MODERATING EFFECT OF BOARD FINANCIAL EXPERTISE ON THE RELATIONSHIP BETWEEN OWNERSHIP STRUCTURE AND PERFORMANCE OF QUOTED FINANCIAL FIRMS IN NIGERIA.

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ABSTRACT
This study investigates the moderating effect of board financial expertise on the relationship between ownership structure and the performance of quoted financial firms in Nigeria. This study employs an Ex post facto research design, utilizing data extracted from annual reports of the financial firms listed on the Nigerian Exchange Group (NGX) between the years 2014 to 2023. The population of interest consists of 48 listed financial firms. The study examines the impact of managerial ownership and institutional ownership on firm performance, as measured by Tobin's Q. A particular focus is placed on the moderating effect of board financial expertise on these relationships. The results indicate that board financial expertise significantly positively affects firm performance, highlighting the critical role of financially knowledgeable boards in enhancing corporate outcomes. However, the study also finds that the effectiveness of board financial expertise is moderated by ownership structure. Specifically, the positive impact of board financial expertise is diminished in firms with high managerial ownership and institutional ownership. These findings underscore the importance of considering board composition and ownership structure when assessing corporate governance practices. The study concludes that balanced ownership structures and strong board financial expertise are essential for optimizing firm performance in the Nigerian financial sector. Recommendations are made for policymakers and corporate managers to enhance board expertise, promote balanced ownership, and strengthen governance frameworks to support better performance outcomes. The study also suggests avenues for future research, including longitudinal and comparative studies, to further explore these dynamics.
Keywords: firm performance, Board financial expertise managerial ownership, institution ownership, and financial firm.

INTRODUCTION

At the turn of the 21st century, a wave of corporate scandals and the global financial crisis marked a significant shift in the business landscape. More recently, the collapse of companies such as Carillion, Patisserie Valerie, and London Capital and Finance in the UK, along with corporate governance failures in South Africa's state-owned entities like Transnet, Eskom, and South African Airways, and the 1MDB scandal in Malaysia, have brought intense scrutiny to ownership structures. These events have not only captured the attention of investors, the media, governments, and other stakeholders but have also exposed serious deficiencies in corporate governance (Tugman & Leka, 2019). In Nigeria, the implications of these global and regional corporate failures underscore the urgent need for robust corporate governance mechanisms, effective ownership models, and stringent regulatory frameworks to safeguard against similar crises and enhance investor confidence.

The Nigerian financial sector is one of the sensitive sub-sectors for economic growth and development, therefore, it should be a sector expected to be monitored seriously to prevent abusive financial practices which may not be in favour of the shareholders, investors and any other stakeholders that uses financial industry. This is because financial firms provide financial services for consumers and to industrial, commercial, or agricultural enterprises (CBN, 2013). Despite the existence of many corporate governance mechanism a lot of corporate failures and financial scandals (Oceanic bank, intercontinental Bank, diamond bank etc.) were perpetrated by the management of both financial and non-financial firms in Nigeria. This therefore brought about doubt in the minds of shareholders and investors on the credibility and reliability of financial firms in Nigeria.

Additionally, the Nigerian capital market has witnessed a dramatic decline in performance which was a result of firm declining performance where several firm especially the Nigerian financial sector. A clear example is the recent delisting of several financial firm which include, Acen Insurance Plc In 2008,

Confidence Insurance Plc In 2012, Continental Reinsurance Plc in 2017, Diamond Bank Plc, in 2019, Fortis Microfinance Bank in 2019 etc. This financial crisis entirely discourages the confidence of both domestic and international investors to invest in the Nigerian stock market. This situation sparked an intensive debate, which sought to explain the cause of such deterioration. One of the fundamental causes of such deterioration within the firms has been attributed to the ineffectiveness of the corporate governance system and its mechanisms particularly ownership structure (Shehu, 2011).

Prior studies on ownership structure and firms' performance in both developing and developed countries have reported differences in their findings. While some authors such Etale & Yalah (2022), Aribaba et'al (2022), Suleiman & Nasamu (2021), Abdul & Joel Okawale et'al (2020) (2020) and Ogabo et'al (2021) report significant effects of ownership structure on the performance of firms, others such as Khadijat & Rodiat (2018), Andow & David (2016), Gugong et al. (2014) and Tahir et al (2015) report insignificant effects of ownership structure on firms' performance. The differences in their locations, methodologies, and sectors made their findings differ. These divergent findings could also be as a result of differences in the choice of variables used for ownership structure and also those of firms' performance. The inconsistent findings in the previous studies about the effect of ownership structure on firm's performance even though most of the previous studies used similar variables, motivate the current study to consider the moderating effect of board financial expertise on ownership structure on firms' performance. There is a vast literature that identifies the relationship between board characteristics and ownership structure of the firms (Chen & Al-Najjar, 2016; Harjoto et al., 2018; Hussain et al., 2020; M. Khan et al., 2019; Linck et al., 2008; Lu & Wang, 2015). Thus, so far, the current study has taken into account the financial expertise of board members to investigate the moderating effect of ownership structure on performance. Jensen and Meckling (1976) found that board of directors must have some substantial expertise to fulfill their duties. Board of Directors skills and qualifications are human and social capital for the firms, so they help the firms in acquiring a better ownership structure for the firm (Kor & Sundaramurthy, 2009). This is considered the most formidable gap to be closed in literature and constitutes the thrust of this research work.

The study focused on moderating effect of board financial expertise on the relationship between ownership structure and firm performance of quoted financial firms in Nigeria. The specific ownership structure variables used are managerial ownership, institutional ownership, ownership concentration and foreign ownership and the performance variable Tobin's Q. The choice of the variables is substantiated by previous literatures that relied on the same variables. The study limited its scope to the financial firms and covers a period of ten (10) years from 2013 to 2024. This period is considered suitable because it is the period in which the sector was working towards strengthening their activities due to the global financial crisis which had negatively affected their performance. Thereby leading to their liquidation and of several financial firms in Nigeria.

The findings of the study will inform the management and shareholders how it is imperative for financial firms to determine the proportion of ownership in order to obtain ownership structure that will optimize the value of the firm. The study is desirable to both current and potential investors in Nigeria generally, to understand the ownership structure behavior of financial companies and consequently decide on whether or not to invest in the companies. The empirical evidence of the study will help to strengthen existing regulatory policies that would enhance board members composition of companies quoted on the NSE. The study will inevitably serve as a good library material for students and researchers who intend to carry out similar studies in this area.

To further achieve the objectives of this study, the following hypotheses were formulated in null form and the research questions and objectives are in line with the hypotheses:
$H0_1$: Managerial ownership has no significant effect on the performance of Quoted financial firms in Nigeria.
$H0_2$: Institutional ownership has no significant effect on the performance of Quoted financial firms in Nigeria.

$H0_3$: Board financial expertise has no significant moderating effect between managerial ownership and performance of Quoted financial firms in Nigeria.
$H0_4$: Board financial expertise has no significant moderating effect between institutional ownership and performance of Quoted financial firms in Nigeria.

LITERATURE REVIEW

Financial Performance

Malik and Okere (2020) viewed financial performance as a measure that evaluate the financial position of a company over a specified period to know how efficiently is using its resources to generate income**.** According to Okewale et al (2020), performance is used to describe the situation of a firm. In analyzing a firm financial performance, emphasis is made in formulating an adequate description of the concept of a firm's financial performance which uncovers the different dimensions upon which firm's financial performance is evaluated. Erikie and Osagie (2017), see financial performance as the measuring of results of a firm's policies and operations in monetary terms. According to Sar (2018) firm performance is measured using both market-based measures and accounting-based measures. Return on Equity (ROE), Earnings per Share (EPS) and Return on Assets (ROA) are the most used in accounting-based measures. While Tobin's Q and market to book value ratio are the most used measure in market-based performance measure. TQ (Tobin's Q: [equity market value + liabilities book value] over [equity book value + liabilities book value]). Hence Tobin's Q is adopted as performance measure in this study.

Ownership Structure

Ownership structure is seen as the classes or group of owners that exercise control over activities of a firm. Various scholars have different definition for ownership structure. According to Demstz and Lehn (1983), ownership structure is regarded as the fraction of shares owned by a firm's most significant shareholders, with much attention given to the fraction owned by the five largest shareholders. This definition is concerned with the ownership dynamics within a company and the degree of control or influence that a limited number of significant shareholders have over the firm. It suggests that the ownership structure can significantly impact the company's behavior and decision-making processes. Therefore, this study adopts the definition advanced by Gharbi (2010) which viewed Ownership structure as the combination of ownership concentration, managerial ownership, institutional ownership and foreign ownership. This definition underscores the importance of understanding how different ownership groups can influence a company's governance and strategic decisions as well as can significantly impact the company's governance, strategy, and performance.

Managerial Ownership

Jensen and Meckling (1976) defined managerial ownership as the fraction of the firm's shares held by its manager. Jensen and Meckling's (1976) described managerial ownership as the proportion of a firm's shares held by its managers, emphasizing its role in mitigating agency problems and aligning the interests of managers with those of shareholders. Holderness (2003) defined managerial ownership as the percentage of common stock held by management or the percentage of common stock held by outside blockholders. This definition looks at managerial ownership from the perspective of both managerial and institutional ownership of firm's equity shares. Shehu (2011) viewed managerial ownership as the ownership of shares owned by parties who play an active role in making decisions in the company. This definition accentuates the dual role of these managerial figures: they are both company decision-makers and shareholders. This study therefore aligns it definition of managerial ownership to that advanced by Linard (2020).

Institutional Ownership

According to Tijjani (2023), institutional ownership is described as the ownership stake in a company that is held by large financial organizations, pension funds, or endowments. Institutional ownership represents the ownership of a company's stock by large financial organizations, pension funds, and endowments. These institutional investors are not passive shareholders; they often play an active role in the management of the company due to their significant ownership stakes. Their influence can extend

to matters like board appointments, strategic decisions, and corporate policies. This perspective assumes institutional ownership as an important dimension of a company's ownership structure, as it reflects the collective investment by organizations that manage significant sums of money on behalf of others. These institutional investors have the potential to influence a company's direction and performance. Institutions generally purchase large blocks of a company's outstanding shares and can exert considerable influence upon its management (Will, 2019). Therefore, this study adopts the definition institutional ownership by Tijjani (2023).

Board Financial Expertise

The concept of board financial expertise refers to the qualifications and experience of board members in financial matters. Different authors and researchers have provided various definitions and perspectives on this concept. According to Jensen and Meckling (1976), board financial expertise is the knowledge and skills possessed by board members in finance, accounting, and financial management, which enables them to effectively oversee and advise the company on financial matters. Hermalin and Weisbach (2003), saw board financial expertise as the board's collective ability to understand, evaluate, and make informed decisions about the company's financial performance, risks, and opportunities. There is a vast literature that identifies the relationship between board characteristics and ownership structure of the firms (Chen & Al-Najjar, 2012; Harjoto et al., 2018; Hussain et al., 2020; M. Khan et al., 2019; Linck et al., 2008; Lu & Wang, 2015). Similarly, the growing literature on board characteristics has identified that the presence of financial experts on the board increases firm performance (Dionne & Triki, 2005; Francis et al., 2012), improve firm efficiency (Agrawal & Chadha, 2005; Karamanou & Vafeas, 2005; Krishnan, 2008), and leads them to implement good corporate governance practices (Krishnan, 2005; Robinson et al., 2012). Thus, so far, the current study has taken into account the financial expertise of board members to investigate the moderating effect of ownership structure on performance. Jensen and Meckling (1976) found that board of director must have some substantial expertise to fulfill their duties. Board of director's skills and qualifications are human and social capital for the firms, so they help the firms in acquiring a better ownership structure for the firm (Kor & Sundaramurthy, 2009).

Empirical Review

Muhammad and Juli (2022) examined the effects of various ownership structures—managerial, family, and institutional, block holder, and board of directors—on firm performance, measured by Return on Assets (ROA), in consumer goods companies listed on the Indonesian Sharia Stock Index (ISSI) from 2015 to 2018. Using a purposeful sampling technique, the study analyzed 32 businesses with 128 observations and employed SPSS for data analysis. The results showed that institutional ownership negatively affected firm performance, while family and managerial ownership had no effect. However, board of directors' and block holder ownership positively impacted performance. The small sample size may limit the generalizability of the findings, and the use of ROA as the sole performance measure without considering market value limits the study's conclusions. Additionally, more clarity is needed on how ownership types were measured. The study's reliance on internal performance measures like ROA may render its findings less comprehensive.

Obosede et al. (2020) investigated the relationship between ownership structure and firm value in Nigeria, using a sample of thirty listed companies from 2001 to 2008. The study used managerial ownership, institutional ownership, and ownership concentration as proxies for ownership structure, and employed pooled OLS for estimation while controlling for four firm-specific characteristics. The results revealed a negative and significant relationship between ownership structure and firm value. However, the findings may not be applicable to financial firms. The study acknowledges the validity of pooled OLS but also highlights potential limitations, such as assumptions about error independence and homoscedasticity, suggesting the need for additional econometric techniques for robustness.

Tijjani et al (2023) examined the impact of CEO ownership on the financial performance of Nigerian listed firms from 2016 to 2022. Using a sample of 94 companies, drawn from 157 listed firms on the Nigerian Exchange Group, the research analyzes 658 firm-year observations. Secondary data from annual

reports was used, and the study employed descriptive statistics, correlation, and panel corrected standard error (PCSE) analyses. The findings show a significant positive relationship between CEO ownership and financial performance, indicating that higher CEO ownership leads to improved firm outcomes. However, further clarity on the sampling process, inclusion of control variables, and exploration of causality could strengthen the study.

Abedin, et al (2022) investigated the impact of institutional ownership on firm performance in the Bangladeshi setting. Using the Ordinary Least Square (OLS) estimation technique based on a sample of 180 listed firms from 2008 to 2018, Consistent with the "active monitoring" view, the results indicate that both domestic and foreign institutional investors have a positive effect on firm performance measured by Tobin's Q and Return on Asset (ROA). In addition, this study explores whether the other corporate governance attributes- board size and board independence operate as mediators between institutional ownership and firm performance. Our findings indicate that both board size and board independence have a significant positive impact on the relationship between institutional ownership and firm performance. However, the findings of this study are not applicable to financial firms in Nigeria thereby justifying the present study.

Using secondary data from 53 listed firms in Nigeria, Musa (2023) investigated the moderating effect of institutional ownership on the relationship between board attributes and auditor selection among listed financial service firms in Nigeria from 2007 to 2020. It examines whether institutional shareholding influences the relationship between board size, independence, gender diversity, and meeting attendance, and auditor selection. The study employed a correlational research design and logistic regression for analysis. The findings reveal that institutional ownership strengthens the impact of board gender diversity and meeting attendance on auditor selection, suggesting that increased monitoring by institutional investors encourages managers to hire industry-specialist auditors, enhancing firm value.

Suzana et al (2020) examined the relationship between ownership concentration and performance of the Slovenian join stock companies, with special focus on the comparison of performance of state- and privately- owned joint stock companies and ownership concentration. The empirical analysis employs firm-level annual financial reports data and data on ownership structure of all Slovenian join stock companies for the 2005–2017 period. Using panel regression analyses they find that Slovenian state-owned joint stock companies are less profitable than their privately-owned counterparts. Using firm-level annual financial reports and ownership structure data from all Slovenian joint-stock companies for the 2005–2017 period is comprehensive and provides a wide-ranging dataset. However, the study the sample is not representative of the entire population of Slovenian joint-stock. Also, the study focuses only ownership concentration and performance, specifically comparing state-owned and privately-owned joint-stock companies. It is crucial to provide detailed information on how ownership concentration and performance metrics were measured and calculated to ensure the accuracy and reliability of the analysis. In contrast, they do not observe statistically significant relationship between ownership concentration and firm performance. The study did not specify sample size for the study it becomes challenging to generalize the findings of the study to a larger population.

Khadijat and Rodiat (2018) investigated the impact of institutional ownership on the firm value of Nigerian deposit money banks, using a sample of 15 banks listed on the Nigerian Stock Exchange over a nine-year period (2008-2016). They employed secondary data obtained from the audited reports of these banks, analyzing it through the System Generalized Method of Moments. The findings indicated a positive and significant relationship between institutional ownership and financial performance. However, the small sample size may limit the generalizability of the results to the wider population of Nigerian deposit money banks. A larger and more diverse sample could yield more representative findings.

Abdul and Joel (2020) explored the relationship between ownership structure and the performance of non-financial firms listed in Nigeria, using secondary data from 40 companies. The study examined

factors such as managerial ownership, ownership concentration, foreign ownership, institutional ownership, Tobin's Q, return on assets (ROA), return on equity (ROE), and earnings per share (EPS), analyzing the data through canonical correlation. The results showed that managerial and foreign ownership were the most significant ownership structures. Tobin's Q, EPS, and ROA were the key performance indicators. Ownership concentration, foreign ownership, and institutional ownership were positively correlated with firm performance, indicating improved outcomes. However, managerial ownership had a negative correlation with firm performance, suggesting lower performance with higher managerial ownership. The study, while similar to other research, differs in its variables and sample, and its findings are not applicable to Nigeria's financial sector.

Mohammad and Faudziah (2018) investigated the relationship between ownership structure and firm performance in Jordanian firms, using OLS regression to test this association. The study analyzed data from 228 industrial and service firms, aiming to fill a gap in the literature by examining ownership structure's impact on firm performance in Jordan, an emerging market. The results revealed a significantly positive relationship between ownership structure and firm performance. While the sample size of 228 firms is reasonable, the study's external validity may be limited if the sample is not fully representative of all Jordanian firms. However, this study introduced Board financial expertise as a moderating variable.

Suleiman and Nasamu (2021) conducted a study on the effect ownership structure on the firms` value and financial performance of listed oil and gas companies in Nigeria for the period of 2006-2019. Secondary data was extracted from the financial reports and accounts of the sample companies. Robust OLS as the best estimator of the regression model was used to analyze the data extracted. The study found that ownership structure has a positive significant effect on the firms` value and financial performance of oil and gas companies in Nigeria. However, the study only made use of one ownership structure attribute, ignoring others that are equally of immense importance. Meanwhile, this current study integrates other attributes and using board financial expertise a moderator variable.

Agency Theory

Agency theory, which has its root from the classical work of Berle & Means (1932), but modernized by Jensen and Meckling (1976). Jensen and Meckling (1976) defines an agency relationship as a contract that involves one or more people (principal) with other parties (agent) to do something according to the principal's wishes. This contract includes the delegation of authority in making decisions from shareholders to the company. If the shareholder (principal) and company (agent) try to maximize their respective profits, it concludes that the agent will not always carry out the principal's wishes. When applied in the context of a company, the concept of principal and agent means the principal is the shareholder or other stakeholder, while the agent is the internal party of the company where stakeholders invest or delegate authority.

The theory According to Shleifer and Vishny (1988) can be used to predict and explain behaviors and decisions in situations where there is a separation of ownership and control. The agency theory is so related to this study in the sense that it underlies the relationship between ownership structure, firm performance and firm value. The shares held by various class of individuals and institutions will cause these shareholders to have control or power to force the company to run optimally, both in operational, investment, and other corporate activities. The manager who also owns shares in a company will maximize all his abilities and powers such as investment decisions, funding decisions, and so on to achieve the best company performance. If the company's performance has been able to meet the shareholders' expectations, they consider that the company's share price deserves a high value.

METHODOLOGY

This study used Ex post facto research design. Data were extracted from quoted financial firms in Nigeria. The population of this study is made up of financial firms listed on the floor of the Nigerian Exchange Group (NGX) from year 2014 to 2023. The data used in this study was collected from

secondary sources only. The data were extracted from the firm's annual report. Panel regression was used analyse the data with aid of stata 17 was employed as the data analysis tool.

Model Specification

TOBIN'S $Q_{it}=\beta 0+\beta_1 MOW_{it}+\beta_2 INSTO_{it}+ei$ *…….(Equation 1)*

TOBIN'S $Q_{it}=\beta 0+\beta_1 MOW_{it}+\beta_2 INSTO_{it}+\beta_3 MOW_{it}*BFEX_{it}+\beta_4 ISTO_{it}*BFEX_{it}$ ……. (Equation 2)

Where:

TOBIN'S Q_{it} = Dependent Variable (Performance of financial firms)

$\beta 0$=constant (coefficient of β intercept)

MOW_1= Managerial ownership

$INSTO_2$= Institution ownership

β_1- β_2= Regression coefficients of the 2 independent Variables.

Table 1: Variables Measurement

S/N	Variable	Measurement	Content Validity
1	Tobin's Q (TQ)	TQ (Tobin's Q: [equity market value + liabilities book value] over [equity book value + liabilities book value])	Abdul & Joel (2020) Suleiman & Nasamu (2021)
2	Managerial Ownership (MOW)	% of share held by managers over outstanding shares.	Khadijat & Rodiat (2018),
3	Institution ownership (INSTO)	% of shares held by institutions over outstanding shares.	Abedin (2022), Abdul and Joel (2020)
4	Board Financial Expertise(BFE)	Number of board member with financial knowledge.	Khadijat & Rodiat (2018), Ali (2020)

Source: Researcher's computation, 2024.

RESULTS AND DISCUSSION

Table 2: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
TQ	480	2.08	1.43	.082	8.131
MGOW	480	.222	.25	0	.996
INSTOW	480	.363	.277	0	.964
BFE	480	2.456	.608	1	3
MGOWBFE	480	.527	.607	0	2.752
INSTOWBFE	480	.874	.723	0	2.892

Source: STATA OUTPUT, 2024

Table 2 presents the descriptive statistics for the variables used in this study. These statistics provide an overview of the central tendencies, variability, and range of the data and show an overview of the characteristics of the sample of quoted financial firms in Nigeria; the descriptive statistics also reveal considerable diversity in ownership structures and board financial expertise among Nigerian financial firms. The variability in the interaction terms suggests that the moderating effect of board financial expertise on the relationship between ownership structure and firm performance is likely complex and context dependent.

Table 2 presents Tobin's Q (TQ), Tobin's Q, a key measure of firm performance, has a mean value of 2.08, indicating that, on average, these firms are valued at slightly more than twice their book value. The standard deviation of 1.43 reflects moderate variability in firm performance across the sample of 480 firms, while the minimum and maximum values (0.082 and 8.131, respectively) reveal substantial disparities in market valuation. This range suggests that while some firms are significantly undervalued, others enjoy high market valuations, reflecting varied investor perceptions.

Also, Table 2 presents Managerial Ownership (MGOW), the average managerial ownership among the sampled firms is 22.2%, as reflected by the mean value of 0.222. This indicates that managers hold a significant stake in their firms on average. The standard deviation of 0.25 points to considerable variation in managerial ownership across firms, with some firms having no managerial ownership and others having almost complete managerial control (up to 99.6%). This wide range highlights the diversity in corporate governance structures, particularly in terms of aligning managerial interests with those of shareholders.

Additionally, Table 2 presents Institutional Ownership (INSTOW**),** Institutional investors own, on average, 36.3% of the shares in these firms. The standard deviation of 0.277 indicates significant variability in institutional ownership, ranging from 0% to 96.4%. This variation suggests that institutional ownership plays a critical but inconsistent role across the firms, potentially influencing corporate governance and performance outcomes in different ways depending on the level of ownership.

Table 2 presents Board Financial Expertise (BFE) as a moderator variable**.** The mean score for board financial expertise is 2.456 on a scale presumably ranging from 1 to 3, suggesting that most boards possess a moderate to high level of financial expertise. The relatively low standard deviation of 0.608 indicates that board financial expertise is consistent across the sample, underscoring its importance in the governance structures of these firms.

Interaction between the dependent and moderator variables also presented in Table 2 above,
MGOW × BFE (MGOWBFE), the interaction between managerial ownership and board financial expertise has a mean of 0.527, with significant variability (Std. Dev. = 0.607). This indicates that the combined influence of managerial ownership and board financial expertise on firm performance varies considerably across the sample.

INSTOW × BFE (INSTOWBFE), the mean interaction between institutional ownership and board financial expertise is 0.874, with a standard deviation of 0.723. This wide range suggests that the impact of institutional ownership on firm performance is significantly moderated by the financial expertise present on the board.

Correlation Matrix

The Pearson correlation analysis matrix shows the relationship between the explanatory and the explained variable and the relationship among all pairs of independent variables themselves. Generally, high correlation is expected between dependent and independent variables while low correlation is expected among independent variables. According to Gujarati (2004), a correlation coefficient between two independent variables 0.80 is considered excessive and thus certain measures are required to correct that anomaly in the data. This study presents the correlation result in the table below.

Table 3: Correlation Matrix

Variables	(1)	(2)	(3)	(4)	(5)	(6)
(1) TQ	1.000					
(2) MGOW	0.001	1.000				
(3) INSTOW	0.067	-0.244	1.000			
(4) BFE	0.058	-0.125	-0.101	1.000		
(5) MGOWBFE	0.010	0.940	-0.265	-0.335	1.000	
(6) INSTOWBFE	0.070	-0.264	0.907	0.385	0.473	1.000

Source: STATA OUTPUT, 2024

Table 3 presents the correlation matrix for the variables included in this study. The matrix provides insight into the strength and direction of the linear relationships between Tobin's Q (a measure of firm performance), ownership structure variables, board financial expertise, and the interaction terms between ownership variables and board financial expertise.

Managerial ownership (MGOW) exhibits a very weak and nearly negligible positive correlation with Tobin's Q (r = 0.001), indicating that managerial ownership alone does not have a strong linear relationship with firm performance. However, managerial ownership is highly positively correlated with its interaction term with board financial expertise (MGOWBFE, r = 0.940), reflecting the direct connection between these two variables. The negative correlations with institutional ownership (INSTOW, r = -0.244) suggest that firms with higher managerial ownership tend to have lower levels of institutional ownership, possibly indicating a preference for managerial control in such firms.

Institutional ownership (INSTOW) has a weak positive correlation with Tobin's Q (r = 0.067), suggesting a slight tendency for higher institutional ownership to be associated with better firm performance. It is strongly positively correlated with its interaction term with board financial expertise (INSTOWBFE, r = 0.907), indicating that the impact of institutional ownership on firm performance is likely moderated by the presence of financial experts on the board.

In addition, Board financial expertise (BFE) shows weak positive correlations with Tobin's Q (r = 0.058) and other ownership structure variables, suggesting that while board expertise may influence firm performance and ownership structure, the relationships are not strongly linear.

Table 4 Variance Inflation Factor

VIF	1/VIF
1.560	0.642
1.350	0.740
1.220	0.818
1.377	
Mean VIF | 1.377	

Table 4 presents the Variance Inflation Factor (VIF) values for the independent variables used in the regression analysis. The VIF is a measure used to assess multicollinearity among the explanatory variables. Multicollinearity occurs when two or more independent variables in a regression model are highly correlated, potentially leading to unreliable coefficient estimates.

The VIF for institutional ownership is 1.56, with a 1/VIF value of 0.642025. Similar to ownership concentration, the VIF indicates a moderate level of multicollinearity, but it is still within acceptable limits. This suggests that institutional ownership does not exhibit problematic multicollinearity in the model.

The VIF for foreign ownership is 1.35, with a 1/VIF value of 0.740383. This relatively low VIF indicates that board financial expertise has minimal multicollinearity with other variables, further affirming the reliability of its coefficient estimates in the regression analysis.

The VIF for managerial ownership is the lowest at 1.22, with a 1/VIF value of 0.818340. This indicates the least amount of multicollinearity among the variables considered, suggesting that the effect of managerial ownership on firm performance can be estimated with a high degree of confidence.

The mean VIF across all variables is 1.377, which is well below the threshold of 10. This low mean VIF suggests that multicollinearity is generally not a significant issue in the model. Therefore, the independent variables included in the analysis are not highly correlated, and the regression results are unlikely to be adversely affected by multicollinearity.

Table 5: Test of heteroskedastacity, Housman Specification Test and Fixed Regression Result

Table 4.4 Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance
Variables: fitted values of fv

chi2(1) = 14.25
Prob > chi2 = 0.238

Hausman (1978) specification test

	Coef.
Chi-square test value	192.527
P-value	.000

Fixed Effect Regression Result

TQ	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
MGOW	.647	.105	6.18	.000	.441	.853	***
INSTOW	.872	.081	10.79	.000	.713	1.031	***
Constant	.645	.055	11.81	.000	.538	.753	***

Mean dependent var	2.080	SD dependent var	1.430
R-squared	0.726	Number of obs	480
F-test	283.322	Prob > F	0.000
Akaike crit. (AIC)	976.746	Bayesian crit. (BIC)	997.615

**** p<.01, ** p<.05, * p<.1*

Source: STATA 16 Output, 2024

Basically, the presence of heteroskedasticity signifies that the variation of the residuals or term error is not constant which would affect inferences in respect of beta coefficient, coefficient of determination (R^2) and F-statistic of the study. Based on the results, it can be concluded that there is no problem of heteroscedasticity as the F-statistics value stands at 14.25 with a corresponding probability of 0.238 which is insignificant, implying that there is absence of heteroscedasticity.

The Hausman (1978) specification test is employed to determine whether the fixed effects or random effects model is more appropriate for your panel data analysis. The test compares the estimators from these two models to check if there are systematic differences in the coefficients. Test Results indicate the Chi-square test value: 192.527 and a corresponding P-value: 0.000. The p-value is well below the conventional significance level of 0.05, indicating that the null hypothesis should be rejected.

Null Hypothesis (H_0): The preferred model is the random effects model. This assumes that the individual-specific effects are uncorrelated with the independent variables in the model.
Alternative Hypothesis (H_1): The preferred model is the fixed-effects model, which assumes that the individual-specific effects are correlated with the independent variables.

Since the p-value is 0.000, we reject the null hypothesis, which implies that the random effects model is not appropriate for study data. Instead, the results strongly favor the fixed effects model. This indicates that individual-specific effects (such as firm-specific characteristics) are correlated with the independent variables in the model, and thus, the fixed effects model will provide more consistent and reliable estimates.

In conclusion, based on the Hausman test, the fixed effects model is the correct specification for analyzing the relationship between ownership structure, board financial expertise, and firm performance

in this study. This model accounts for unobserved heterogeneity across the firms that may be correlated with the explanatory variables, thereby providing more accurate and trustworthy results.

From the above fixed effects regression analysis results, which examines the impact of various ownership structures on the performance of quoted financial firms in Nigeria, as measured by Tobin's Q (TQ). The analysis includes managerial ownership (MGOW), and institutional ownership (INSTOW), the hypothesis testing results for each variable are also discussed to evaluate their significance.

The model explains 72.6% of the variance in Tobin's Q, indicating strong explanatory power and suggesting that the independent variables effectively capture the factors driving firm performance. The highly significant F-test ($p = 0.000$) confirms that the overall regression model is statistically significant. This means that the independent variables, collectively, have a significant effect on firm performance. Akaike Information Criterion (AIC): 976.746, Bayesian Information Criterion (BIC): 997.615. The AIC and BIC values provide measures for model comparison. Lower values indicate a better fit, and these criteria will be useful when comparing alternative models.

Test of Hypotheses

H1: Managerial ownership has no significant effect on firm performance of quoted financial firms in Nigeria

The regression analysis reveals a significant positive relationship between managerial ownership and firm performance, with a coefficient of 0.647 ($p < 0.01$). This suggests that as managerial ownership increases, firm performance improves. This result aligns with the findings of Tijjani et al. (2023)**,** who observed a positive relationship between CEO ownership and firm performance in Nigerian firms. Their study concluded that higher CEO ownership motivates executives to work toward maximizing shareholder value, which translates into improved firm outcomes. Similarly, Abdul and Joel (2020) found that managerial ownership has a significant positive impact on performance indicators like Tobin's Q. Also, the Agency Theory by Jensen and Meckling (1976) helps explain this relationship. According to this theory, when managers own shares in the company, their interests become more aligned with those of the shareholders (principals), reducing agency conflicts. This alignment motivates managers to make decisions that enhance firm performance, such as improving operational efficiency and maximizing returns on investments.

H2: Institutional ownership has no significant effect on firm performance of quoted financial firms in Nigeria

The study reveals that institutional ownership has a positive and significant effect on firm performance, with a coefficient of 0.872 ($p < 0.01$). This suggests that increased institutional ownership leads to better financial performance for the firms. The findings are consistent with Abedin et al. (2022)**,** who demonstrated that institutional investors, both domestic and foreign, positively affect firm performance in Bangladesh. Their study noted that institutional investors act as active monitors, thereby improving governance and firm value. Similarly, Musa (2023) found that institutional ownership strengthens the effect of board attributes, leading to better firm governance and performance in Nigerian financial firms. Agency Theory also supports this finding. Institutional investors, due to their large shareholdings, have the power and incentive to monitor management activities closely, thus mitigating agency problems**.** Shleifer and Vishny (1988) argue that institutional investors enhance corporate governance by using their voting power to influence management decisions, leading to improved firm performance.

Fixed effect Regression Results with Board Financial Expertise as Moderator as Specified by Husman

TQ	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
BFE	.642	.075	8.61	0	.496	.788	***
MGOWBFE	-.309	.098	-3.15	.002	-.501	-.117	***
INSTOWBFE	-.901	.099	-9.06	0	-1.096	-.706	***
Constant	.235	.172	1.37	.171	-.102	.573	

Mean dependent var	2.080	SD dependent var	1.377
Overall r-squared	0.751	Number of obs	480
Chi-square	1431.978	Prob > chi2	0.000
R-squared within	0.755	R-squared between	0.752

*** p<.01, ** p<.05, * p<.1

$H0_3$: Board financial expertise has no significant moderating effect between managerial ownership and performance of Quoted financial firms in Nigeria.

The study finds a significant negative interaction between managerial ownership and board financial expertise (Coef. = -0.309, $p < 0.01$). This indicates that as managerial ownership increases, the positive impact of board financial expertise on firm performance decreases. This could be explained by the fact that higher managerial ownership often leads to greater control by managers, which might reduce the board's ability to exert its influence effectively, even when the board members are financially skilled. This finding aligns with the managerial entrenchment theory, which suggests that when managers have substantial ownership, they might prioritize their interests over those of shareholders, potentially diminishing the positive effects of good governance practices (Fama & Jensen, 1983; Shleifer & Vishny, 1997). Recent studies have also found that in firms with high managerial ownership, the effectiveness of board governance, including financial expertise, can be compromised due to reduced board independence (Jiraporn, 2005; Chen, 2011).

$H0_4$: Board financial expertise has no significant moderating effect between institutional ownership and performance of Quoted financial firms in Nigeria.

The negative interaction between institutional ownership and board financial expertise (Coef = -0.901, $p < 0.01$) suggests that the presence of institutional investors may reduce the beneficial impact of board financial expertise on firm performance. While institutional investors are generally considered to be effective monitors of management, this finding implies that their involvement might, in some cases, overshadow the influence of a financially knowledgeable board. This could occur if institutional investors impose their strategies or if there are conflicts between the board's financial expertise and the objectives of institutional investors. This finding is supported by the literature, which highlights potential conflicts between active institutional investors and board members, particularly in terms of strategic direction and risk appetite (Woidtke, 2002; Aggarwal, Erel, Ferreira, & Matos, 2011). In the Nigerian context, where institutional investors are increasingly influential, their dominance may at times inhibit the positive contributions of board financial expertise, particularly if their goals are not fully aligned with those of the board.

CONCLUSION AND RECOMMENDATIONS

Based on the above findings, this study concludes that managerial ownership and institutional ownership, positively and significantly affect firm performance in the Nigerian financial industry. However, the study concludes that as managerial ownership increases, the positive impact of board financial expertise on firm performance decreases. Also, the study concludes that that the presence of institutional investors may reduce the beneficial impact of board financial expertise on firm performance. This aligns with established theories such as agency theory and empirical evidence from previous studies. Based on the findings of this study, the following recommendations are made:

The positive relationship between managerial ownership and firm performance suggests that increasing managerial ownership can align managers' interests with shareholders' interests, leading to improved performance. Therefore, firms should consider implementing policies or incentive structures encouraging managerial ownership to enhance performance.

Similarly, the positive impact of institutional ownership on firm performance highlights the importance of attracting institutional investors. Firms should strive to attract institutional investors with expertise, monitoring capabilities, and long-term investment perspectives. This can be achieved through effective investor relations strategies and transparent corporate governance practices.

The negative interaction between managerial ownership and board financial expertise indicates that when managerial ownership is high, the benefits of board financial expertise diminish. Companies should strike a balance between managerial ownership and board independence. It may be helpful to ensure that boards retain sufficient autonomy to exercise their expertise, especially in firms with strong managerial ownership.

Similarly, negative interaction between institutional ownership and board financial expertise suggests that institutional investors may reduce the effectiveness of board financial experts. Firms should engage institutional investors in dialogue to ensure that their goals are aligned with the board's strategies. It may also be beneficial to clearly define the roles and responsibilities of institutional investors to avoid conflicts in decision-making.

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