, CBN) may consider setting gender diversity guidelines or quotas to ensure inclusivity and diverse perspectives at the board level.

Keyword: corporate governance, board attributes, profitability, financial service firms, and return on assets.

Introduction

Recent studies highlight that board composition has become increasingly relevant in a complex and dynamic business environment. For instance, diverse boards by gender, skills, and experience tend to exhibit broader perspectives and better decision-making, which can improve financial outcomes (Kamaludin et al., 2021). Similarly, the presence of independent directors is associated with enhanced objectivity in board oversight and reduced agency costs (Zaid et al., 2020).

Profitability is a key financial metric that reflects the ability of a business to generate earnings relative to its revenue, operating costs, assets, or shareholders' equity over a given period. It serves as an essential indicator of a company's financial health and long-term viability. A profitable company not only sustains its operations but also provides returns to its investors, supports business growth, and contributes to overall economic development.

In both strategic management and financial analysis, profitability plays a central role in decision-making processes, such as pricing strategies, cost control, investment planning, and



performance evaluation. Maintaining strong profitability is crucial, particularly in highly competitive markets where firms must continuously innovate and adapt to shifting consumer demands and economic conditions.

According to Bhatt and Bhatt (2017), the notion of corporate governance relates to all processes, procedures and systems that are designed to allocate corporate resources to interested parties in a manner that mirrors transparency and responsibility, and also the maximization of shareholders' wealth. The significance of corporate governance in today's corporate business setting cannot be stressed too far, because it allows claimants to a firm's prosperity to develop the ways that ensure that their personal and group interests are protected (Liem, 2016).

There are quite a number of empirical studies on board attributes as influencer of firm performance (Garcia-Sanchez, 2011). This strand of literature focuses on examination of board size, board gender diversity, board activity, independent or non-executive directors, insider ownership, board age, chief executive officer (CEO) duality, and board competence on firm performance.

Corporate governance codes in Nigeria, such as the Corporate Governance Guidelines issued by the Central Bank of Nigeria (CBN) and the Financial Reporting Council of Nigeria (FRCN), stress the importance of effective board composition including factors such as board independence, size, diversity, and expertise. These board attributes have been found to influence strategic decision-making, risk management, and ultimately firm performance (Kajola, 2008).

In the context of financial services firms, profitability is a primary indicator of financial health, sustainability, and shareholder value. The Nigerian financial sector has experienced instances of mismanagement and governance failures in the past, such as the banking crisis of 2009, which exposed weaknesses in board oversight and corporate governance structures. As a result, regulators have continued to advocate for stronger governance mechanisms (Sanusi, 2010).

This research topic is therefore relevant as it investigates the specific ways in which board attributes influence the financial outcomes of firms within a sector that is heavily reliant on prudent governance. It helps bridge the empirical gap by offering localized evidence on the governance-performance nexus, which is vital for improving investor confidence, regulatory policy, and firm-level governance practices in Nigeria.

However, the combination of competence, tenure, interlocking, size, independence and diversity attribute of board directors in relation to firm performance have not yet received rigorous study in the empirical literature. Gantenbein and Volonte (2011) alluded to this by stating that studies do not often address director skills, because detailed data of these characteristics is not readily available, and personal factors (like talent) are either not observable or difficult to proxy. The concern of this research, therefore, is to fill this empirical gap in knowledge. Specifically, the research focuses on board directors' unobservable attribute and how well they influence firm performance.



Statement of problem

In spite of the foregoing measures adopted by the apex bank on financial service firms in Nigeria, issues of mergers and acquisition still persist as evidenced by the acquisition of Diamond Bank by Access Bank in 2019 (Eleanya, 2019), thus, begging the question, why is there still financial instability in financial services firms in Nigeria even after the reformed initiated by the apex bank in Nigeria?

This research provides context-specific empirical evidence on the relationship between board attributes and profitability within Nigeria's financial services sector, a setting marked by regulatory reforms, corporate governance challenges, and economic volatility. While global studies have extensively analyzed board structures and firm performance, Nigeria's institutional, cultural, and economic peculiarities are under-researched in this context. By focusing on quoted financial services firms in Nigeria, this study captures a regulated, investor-sensitive environment, yielding insights that are both sector-specific and country-relevant (Ehikioya, 2009).

This research adds to the corporate governance literature by; providing empirical evidence from Nigeria, an emerging market with unique governance challenges and institutional frameworks (Adegbite, 2012). Exploring board attributes beyond size and independence, such as gender diversity, financial expertise, and board meeting frequency, which are less frequently examined in Nigerian studies, filling a sector-specific gap, as most existing studies in Nigeria focus broadly on listed firms or industrial sectors, while few focus solely on financial service firms. This research contributes to and engages with corporate governance theories such as: Agency Theory, it examines how board structure helps mitigate agency conflicts between managers and shareholders, thus enhancing firm profitability (Jensen & Meckling, 1976). Contribution to Practice, financial service firms can use the findings to design more effective board structures that enhance profitability. Nigerian regulators like the CBN and FRCN can use the findings to update governance codes, especially regarding board diversity, independence, and expertise. Investors and shareholders can assess board composition when evaluating firms for investment or engagement, increasing the practical utility of governance signals.

Objectives of the Study

The motivation behind this study is to examine the effect of board attribute on profitability of quoted financial services firms in Nigeria. The study seeks to achieve the following specific objectives:

- i. To ascertain the effect of board size on the return on assets of quoted financial services firms in Nigeria.
- ii. To examine the effect of board independence on the return on assets of quoted financial services firms in Nigeria.
- iii. To explore the effect of board gender diversity on the return on assets of quoted financial services firms in Nigeria.



- iv. To examine the effect of board tenure on the return on assets of quoted financial services firms in Nigeria.
- v. To ascertain the effect of board competence on the return on assets of quoted financial services firms in Nigeria.
- vi. To explore the effect of board interlocking on the return on assets of quoted financial services firms in Nigeria.

Hypotheses of the Study

In line with the research questions and objectives, the following hypotheses were formulated in their null form to guide the study:

- H0₁: Board size has no significant effect on the return on assets of quoted financial services firms in Nigeria.
- H0₂: Board independence has no significant effect on the return on assets of quoted financial services firms in Nigeria.
- H0₃: Board gender diversity has no effect on the return on assets of quoted financial services firms in Nigeria.
- H0₄: There is no significant positive relationship between board tenure and firm profitability in Nigerian financial services firms.
- H0₅: There is no significant positive relationship between board competence and firm profitability in Nigerian financial services firms.
- H0₆: There is no significant positive relationship between board interlocking and firm profitability in Nigerian financial services firms.

LITERATURE REVIEW

Conceptual Review

The global financial crisis of the 21st century that affected numerous companies and organizations negatively has compelled stakeholders to reevaluate and reinvent corporate governance structure and operations (Saleh, 2016). According to Alodat et al. (2022), corporate governance refers to the rules, practices and processes by which a company is executed and managed. Good corporate governance ensures that companies operate efficiently and effectively and maximize shareholder value. Chancharat and Chancharat (2019) were of the view that the functionality of corporate governance is apt to navigate and institute a sense of ownership and coordinated governance, which is geared towards enabling managers conduct themselves in an ethical manner and also, make excellent decisions that would increase the developmental agenda of the business corporation and benefit to stakeholders.

Corporate Governance

According to Alodat et al. (2022) corporate governance refers to the rules, practices and processes by which a company is executed and managed. Good corporate governance ensures that companies operate efficiently and effectively and maximize shareholder value. Similarly, OECD (2007) maintains that corporate governance refers to the system by which corporations



are directed and controlled. The governance structure specifies the distribution of rights and responsibilities among different participants in the corporation and specifies the rules and procedures for making decisions in corporate organizations such as the board, manager, shareholders, and spells out the rules and procedures for deciding on corporate affairs.

Profitability

Profitability is a core measure of a firm's financial health and operational efficiency. It refers to the ability of a business to generate earnings relative to its revenue, assets, or equity over a specific period. Profitability is not only essential for the survival and growth of firms but also for attracting investment, maintaining competitiveness, and ensuring long-term sustainability (Yusuf & Sanni, 2020).

Board Attributes

Board attributes are the specific characteristics and structural elements of a company's board of directors that influence its governance capacity, oversight functions, and impact on firm performance (Kamaludin et al., 2021). These attributes commonly include board size, independence, gender and professional diversity, board meeting frequency, tenure, and financial expertise. The structure and composition of the board play a significant role in determining its ability to fulfill key responsibilities such as strategic guidance, performance monitoring, and risk management.

Board Size

Dozie (2020) defined board size as the number of members that form the board. There is no agreed number of members that make up an ideal board size. There have been diverging opinions by various researchers on the number of persons that should make up an ideal board. Some schools of thought are of the opinion that a small board is more effective because it enhances fast decision making and cannot be manipulated by management. The size of the board of directors is an important factor in corporate governance, and it is not the same in all business organizations whether private or public, and this is dependent on the business size, its cultural set-up, and business type (Chancharat et al., 2019).

Board Independence

The independence of the board is primarily hinged on the inclusion of non-executive members. This is due to the notion that non-executives do not have a direct link with the Chief Executive Officers (CEOs) and the executives whose operations do not depend on the activities of the latter (Vitolla et al., 2019), hence, allowing them to be more independent in reviewing companies' financial and non-financial activities (Liao et al., 2015; Vitolla et al., 2019). On information disclosure and response, Garcia-Sanchez et al. (2011) noted that non-executive members are more open and prone to indiscreet leakage of information, compared to their executive counterparts. Substantiating the usefulness of the non-executives, the stakeholders' theory reveals a crucial relationship that prohibits non-executives from espousing contrary views from his executive colleagues having related party affiliation to the firm.

Board Gender Diversity

Board diversity has taken a range of different dimensions depending on the firm's perspective. Some firm think of board diversity in terms of different skills set, race gender, minority groups etc. However, the considerable participation of women in all the activities around the world has noticeably increased. As a result, women presence in the boardroom cannot be disregarded in this era (Mohamad & Hassan, 2022). Agency theory suggests that board diversity enhances the board independence and board gender is considered as one of the diversity variables in the previous studies. With respect to corporate governance and firm performance, most of the previous studies found that female directors enhance profitability of firms (Zhang et al., 2013).

Board Interlocking

Board interlocking refers to a situation where individuals simultaneously serve on the boards of two or more companies. These individuals, known as interlocking directors, create formal links between firms through shared governance roles. This phenomenon is common in both developed and emerging markets and is increasingly scrutinized for its implications on corporate governance, information flow, and firm performance (Al-Matari et al., 2020).

Board Tenure

Board tenure refers to the length of time a director has served on the board of a company. It is a crucial aspect of corporate governance that influences board effectiveness, independence, and strategic decision-making. Scholars argue that the optimal tenure balances experience and independence while long-serving directors may offer institutional memory and strategic insight, extended tenure may reduce objectivity, challenge independence, and foster entrenchment (Ali & Raza, 2021).

Board Competence

Board competence refers to the collective skills, experience, education, and professional qualifications of board members. A competent board is critical for strategic oversight, financial accountability, and risk management. Competence is often assessed through factors such as educational background, industry experience, financial literacy, and professional certifications (Ahmed & Bala, 2022).

A board with a diverse range of competencies is more likely to challenge executive decisions, adapt to market changes, and drive long-term firm success (Mogaji & Sanyaolu, 2021). In financial service firms, where operations are complex and regulated, board competence becomes even more essential to ensure compliance, sustainability, and profitability.

Conceptual Framework

The relationship between board attribute mechanism and profitability as shown on Figure 1, which displays that board attribute mechanism index is developed based on board size, board independence, board diversity, tenure, competence and interlocking. The figure also demonstrates that the constructed index is then related to profitability activities as per proposed

by the legitimacy theory, agency theory, stakeholders' theory and the managerial signaling theory.

Independent Variables

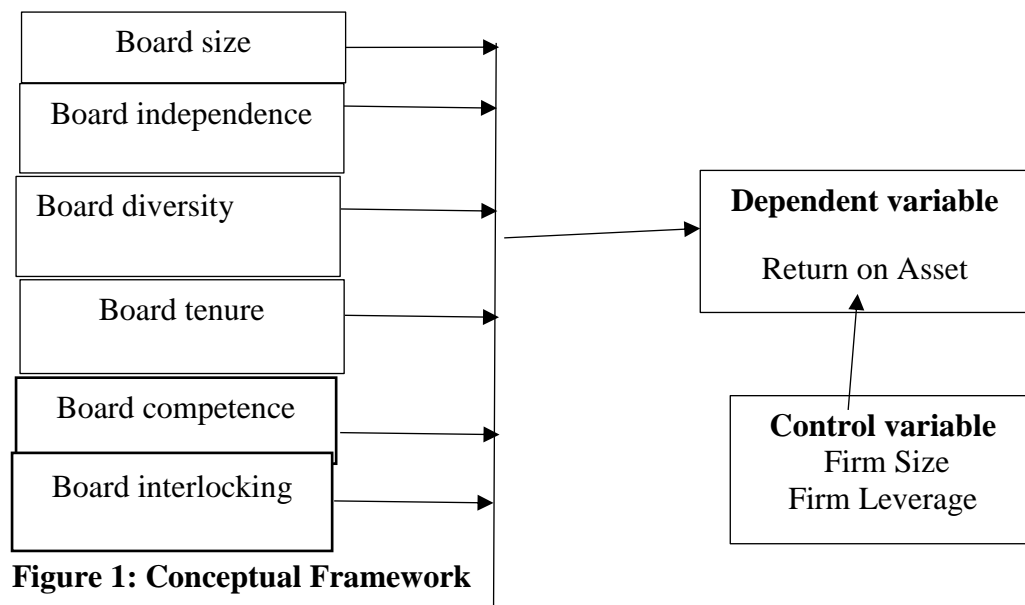


Figure 1: Conceptual Framework

Theoretical Review

Agency Theory by Michael C. Jensen and William H. Meckling in 1976

Agency Theory, first introduced by Michael C. Jensen and William H. Meckling in 1976, is a foundational theory in corporate governance and organizational economics. It conceptualizes the firm as a nexus of contracts, particularly focusing on the principal-agent relationship—where principals (shareholders) delegate decision-making authority to agents (managers). The core concern of the theory lies in addressing agency problems that arise due to conflicts of interest between these two parties, especially when managers may pursue personal interests at the expense of shareholders' wealth. Jensen and Meckling (1976) describe the agency contract as a formal or informal agreement whereby the owners entrust the management of the firm to agents, who are expected to act in the best interests of the owners. However, due to divergent goals and asymmetry in information, managers may not always act in alignment with shareholder objectives. This creates agency costs, which include monitoring expenses, bonding costs, and residual loss.

To mitigate these conflicts, Agency Theory advocates for the establishment of effective corporate governance mechanisms. These mechanisms aim to align managerial interests with those of shareholders and reduce the opportunities for managerial opportunism (Haniffa & Hudaib, 2006; Solomon, 2010). Such governance practices include enhancing board independence, ensuring gender diversity, forming independent audit committees, and reducing the proportion of executive directors on boards (Al-Janadi et al., 2013; Bebchuk & Weisbach, 2010; Fama, 1980). According to Waleed (2014), agency theory supports the creation of legal



and institutional frameworks that empower shareholders to monitor and control managerial behavior, thus improving accountability and transparency. In doing so, it helps reduce agency-related costs and improves overall corporate performance (Siddiqui et al., 2013).

Stakeholders' Theory by R. Edward Freeman in 1984

Stakeholders' Theory was first introduced by R. Edward Freeman in 1984 as a response to the limitations of the traditional shareholder-centric view of the firm. Freeman defined stakeholders as any individuals or groups who can affect or are affected by the activities of a company. His theory shifted the focus of corporate governance from merely maximizing shareholder wealth to considering the broader network of relationships that a business must manage responsibly, including employees, customers, suppliers, creditors, communities, and regulatory bodies. The conceptual foundation of Stakeholders' Theory began to take shape in the 1970s amid growing criticism of the shareholder model, which was increasingly seen as too narrow in addressing the ethical and social responsibilities of modern corporations (Waleed, 2014). Freeman's (1984) formal articulation of stakeholder obligations laid the groundwork for a more inclusive and ethically grounded framework of corporate governance.

Stakeholders' Theory rests on several key assumptions. First, corporations should not operate solely for the financial benefit of their owners but should also consider the well-being and interests of all affected stakeholders (Chen & Roberts, 2010). Second, executive directors and managers are accountable not just to shareholders and creditors, but to a diverse group of stakeholders including employees, customers, government bodies, suppliers, and the broader community (Clarke, 1998). Third, the theory establishes a strong linkage between ethical business conduct and financial performance, advocating for moral responsibility in corporate decisions (Westphal & Zajac, 2013).

Empirical Review

This section provides some insights for a better understanding of prior studies done by authors at different periods in the area of the effect of board attribute mechanism on profitability of financial service firm.

Akinyomi and Olutoye (2015) studied the association between organizational governance and profitability of 10 deposit money banks (DMBs) in Nigeria from 2010 to 2015. The independent variables were board composition, board size and directors' interest, while the dependent variables were ROE and ROA. The relevant data was extracted from audited financial statements of the sampled banks, and analyzed using ordinary least square regression (OLS). The study findings revealed positive but insignificant association between board composition, board size and director interests with profitability. Based on findings of the study, the study recommends that, in order to prevent distress in the banking sector, there should be a regular review of the corporate governance codes so as to reflect current social, environmental, technological and economic situations.

Olayinka and Adegbite (2019) investigated the influence of corporate governance on the performance of 10 listed companies in Nigeria from 2010 to 2018. Board size, board composition and audit committee size were the independent variables, while the dependent



variable was net profit margin (NPM). The study employed an exploratory research design. A panel data random effect regression was used to analyze the data. The study findings revealed that board size has negative but significant effect on NPM, board composition has positive and significant effect on NPM, while audit committee size has positive but insignificant effect on NPM. The study concluded that smaller board size would increase performance and the board composition should consist more of the non-executive directors, while the audit committee also should be reviewed from time to time.

Alexander and Musibau (2020) examined the impact of corporate governance on firm performance of 248 companies quoted on the Nigerian Exchange Group a period of 10 years from 2011 to 2020. Board size, board independence, board gender diversity and ownership structure were used as independent variables, while the dependent variables were ROA and ROE. Data was derived from the published annual financial statements of the selected firms, and analyzed using random effect regression. The findings of the study revealed a negative but significant effect of board size on ROA and ROE, while board independence, ownership structure and board gender diversity have positive but insignificant effect on ROA and ROE. The study recommended that statutory bodies should enact laws that would mandate all firms to maintain a small board size.

Agbaeze and Ogosi (2018) examined the impact of corporate governance on profitability of five Nigerian banks for a period of 11 years from 2005 to 2015. The independent variable used was the number of members on the board, while ROA was used as a proxy for profitability. Also, the number of employees was introduced as a control variable. Regression fixed effect model was used to analyze the data for the study. The result revealed that there was a positive and significant effect of board size and number of employees on the ROA of the sampled Nigerian banks. The study therefore concluded that corporate governance had an impact on profitability on Nigerian banks. The study, therefore, recommended that proper attention should be paid to corporate governance in this part of the world as it has the potential to increase profitability of Nigerian banks.

Hafiz et al. (2020) examined the impact of corporate governance on profitability of five conventional banks operating in Pakistan from 2010 to 2019. Board size and board independence were the independent variables, while the dependent variables were ROE and ROA. The data used were extracted from the annual reports of the sampled banks. Augmented Dickey Fuller test was used to examine the unit root of variables, and OLS multiple linear regression utilized for data analysis. The study findings indicate that board size has negative and insignificant effect on ROA and ROE of the sampled banks. Similarly, board independence (Insider-outsider board of directors) has positive and significant effect on ROA and ROE. The overall findings show that board size and board independence are highly associated with ROE and ROA. The study recommended that banking sector in developing countries and the board should contain an appropriate strength and acquire more professional and qualified staff. Also, there should be an optional number of directors on the board size, there are need for commercial banks to increase their profitability. To enhance the investors' confidence with the bank there is also the need for the commercial banks to increase their board independency.



Alhassan and Mavis. (2021) examined the influence of corporate governance on the financial performance of 30 rural banks in Ghana for a period of 10 years from 2010 to 2019. The independent variables used were board size, board independence, board diversity and CEO duality and the dependent variables were ROE and ROA. Method of data analysis used was descriptive statistic and regression analysis where random effect was adopted. The result of the study showed that there was a positive effect of board size on ROE and ROA, even though ROA was statistically insignificant. Also, board independence was found to be a significant determinant of ROE and ROA. The study also revealed that board gender diversity has negative and insignificant effect on ROE and ROA; there was a positive but statistically insignificant effect of CEO duality on ROE and ROA. Based on the findings, it was recommended that rural banks in Ghana should endeavour to separate CEO and board chairperson in compliance with good corporate governance principles based on the bank of Ghana guideline on good corporate governance for financial institutions issued in 2019; and rural banks should continue to have a significant proportion of their board members as non-executive directors as that have a significant impact on financial performance of rural banks.

Mohammed and Hassan (2022) examined the effect of corporate governance from the year 2012-2022. The objective of the study was to examine the impact of corporate governance system on company performance. Corporate governance mechanisms used as independent variables were size of the board of directors and board of director's leadership on the board, while return on assets and return on equity were used as proxies of firm financial performance. The method used for analyzing the data was multiple regression. The findings of the study revealed that board size is negatively and also positively related to financial performance. In addition, the existing of outside magnets strengthening the profitability of the firms. The study also found that however, no link between leadership features and firm financial performance. The study concludes that a support to the smaller board is more likely to be able to provide effective monitoring of the company's management.

Al-Matari et al. (2020) investigated the impact of board interlocking on the performance of firms in Oman. Their findings suggested that board interlocks positively influenced firm performance by facilitating the transfer of strategic resources across firms. Also, Nguyen et al. (2022) explored the relationship between board interlocks and firm performance in Vietnam. The study revealed that board interlocks had a significant positive effect on performance due to enhanced resource accessibility. Kim et al. (2021) examined the impact of board interlocks on firm performance in South Korea. They found that board interlocks enhance firm performance by improving strategic alignment but may reduce independence in decision-making.

Ali and Raza (2021) explored the relationship between board tenure and firm performance in emerging markets. They found that longer board tenure improves firm performance due to accumulated experience and institutional knowledge. Okoye et al. (2020) analyzed the effect of board tenure on financial performance in Nigerian deposit money banks. Their results suggested a positive relationship between tenure and performance, as long-tenured boards possessed valuable firm-specific knowledge. Ahmed and Bala (2022) investigated the impact



of board tenure on financial performance in Nigerian banks. They found that moderate board tenure significantly enhanced performance, while excessive tenure led to governance issues.

Mogaji and Sanyaolu (2021) analyzed the relationship between board competence and financial performance in Nigerian banks. Their findings highlighted the crucial role of diverse and competent boards in improving financial performance. Uwuigbe et al. (2020) examined the influence of board competence on the profitability of Nigerian listed companies. They found that firms with boards exhibiting a high level of competence, particularly in financial literacy, performed better. Okoye and Uchenna (2020) studied the impact of board competence on corporate performance in Nigeria. They concluded that boards with diverse skills and experience, particularly in finance and strategy, positively influenced performance.

RESEARCH METHODOLOGY

This study employed ex-post factor research design and correlational research design in order to check the relationship between board attribute and profitability of quoted financial service firms. The population of the study comprised 43 financial services firms listed in a data released by the Nigerian Exchange Group on the list of financial service firms in Nigeria for the year before June 9th, 2025. Considering the scope (2014-2023) of this study, purposive sampling techniques along with certain filters was employed in arriving at the sample of the study. The filters to be used for the study includes:

- i. The financial services firm selected in constituting the sample must be listed on the Nigerian Exchange Group prior to the year 2013.
- ii. The firm selected must have traded consistently on the Nigerian Exchange Group for the period considered.
- iii. The firm must have published its financial statements throughout the period of the study.

Out of the total 43 financial services firms, 34 firms met the criteria and thus constituted the sample and 9 firms of the financial services firms did not meet the sampling criteria, and thus did not make the sample. The data to be collected for this study was secondary source of data because it is quantitative in nature. The secondary data was obtained from annual reports of the financial service firms from 2014-2023.

Variables and Measurement

The measurement of the dependent, independent and control variables are provided in the Table below.

S/N	Variable	Notation /Symbol	Measurement	Authors
Dependent variable				
1	Return on Assets	ROA	The ratio of net profit after tax over total assets	Maureen, (2020)
Independent Variables				
2	Board Size	BS	Total number of directors on the board.	Kalu (2016)
3	Board Independence	BIND	Non-executive directors divided by total board size	Kalu (2016)
4	Board Gender Diversity	BGD	Number of women on the board divided by total board size.	Musab et al., (2019); Kalu (2016)
5	Board tenure	BT	Measured as summation of year of service of each director divided by number of directors.	sterling Huang (2018)
6	Board competence	BC	Measured using multi-dimensional framework with focus on strategy oversight, risk management, leadership effectiveness, and internal communication.	Asahak et al. (2018)
7	Board interlocking directors	BID	Measured using binary indicator that is assigning 1 if it shares at least one director with another firm and 0 if it does not.	Ogbeide et al. (2020)
Control Variables				
8	Firm Leverage	FLV	Total debt divided by total assets	Musab et al, 2019)
9	Firm Size	FS	Natural logarithm of total assets	Hafiz et al., (2020)

Source: Author (2025)

Model Specification

The model specification as used by Kalu (2016) and Hafiz et al. (2020) with little modification to suit the changes as to capture the main variables of this present study was adopted for this research.

$$ROA_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 BIND_{it} + \beta_3 BGD_{it} + \beta_4 BT_{it} + \beta_5 BC_{it} + \beta_6 BID_{it} + \beta_7 FS_{it} + \beta_8 FLV_{it} + \epsilon_{it}$$

Where:

ROA = Return on Assets



BS = Board Size

BIND = Board Independence

BGD = Board Gender Diversity

BT = Board Tenure

BC = Board Competence

BID = Board Interlocking Director

FS = Firm Size

FLV = Firm Leverage

e = Error Term

β_0 - β_8 = intercept (constant)

i – Firm

t = Time

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

Descriptive Statistics

The descriptive statistics is used to summarize the data. This is based on the mean, standard deviation, minimum and maximum values.

Table 4.1: Descriptive Statistics

Var	Obs	Mean	Std. dev	Min	Max
ROA	340	0.0240009	0.0688243	-0.2323	0.4969
BS	340	10.70588	3.285163	4	21
BIND	340	0.588295	0.1623549	0	0.9286
BGD	340	0.1804785	0.1191225	0	0.5455
BT	340	3.363704	2.280172	0.1428571	14
BC	340	0.9198529	0.2068409	0	1
BID	340	0.85	0.3575977	0	1
FS	340	7.869366	1.013823	6.2858	9.985
FLV	340	0.5919753	0.3251796	0.0012	2.5475

Source: STATA output, 2024

Table 4.1 shows the descriptive statistics of the variables of this study. As indicated in the table above, the total observations are 340 with respect to data from 34 listed financial services firms over the period of 10 years. The average value of ROA of the sampled firms during the period



of study is approximately 0.024%, implying that for every one naira in assets, a return of 2 kobo is made. The standard deviation is 6.8%, which implies that the ROA of the sampled companies deviated from the mean by approximately 7 kobo, giving credence to the fact that there is wide variation in ROA of the sampled firms during the period of study. The minimum value of ROA is a negative return of approximately 23 kobo recorded by Abbey Mortgage Bank Plc in 2020, while the maximum value is a positive return of approximately 50 kobo recorded by Africa Prudential Plc in 2016.

Similarly, Table 4.1 shows that BS has a mean value of 11 directors, which signifies that on the average, 11 members sat on the board of the sampled firms during the study period. The standard deviation of three directors implies that if the board members increased or decreased by three members during the study period, indicating that if the BS increase by 0.3 % it will negatively affect ROA which will lead to fall in ROA by 0.3 % in the sample financial services firms in Nigeria. The minimum membership recorded was four directors, and this was in Africa Alliance Insurance Plc in 2018, while the maximum board membership of 21 was recorded by First Bank of Nigeria Plc in 2014. The board size of the sampled firms conforms with Section 246 of CAMA 1990 and 271 of CAMA 2020, which requires that at least two directors must be on the board of any public company as no firm has less than two members on its board.

Furthermore, Table 4.1 shows that on the average, approximately 59% of the board members of the sampled firms were independent directors, and this ratio could increase or decrease by 16% as indicated by the standard deviation, implying that the values of BIND are not widely dispersed from the mean. The mean value is in consonance with the 2018 Code of Corporate Governance, which requires that there should be more independent or non-executive members on the board than other directors. However, some companies did not meet up with the requirement as other directors were more than the independent or non-executive directors. Section 275 of CAMA 2020 also requires that there should be at least three independent directors on the board.

In terms of BGD, Table 4.1 shows that on the average, 18% of board members in the sampled firms were women, and this ratio could rise or fall by approximately 12% as shown by the standard deviation. The standard deviation shows that the ratios of BGD are not widely dispersed from the mean. No woman was recorded on the board of at least one of the sampled firms, while the highest ratio of women on the board was approximately 55%, and this was recorded by Stanbic IBTC Plc in 2019 and 2020.

BT have a mean of 3.36, and a standard deviation of 2.28 with a minimum level of 0.14 and maximum level of 14. Average board tenure is 3.4 years. Some boards are newly formed while others are quite seasoned (up to 14 years). Long tenure may provide experience, but too much can reduce objectivity. For BC there is a mean of 0.92, a standard deviation of 0.21, a minimum level of 0 and a maximum level of 1. Therefore 92% of firms have board competence. This is a strong indicator of governance structures in place. BID (board interlocking directors) have an average of 7.85, a standard deviation of 3.36 with a minimum level of 1 and a maximum



level of 15 Board interlocking directors has a moderately high average. Could reflect number or variety of interlocking directors.

Table 4.1 further shows the statistics for the control variables of FLV and FS. For FLV, the table shows on the average, 59% of the sampled firms' assets were financed by debt, and this percentage could rise or fall by 32%, indicating a low dispersion from the mean. The minimum value of 0.1% was recorded by FCMB Plc in 2013, while the maximum value of approximately 25% was recorded by Unity Bank in 2017.

Finally, FS shows a mean log value of approximately 7.85 points with a standard deviation of 1 point, indicating a low variability of the values from the mean. Living trust Mortgage Bank has the smallest asset value represented by log of 6.29 in 2012, while Access Bank Plc has the highest asset value represented by log of approximately 9.99 points in 2021.

Correlation Analysis

The summary of the Pearson correlation coefficients of the variables of the study are presented in Table 4.2.

Table 4.2: Correlation Matrix

	ROA	BS	BIND	BGD	BT	BC	BID	FS	FLV
ROA	1.0000								
BS	-0.0737	1.0000							
BIND	0.0005	0.0643	1.0000						
BGD	0.1068	0.0681	-0.1430	1.0000					
BT	-0.0163	-0.1083	0.0581	-0.1132	1.0000				
BC	0.0794	0.2268	-0.0172	-0.0378	0.1079	1.0000			
BID	0.0125	0.1281	0.2845	0.1150	0.2107	0.0364	1.0000		
FS	-0.0551	0.6650	-0.0428	0.2772	0.0521	0.1867	0.2689	1.0000	
FLV	-0.1886	0.2749	-0.1859	0.2029	-0.0168	-0.0595	0.1299	0.5793	1.0000

Source: STATA output, 2024

Table 4.2 shows that the relationship between BS and ROA is negative from the coefficient of -0.0737. The negative relationship implies that, while BS moves in one direction, ROA moves in the opposite direction. The relationship is, however, weak considering the low coefficient, which is far below the 0.8 benchmark (Guajarati, 2007 cited in Ongore & Kusa, 2013). The relationship between BIND and ROA is positive with the coefficient of 0.005. The relationship is also weak considering the low coefficient. The positive relationship indicates that BIND and ROA move in the same direction. Likewise, the relationship between BGD and ROA is positive with a coefficient of 0.1068. This stabilizing influence has a huge potential to affect financial



performance positively, thereby enhancing shareholders' wealth. The relationship is also weak, but BGD and ROA move in the same direction. For BT and ROA, the relationship is negative with a coefficient of -0.0163. This indicates that BT and ROA move in different direction, and the relationship is weak. The relationship between BC and ROA and BID and ROA is positive with the coefficient of 0.0794 and 0.0125 respectively. The relationship is also weak considering the low coefficient. The positive relationship indicates that BC and ROA and BID and ROA move in the same direction. FLV (-0.1886) and FS (-0.0551) have negative and weak relationship with ROA

Regression Results

This section presents the regression results based on the OLS regression. The results are presented in Table 4.3.

Table 4.3: OLS Regression Result

Variable	Coefficient	Robust Std. error	T-value	P-value
CONSTANT	-0.008931	0.0365047	-0.24	0.807
BS	-0.0022273	0.0017849	-1.25	0.213
BIND	-0.0085072	0.0165657	-0.51	0.608
BGD	0.0744145	0.0328147	2.27	0.024
BT	-0.0010688	0.0012256	-0.87	0.384
BC	0.0255369	0.0235073	1.09	0.278
BID	0.0050253	0.0099143	0.51	0.613
FS	0.0070331	0.0056034	1.26	0.210
FLS	-0.0526388	0.015109	-3.48	0.001
R ²	0.0698			
F-Statistics	3.98			
Probability	0.0002			

Source: STATA output, 2024

As shown in Table 4.3, the value of R², which is often regarded as the coefficient of multiple determinations, is 0.0698 which implies that approximately 6.98% variation in ROA could jointly be explained by BS, BIND, BGD, BT, BC, BID, FLV and FS, while the remaining percentage could be attributed to other factors outside the scope of the model. From Table 4.7 it is seen that the F-statistics, which is used to test the hypothesis that a proposed regression model fits the data well, is 3.98 at 5% level of significance. This proves that the model is fit and the explanatory variables are properly selected, combined and used.



BS has a coefficient value of -0.0022273, which connotes that BS negatively affects ROA, and that a rise in BS by 1% would lead to a fall in ROA by 0.0022273 % in the sampled financial services firms in Nigeria. This connotes that the higher the number of directors on the board, the lower the ROA, and so financial services firms could not use the number of directors on their board to influence their return on assets. BIND has a coefficient value of -0.0085072, which indicates that BIND has negative effect on ROA, and that a rise in BIND by 1% would lead to a fall in ROA in the sampled financial services firms in Nigeria and so the number of independent directors on their board has no influence on the return on assets of the sampled companies during the study period.

BGD has a coefficient value of 0.0744145, implying that BGD has positive effect on ROA, and an increase in BGD by 1% would lead to an increase in ROA. This means that the higher the number of women on the board, the higher the ROA. BT has a coefficient value of -0.0010688, meaning that BT negatively affects ROA, and an increase in BT by 1% would lead to a decrease in ROA. This connotes that the higher the number of time spend by directors on the board of the sampled companies, the lower the ROA. BC has a coefficient value of 0.0255369, implying that BC has positive effect on ROA, and an increase in BC by 1% would lead to an increase in ROA. This means that the higher the number of competent directors on the board, the higher the ROA. BID has a coefficient value of 0.0050253, implying that BID has positive effect on ROA, and an increase in BID by 1% would lead to an increase in ROA. This means that the higher the number of director working as board members of another firm on the board, the higher the ROA.

For the control variables, FLV has a coefficient of -0.0526388, suggesting that FLV negatively affects ROA, and a rise in FLV by 1% would lead to a fall in ROA. This indicates that the higher the amount of total debt of the sampled firms, the lower the ROA. This is so because interest is paid on debt and is charged against profit. So, higher debt profile entails higher interest payment. Finally, for FS, the coefficient is 0.0070331, showing that FS positively affects ROA, and a rise in FS by 1% would lead to a rise in ROA by 1%. This implies that the bigger the size of a company, the better the ROA. Big firms enjoy economies of scale, and so they are able to cut down on cost of operations. Less cost results in high profit.

Test of Hypotheses

The hypotheses in this study were tested using the p-values in Table 4.3.

H₀₁: Board size has no significant effect on the return on assets of quoted financial services firms in Nigeria.

As shown in Table 4.3, BS has a p-value of 0.213. This is more than the preselected 5% level of significance. This result provides us with statistical evidence to accept the null hypothesis which states that board size has no significant effect on the return on assets of listed financial services firms in Nigeria. The study concludes that board size has no significant effect on the return on assets of listed financial services firms in Nigeria during the study period.

H02: Board independence has no significant effect on the return on assets of quoted financial services firms in Nigeria.

As depicted in Table 4.3, BIND has a p-value of 0.608 which is more than the preselected 5% level of significance. This result provides us with statistical evidence to accept the null hypothesis which states that board independence has no significant effect on the return on assets of listed financial services firms in Nigeria. The study concludes that board independence has insignificant effect on the return on assets of listed financial services firms in Nigeria during the study period.

H03: Board gender diversity has no significant effect on the return on assets of quoted financial services firms in Nigeria.

Table 4.3 shows that BGD has a p-value of 0.024 which is less than the preselected 5% level of significance. This result provides us with statistical evidence not to accept the null hypothesis which states that board gender diversity has no significant effect on the return on assets of listed financial services firms in Nigeria. The study concludes that board gender diversity has significant effect on the return on assets of listed financial services firms in Nigeria during the study period.

H04: There is no significant positive relationship between board tenure and firm profitability in Nigerian financial services firms.

As depicted in Table 4.3, BT has a p-value of 0.384 which is more than the preselected 5% level of significance. This result provides us with statistical evidence to accept the null hypothesis which states that board tenure has no significant effect on the return on assets of listed financial services firms in Nigeria. The study concludes that board tenure has insignificant effect on the return on assets of listed financial services firms in Nigeria during the study period.

H05: There is no significant positive relationship between board competence and firm profitability in Nigerian financial services firms.

In Table 4.3, BC has a p-value of 0.278 which is more than the preselected 5% level of significance. This result provides us with statistical evidence to accept the null hypothesis which states that board competence has no significant effect on the return on assets of listed financial services firms in Nigeria. The study concludes that board competence has insignificant effect on the return on assets of listed financial services firms in Nigeria during the study period.

H06: There is no significant positive relationship between board interlocking and firm profitability in Nigerian financial services firms.

As depicted in Table 4.3, BID has a p-value of 0.613 which is more than the preselected 5% level of significance. This result provides us with statistical evidence to accept the null hypothesis which states that board interlocking directors has no significant effect on the return on assets of listed financial services firms in Nigeria. The study concludes that board interlocking directors has insignificant effect on the return on assets of listed financial services firms in Nigeria during the study period.

Conclusion

This study examined the relationship between various board attributes and the financial performance measured by Return on Assets (ROA) of listed financial services companies in Nigeria. Based on the regression results discussed, the following conclusions are drawn:

- i. Board Size (BS) has a negative but insignificant impact on ROA. This suggests that increasing the number of board members does not necessarily improve financial performance. It emphasizes the importance of maintaining an optimal board size that supports effective decision-making and coordination.
- ii. Board Independence (BIND) also has a negative but insignificant effect on ROA. This implies that the presence of independent directors on the board does not significantly enhance firm performance, potentially due to limited involvement or understanding of internal dynamics.
- iii. Board Gender Diversity (BGD) exhibits a positive and significant influence on ROA. This indicates that gender-diverse boards contribute meaningfully to firm performance, supporting the view that inclusion of women enhances board effectiveness and decision quality.
- iv. Board Tenure (BT) shows a negative and insignificant relationship with ROA. This means that longer board tenure may not translate to better financial outcomes, possibly due to reduced innovation or adaptability over time.
- v. Board Competence (BC) has a positive but insignificant effect on ROA. Meaning that although competent board members are expected to improve governance, their impact on performance is not statistically evident in this study.
- vi. Board Interlocking Directors (BID) reveals a positive but insignificant effect on ROA. Which implies that serving on multiple boards does not significantly influence firm performance, which may suggest minimal strategic advantage from such interlocks in the Nigerian financial services sector.

Recommendations of the Study

Based on the findings from the regression analysis and the discussion of results, the following recommendations are proposed to enhance board effectiveness and financial performance of listed financial services companies in Nigeria:

- i. Since board size has a negative but insignificant effect on ROA, financial service firms should avoid unnecessarily large boards, which may lead to slow decision-making and inefficiencies, constitute a board with an optimal number of directors, ensuring that each member adds strategic value and contributes meaningfully to governance processes.



- ii. Given that board independence has a negative and insignificant impact on ROA, companies should ensure that independent directors are not just nominal, but are empowered to contribute to strategy, oversight, and accountability, periodic training and orientation should be provided to independent directors to deepen their understanding of the firm's operations and regulatory environment.
- iii. As board gender diversity showed a positive and significant effect on ROA, firms are strongly encouraged to intentionally recruit more qualified women to serve on boards, Regulators (e.g., SEC, CBN) may consider setting gender diversity guidelines or quotas to ensure inclusivity and diverse perspectives at the board level.
- iv. With board tenure showing a negative and insignificant effect, companies should review and possibly limit board tenure to avoid stagnation and promote fresh insights. Introducing succession planning and periodic performance reviews can help maintain effectiveness and accountability among board members.
- v. Although board competence had a positive but insignificant impact firms should prioritize competence in board appointments, ensuring members have relevant industry experience, financial literacy, and governance skills. Regular training, certifications, and performance evaluations should be adopted to enhance competence and engagement levels.
- vi. Since board interlocking directors had a positive but insignificant effect companies should assess the value of board interlocks and ensure they do not lead to conflicts of interest or diluted attention from directors. Regulatory bodies may consider setting limits or disclosure requirements on the number of directorships held by individuals to maintain focus and reduce governance risk.



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