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MODERATING EFFECT OF INSTITUTIONAL OWNERSHIP STRUCTURE ON THE RELATIONSHIP BETWEEN LEVERAGE AND FINANCIAL PERFORMANCE OF LISTED DEPOSIT MONEY BANKS IN NIGERIA

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Abstract

The study examines the Moderating effect of Institutional Ownership Structure on the relationship between leverage and the financial performance of listed deposit money banks in Nigeria. The problem facing entities in Nigeria lies in financing either to source equity or debt. Considering a bank's capital structure is imperative not just to boost earnings but also its effect on the organization's capability to manage competitive environments. The Study covers the period of twelve (12) years from 2010 to 2021. The Sample size of this study includes all thirteen (13) Banks listed in the Nigerian Exchange Limited (NEL) as at 31 December 2021. In view of the availability of data for thirteen (13) Banks, the study adopted a Census sampling approach by studying the thirteen (13) Banks as the population of the study. Multiple regression was used for the panel data analysis in order to establish the effect and relationship between the variables of the study. While Correlation and descriptive statistics were also employed. The analysis in model one reveals that leverage and institutional ownership structure have a positive and significant effect on the financial performance proxied by ROE of the listed deposit money banks in Nigeria. It was found that institutional ownership structure moderated the leverage and non-performing loan relationship, against financial performance was negatively significant. This study concluded that the interaction between institutional ownership structure and financial performance was found to be positive and significantly influenced financial performance. Institutional shareholding moderates the relationship between leverage and financial performance significantly. It is therefore recommended that banks should maintain an appropriate proportion of debt with equity in their capital structure if return on equity is to be improved. They must also be concerned with utilizing these debts effectively and efficiently.

Keywords: Leverage, Institutional Ownership Structure, and Financial Performance

1.0 Introduction

A bank's health is influenced by return on its equity, investments, and assets rather than the size of its financial statements expressed in millions, billions, or trillions. However, earning superiority has been a key indicator of a bank's performance. Bank performance is a significant factor in determining a banking system's growth, survivability, sustainability, and development, and it should be a top priority for bank managers (Timothy, 2018). To determine the current financial performance of Banks, descriptive and analytical measures could be used. Total assets and liabilities, stockholders' equity, total revenues, total costs, and net income are characteristics of descriptive financial performance measures, while profitability, liquidity, and solvency measurements are characteristics of analytical financial performance measures (Mustafa, 2014).

Financial leverage can be described as the extent to which a business or investor is using borrowed money. Financial leverage is a measure of how much a firm uses equity and debt to finance its assets. As debt increases, financial leverage increases. The banking business is to raise funds from the surplus spending unit of the economy to the deficit spending unit. In undertaking this primary duty, banks normally engage in leverage by using customer deposits to acquire more assets.

The sources of long-term funding for a business are divided into two main categories: owners' equity funding and borrowed funding debt. The proportionate mix of these two sources in financing a firm's investment proposals has been the subject of intensive theoretical modelling and empirical examination over the years, having its tenet in the implication of such a mix on corporate performance (Desta, 2020). Financial leverage is a very important external financing mode. Financial leverage shows that a business needs finance to purchase a new asset, enhance its production or operational activities. Financial leverage is one of the best ways for Banks to achieve their goals. With the help of financial leverage, banks can not only achieve their goals but also maximize the value of their shareholders. (Umer & Muhammad, 2018).

Throughout the banking industry, increasing institutional ownership is seen as an important pathway for protecting minority shareholders against expropriation by dominating shareholders. Furthermore, it may be claimed that if a significant number of institutions possess a large percentage of a bank's equity shares, management may feel compelled to manipulate results to pacify these institutions. Because institutional investors have the funds to buy and sell shares, they can help in maintaining banks' solvency and liquidity. (Central Bank of Nigeria, 2019).

Given that shareholders are increasingly interested in understanding more about the activities of the

banks in which they have invested, an empirical study examining the Moderating effect of institutional ownership structure on the relationship between leverage and financial Performance of Banks Listed on the Nigeria Stock Exchange is merited. This demonstrates there are factors influencing the relationship which have not been taken into consideration in previous research. The focus of this research is on institutional ownership structure as a moderating variable of the study, which tends to curb managers' excesses. The study investigates the moderating effect of institutional ownership structure on the relationship between leverage and the financial performance of listed deposit money banks in Nigeria.

Nigerian banking sector has been plagued with the trickiest insider abuses and poor corporate governance is more often identified as a major factor in virtually all instances of financial sector distress, making it even more important for banks to be held to the highest standards of unethical leadership at the top, corporate governance, and financial mismanagement by Nigerian bank shareholders have hampered their performance and sustainability. Bank managers have been known to make securitized or fictitious loans to friends and family members, placing their private interests ahead of the banks. Shareholders often borrow funds in excess of the capital they invested in the bank to start it, and they do so through companies that are directly related to them. Due to these activities, various banks have a

significant increase in unsecured non-performing loans, which can be traced to the shareholders (directors) of these banks. Recent incidents of a rapid growth in non-performing loans, as well as other corporate mismanagement and insider abuses, have raised many issues about the efficacy of commercial banks' existing ownership structure (Nweze, 2017).

The sudden collapse of some banks in the past is traceable to the inability of corporate financial managers to secure the best proportion of capital in carrying out daily operations, which engenders profitability and continuity in the banking system. If none of these financial means bring productive results, then there should be consideration for an alternative route. However, the problem facing Banks in Nigeria lies in financing either to source equity or debt assets. Considering a firm's capital structure is imperative not just to boost earnings but also its effect on the organization's capability to manage competitive environments. The aim of a firm's capital structure may not be focused on wealth maximisation, but to safeguard management's interest, mostly in firms where control is dictated by directors and shares of the corporation are carefully held.

The challenges Nigerian banks face may be linked back to their funding sources, which might be either equity or debt. It is critical to consider a bank's capital structure not just to increase profits, but also to understand how it affects the organisation's capacity to manage competitive conditions. However,

technology innovations and considerable changes in the financial and monetary environment have increased competitiveness in the banking sector. (Sunday & Samson, 2019). In fact, it is very rare to find studies relating Leverage and financial performance as a second-order construct and Institutional ownership structure together in a single model. Therefore, in view of the aforementioned gaps and the suggestions for further studies, this study sought the general objective of study is to examine the Moderating effect of Institutional Ownership Structure on the relationship between leverage and financial performance of listed deposit money banks in Nigeria.

2.0 The Literature Review

The conceptual framework was developed and presents a critical review of empirical literature. Furthermore, a theoretical foundation is built upon which the study is based. Emphasis is therefore placed on capital adequacy, cash liquidity, deposit growth rate, leverage, loan growth rate, and non-performing loans in relation to financial performance. The research is moderated by the Institutional Ownership structure of listed deposit money banks in Nigeria over the period of twelve (12) years from 2010 to 2021.

2.1 Concept of Leverage

The amount of equity and debt used to finance a company's assets is referred to as leverage. However, an increase in debt results in an increase

in Leverage. Because equity financing bears less risk, management favours it over debt financing (Matt, 2000). Leverage is defined as a loan or other form of borrowing (debt) where the proceeds are reinvested to earn a higher return than the cost of interest. Leverage refers to how much money a company borrows (debt financing) to maximise profits, and it's measured by the ratio of total liabilities to equity. The ratio of debt to equity in a statement of financial position is referred to as leverage. The financing or leverage decision is a significant managerial decision because it influences the shareholders' return and risk and the market value of the firm (Omondi & Muturi, 2013). According to Deste (2020), leverage is a measure of how much a firm uses equity and debt to fund its assets, and it is considered a result of events that determine a firm's source of financing to manage the business. It might take the form of a loan or other form of borrowing (debt). It is measured as a firm's total debt to equity ratio.

Leverage financing refers to a bank's debt-to-equity capital ratio. A significant portion of the bank's cash flow would be reduced as a result of paying interest and repaying the principal amount of the debt, according to Magpayo (2011). The use of debt to acquire new assets is often referred to as financial leverage. It might be financial or operational leverage. Leverage is the use of borrowed money to expand a firm's production volume, sales, and profitability to improve its performance. It is

measured as a firm's total debt to equity ratio. Jang and Yoon (2005). The greater a firm's financial leverage is, the more debt it has. Because interest is a fixed expense that can be discounted from earnings, a loan allows a firm to create more profits without having to grow its equity capital, which would need an increase in dividend payments that could not be deducted from profits. Magpayo (2011).

2.2 Concept of Institutional Ownership Structure

Naoki and Hideaki (2020). Any financial institution's ownership portion or stake in a firm is referred to as institutional ownership. Institutions usually purchase significant portions of a firm's shares outstanding and have a lot of power over its management. As a result, institutional shareholders are often professionals who leverage their knowledge to scrutinise management and ensure that their interests are aligned with the Bank's. Institutional Ownership structure refers to the equity holdings owned by registered private organisations; mainly institutional shareholdings are usually large and capable of affecting bank performance either negatively or positively.

2.3 Concept Financial Performance

Shareholders and other stakeholders, and the economy as a whole, are all concerned about how well firms perform. The returns on their investment are what investors care about. Investors might benefit from firms that are functioning well. A

company's financial performance will increase employee income, provide excellent products to customers, and make its operational environment interesting. The financial performance of a firm can be analysed in terms of profitability, dividend growth, sales turnover, asset base, and capital employed, among others (Almajali et al., 2012). According to Bacha and Attia (2016), Financial performance is described as a tool that assesses how successfully firms use their resources to generate profits, making it a significant tool for many stakeholders in the company. As a result, financial performance is significant to a firm's survival and sustained patronage from potential and current investors, creditors, and other stakeholders in the business sector.

According to Mirza and Javed (2013), a firm's performance may generate more profits, which can lead to future investment, which can generate jobs and increase people's income. Measuring banks' financial performance is one of the management strategic functions aimed at satisfying the interests of shareholders and other stakeholders in a company. Bank's performance appraisal is an evaluation which is done periodically and systematically in determining the achievements of the company's objectives, Amelia (2002). Evaluation of the company's performance requires certain standards that are either internal or external. Internal standards refer to the ability of a company to achieve its stated objectives, while external

standard refers to the comparison, i.e., comparing a bank with its competitors in the industry.

2.4 Theoretical review

Signaling Theory

First introduced by Michael Spence in 1973, Signalling theory assumes with understanding of why certain signals are reliable and others are not in terms of decision making. The theory looks at the quality and reliability of accounting information sent by a bank to its users of accounting information for investment decision making by the potential investors. Signals sent by the firm are the results of its operating activities, which will inform investors about the bank's prospects. The theory assumed that managers and shareholders of a bank differ in terms of getting access to some vital information about the firm's operation. Some information can be accessed by the managers, while the shareholders do not have access to such information.

Signalling theory is concerned with understanding why certain signals are dependable and others are not. The theory examines the quality and accuracy of accounting information sent by a bank to its users for the purpose of making investment decisions by potential investors. The outcomes of the firm's operating operations are conveyed as signals, which will tell investors about the bank's future possibilities. The hypothesis suggested that bank managers and shareholders have different levels of access to important information about the bank's operations. The management has access to some

information, whilst the shareholders do not. According to Brigham and Houston (2011). Signalling theory is an act undertaken by bank management that sends investors signals about how management assesses the bank's prospects. Firms with promising futures will aim to avoid selling stock and will seek all additional money via other ways, including debt that exceeds the standard goal capital structure.

2.5 Empirical Review

Leverage and Financial Performance

Desta (2020) evaluates the impact of financial leverage on the financial performance of Ethiopian commercial banks during ten years (2008-2017) for the five commercial banks chosen. Three variables were utilized to evaluate financial leverage for the independent variables: debt ratio (DR), debt equity ratio (DER), and interest coverage ratio (ICR) (times interest earned ratio). The dependent variable was measured using two ratios: return on assets (ROA) and return on equity (ROE) as a measure of financial performance. The researchers utilised an ex-post facto and longitudinal research strategy. The secondary data came from the audited financial reports (profit and loss statement and statement of financial position) of a few commercial banks in Ethiopia's financial system. The researchers employed descriptive statistics and a fixed Effect model. The study's findings revealed that the Debt Ratio (DR) has a minor negative impact on bank performance as measured by Return

on Assets (ROA) and Return on Equity (ROE), whereas the Debt Equity Ratio (DER) and Interest Coverage Ratio (ICR) have a significant positive impact on bank performance as measured by Return on Assets (ROA) and Return on Equity (ROE). The performance of Ethiopian banks is evaluated using Return on Assets (ROA) and Return on Equity (ROE). The information gathered was examined and presented. According to the conclusions of the study, it is better to utilise debt as a source of finance until the cost of capital does not exceed the real return of a company, to maximize the ultimate purpose of a firm, which is to maximise the wealth of shareholders and the value of a corporation. However, the study failed to examine other dimensions of bank attributes, such as cash liquidity, loan growth rate, and non-performing loans as well as provide any theoretical justification for the relationship that might exist between bank attributes and Financial Performance.

Sohail and Ulfat (2019) evaluate the influence of various debt financing options on firm performance in 14 Pakistani finance industries. For a period of nine years, secondary data was collected on 14 distinct sectors of the Pakistan Stock Exchange (2006 to 2014). The study relied on secondary data, which was derived from corporate financial statements. Panel least squares was employed as the methodology, and the Hausman test was utilised to determine if the fixed effect or random effect model

should be used. Debt financing has a negative but considerable impact on firm performance in Pakistan, according to the findings of the study. In conclusion, the study's findings demonstrate that company performance is negatively correlated with both short and long-term debt. This demonstrates that when a company's size grows, it will profit from economies of scale. This study's findings suggest that businesses should rely more on their internal sources of finance because it is the most cost-effective and trustworthy source of capital in Pakistan. According to the report, organisations in Pakistan should employ a lower degree of debt because it lowers their performance. Two variables were employed in the research. Because the research was conducted in Pakistan, the results may not apply to Nigeria due to the nations' differing socioeconomic and financial policies. However, the study failed to examine the moderating role of institutional ownership structure on the relationship between bank attributes and financial performance. Farhan, Iqra, and Muhammad (2019) assessed the optimal level of capital structure that enterprises might adopt to improve their financial performance, given the industry dynamics and economic circumstances of the country. Financial statement report from Karachi Stock Exchange (KSE), 100 index-listed securities was collected, using Hausman's specification test was conducted to choose between random effect and fixed effect. Study examines the influence of financial leverage

on the firms' performance from 2005 to 2014. The proxies of financial performance examined against financial leverage for the KSE 100 index listed enterprises are return on assets, return on equity, and TOBIN's Q. The paper's findings show that capital structure, leverage, interest cover, and sales growth are the most significant factors affecting a firm's profitability. Many of the companies were found to be new, with fewer than ten years of financial information. Furthermore, many companies were discovered to be profitable even if they had no debt. Only enterprises with significant debt to capital ratios, all belonging to the non-financial sector, were evaluated based on leverage and profitability. The analysis is precise in statistically proving the leverage factors considered in the study as significant or non-significant to the firm's profitability.

Muhammad (2018) examined the effect of leverage on the performance of Pakistan's publicly traded oil refineries. By utilizing ROE, it was able to put performance measures into a broader context. Controlling for liquidity and company age added to the study's explanatory factors, in addition to financial leverage. The information was gathered from the financial accounts of Pakistan's publicly traded oil refineries. Secondary data is quantitative information backed up by empirical facts. The study used pooled regression analysis to analyze secondary data from the financial statements of Pakistan's publicly traded oil refineries from 2012

to 2016. It was discovered that leverage and firm financial performance have a significant negative relationship as assessed by the proxy of ROE. As a result, the study suggested that oil refinery companies should consider using alternative strategies to finance their various projects rather than relying solely on financial leverage. As a result, it might be argued that financial leverage can cause oil refineries to perform poorly due to the additional expenses of debt financing, which could overturn the gains from the projects in which investment is made. This research study suggests that listed oil refinery companies in Pakistan look for alternative sources of funding for their initiatives, rather than relying solely on financial leverage. Furthermore, oil refinery listed companies on the Pakistan Stock Exchange (PSX) should strive for lower financial leverage. The study is limited to oil and gas firms in Pakistan; the research domain is different. Therefore, the result may not be the same.

Cindy, Zainul, and Ni Nyoman (2019). Evaluate the Influence of Liquidity Ratio, Solvability, Asset Growth, and Inflation on Stock Return with Profitability as an Intervening Variable in the Building Construction Sector of the Indonesian Stock Exchange: A Review of Theories and Evidence. The population in this study is the building construction subsector, which has a total of 16 companies for the 2014-2018 period. The creation of the regression model, which involves

the Sobel Test, is the method of analysis used by path analysis. The regression equation in this route analysis includes independent and dependent variables, as well as testing of intervening factors. Stock returns are rewards and results obtained from stock in the form of profits or losses. The level of return obtained by investors is influenced by microeconomic and macroeconomic factors.

Institutional Ownership Structure and Financial Performance

Hideaki and Naoki's (2020) examined the influence of institutional investors on oriented shareholders and oriented stakeholders in Japan. 500 quoted companies in Japan were used in the study sample from 2010 to 2016. Research revealed that institutional shareholders, or foreign shareholders, play an effective oversight role in Japanese firms. Furthermore, we demonstrated that their monitoring functions are projected to boost organizations through increased growth potential. These findings suggested that institutional owners can improve long-term business performance and establishing long-term governance procedures in a stakeholder-oriented system. Findings are explained in three categories. It was suggested that institutional and overseas shareholders in Japanese businesses are just as successful as monitors. Domestic shareholders, notably steady stockholders, are expected to play a role in monitoring as well. This means that institutional investors' growing clout serves as a monitoring tool

that works in tandem with local and stable shareholders. Second, institutional and international shareholders' monitoring is projected to strengthen enterprises with greater development potential. The study used 2924 firms in Japan. The study was conducted in Japan; the research may not be applicable in Nigeria.

Huthaifa, Ashraf, and Mohamed (2019) explained how capital structure and institutional ownership might help Jordanian real estate businesses enhance their financial performance. During the study period, all (34) Jordanian real estate businesses registered on the Jordan Stock Exchange were included (2015-2017). The study's most important findings are that there is a positive relationship between capital structure and institutional ownership in terms of improving financial performance at Jordanian real estate companies (ROA, ROE, EPS), and that there is also a positive relationship between company size as measured by total assets and financial performance at Jordanian real estate companies. Researchers provided a number of recommendations based on the aforementioned findings, including the necessity for private investment businesses to promote investments in Jordanian real estate companies by increasing institutional ownership or property ratios in order to enhance the amount of capital in these firms. The study used Jordanian real estate companies listed the research was conducted in Jordan; the result may not be generalized to Nigeria

due to the differences in socio economic and other financial policies of the countries.

Fahmi, Lisandri, Soelistijono, and Akhmad (2019) sought to obtain empirical evidence of the effect of Institutional and Managerial Ownership on Corporate Financial Performance. There is evidence that Institutional Ownership and Managerial Ownership impact Corporate Financial Performance through the mediation of earnings management, according to the Path Analysis approach for banks listed on the Stock Exchange. Finally, using discretionary accruals, managers can change reported earnings from what should have occurred. Managers benefit from this earnings management strategy because their performance is measured in terms of earnings. It is therefore recommended that institutional ownership, or in other words, institutional investors with significant investments in the company, monitor accounting decisions made by managers easily and directly, and can force change if it is believed that managers have engaged in opportunistic earnings management.

Ruchi and Archana (2018) used Indian panel data to explore the interdependence and interactions between institutional ownership and firm performance in an emerging market, which comprises listed Indian non-financial enterprises listed on the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE) as of 31 March 2014. Simultaneous equations and pooled and panel

instrumental regression analysis were used. The fixed effect model's findings support the correlation between firm performance and institutional ownership. Firm performance and institutional ownership are both influenced by leverage and asset structure. The study's conclusions might be used as guidance by policymakers, institutional investors, and Indian businesses. Institutional investors are advised to assume a dual role, one as investors and the other as custodians of their customers' funds. The study was done in India, and the goal was to look at the relationship between institutional ownership and the performance of listed non-financial enterprises. The research area was different from the current study.

3.0 Methodology

An ex-post facto research design is adopted for the study because the study used panel data. The researcher seeks to examine the moderating effect of Institutional Ownership Structure on the relationship between Leverage and the financial performance of listed Deposit money banks in Nigeria over the period of 2010 to 2021. Secondary data was used due to the nature of the research paradigm, which is quantitative. Panel data was used to extract data from the annual reports and accounts of the banks for the purpose of assessing the effect of the variables of the study. Data was collected from the Nigerian Exchange office Kaduna branch, and also through the bank's annual report statement online.

The Sample size of this study will include all Thirteen (13) Banks listed on the Nigerian Exchange (NE) as at 31 December 2021. In view of the availability of data for thirteen (13) Banks, the study adopted a Census sampling approach by studying the thirteen (13) Banks as the population of the study. Two criteria were used to arrive at the sample. One, the banks must have continuously traded in the Nigerian Exchange Limited (NEL) for the period 2010 to 2021. Two, it must have readily available data for the variables of interest. This gives a sample of 13 banks that meet both the criteria. The data was collected through secondary sources, mainly from published annual reports.

Multiple regressions were used for the panel data analysis in order to establish the effect and relationship between the variables of the study. Multiple regression, correlation and descriptive statistics were considered appropriate. In order to achieve reliability of the result, robustness tests like the multicollinearity test, Hausman test, heteroscedasticity test and Normality test were conducted.

3.1 Model Specification

$$ROE_{it} = \beta_0it + \beta_1LVGit + \beta_2IOSit + \beta_3FMSit + \beta_4LVG * IOSit + U_{it}$$

Table 3.0 below: Variables' definition and measurement

Variables Acronym	Variables Name	Variables Measurement and Sources
ROE	Return on Equity	Measured as banks' profit after tax divided by banks' total equity (Samuel, Yakubu & Olumuyiwa 2018).
LVG	Leverage	Measured as the ratio of a banks total debt to equity (Deste, 2020).
IOS	Institutional Ownership Structure	Measured as the Proportion of shares owned by institutional shareholders to the total number of shares issued (Huthaifa, Ashraf & Mohamed, 2019, Kashif, 2017 and Hideaki & Naoki, 2020).
FMS	Firm size	Measured as natural logarithms of Firms' total assets (Shih, 2012)
LVG*IOS	Interaction of Leverage and Institutional Ownership Structure	Measured as the ratio of a banks total debt to equity multiplied by the ratio (%) proportion of shares owned by institutional shareholders (owners) to the total number of issued shares.

Source: Compiled by the Author from various literature, 2021

4.0 Result and Discussion

Table 1: Descriptive Statistics

Variables	Obs.	Minimum	Maximum	Mean	SD
ROE	156	-3.9432	2.8708	0.070 0699	0.4868795
LEV	156	0.0002	2.5475	0.856 5244	0.1779151
IOS	156	0	2.3842	0.387	0.306835
FMS	156			9897	

Sources: Output generated using STATA 13 (2023)

Leverage has a minimum value of 0.0002 and a maximum value of 2.5475 respectively. This

implies that within the period of the study, the bank with the lowest earnings from Leverage generated 0.2 percent of the total equity and debt of advances issued to the Banks. The Bank with the highest earnings from debts and equity generate 2.5 per cent of the total debt and equity issued to the banks. Leverage has an average score of 0.8565244, which signifies an average level of dispersion. This implies average chances of having a normal distribution problem associated with the data of the study.

Finally, the Institutional Ownership structure has a mean of 0.3879897, with a standard deviation of 0.30683 signifies an average level of dispersion in the institutional data of the study. This implies low chances of having a normal distribution problem associated with the data of the study. The minimum and maximum values of Institutional ownership structure of listed Deposit Money Banks in Nigeria are 0.000 and 2.3842, respectively. This implies that some Nigerian banks within the period of the study have 0 per cent of institutional ownership. The bank with the highest earnings from institutional ownership structure generates 2.38 per cent of the total equity shares owned by Institutional owners.

Robustness Test

The study conducted a diagnostic test, which included Multicollinearity test, Heteroscedasticity test and Hausman specification tests in order to ascertain the reliability of the statistical regression

result. The results from the diagnostic tests are presented below:

Multicollinearity Test

The study adopted a panel multiple regression model to measure the association between independent and dependent variables. Where the association is highly correlated, multicollinearity exists. For that, the study tested for multicollinearity, to determine its existence or otherwise. This was done using the variance inflation factor (VIF) and the tolerance value. Where the variance inflation factor (VIF) and tolerance value are less than 10 and 1, respectively, this signifies the absence of a multicollinearity problem associated with the data of the study. Otherwise, this implies the existence of a multicollinearity problem in the data of the study. The result of multicollinearity.

Table 4.2: Multicollinearity Test Result

Variables	VIF	Tolerance
LEV	1.31	0.761
IOS	1.04	0.965
Mean VIF	1.18	

Sources: Stata Output, 2023.

Heteroskedasticity Test

The study observations are of different sizes, some in decimal while others are in units. As such, heteroscedasticity sometimes occurs when there is a large difference between the sizes of the observations. For that, the study conducts a Heteroscedasticity test to validate its existence or otherwise. The test is done using the Breusch-pagan/Cook-Weisberg test for heteroskedasticity.

The result of the test reveals a chi-square value of 51.49 with a p-value of 0.000, which is significant at 1% level of significance. This signifies that a heteroskedasticity problem exists in the data of this study, and to correct this problem, the study ran a Feasible Generalised Least Squares (FGLS) model.

Table 4.3: Robustness Test for Model

Variables	Statistics	P-Values
Model		
Hausman Test	5.23	0.2644
R²	0.1995	
F-Statistic (Wald)	98.19	0.0000
Hetest	51.49	0.0000
Mean VIF: Chi2		

Sources: Output generated using STATA 13 (2023)

The presence of Heteroskedasticity in the panel for the models is indicated by the Breuch Pagan/Cook-Weisberg test for heteroskedasticity Chi² value of 51.49 and with p-value of 0.0000 is significant at 1% level of significance. Thus, the null hypothesis, which states that the residual has no constant variance and zero mean, is not rejected. Therefore, a further post-estimated test was conducted to ascertain and correct for the presence of heteroskedasticity.

The result from the Hausman fixed and random effect test model with a Chi² value of and 5.23 with p-value of 0.2644, respectively, is statistically insignificant at any level of significance. The model indicates the Random effect model as the most appropriate for the study. Furthermore, the absence of multicollinearity among the explanatory variables is shown by the mean **VIF** of 1.01 for the

model. The decision criterion for the Variance Inflation factor is that a value of 10 or above implies the presence of multicollinearity.

Regression results and hypothesis testing

The (R² value of 0.1995) coefficient of determination, which explains around 19% of the total variation in the dependent variable. Hence, the result of R² signifies that 19% of total variation in the financial performance measured by ROE is caused by leverage, and with the introduction of a moderating variable (Institutional ownership structure). The table also shows that the model is fitted from the F-statistic of 98.19, which is statistically significant at 1% level of significance (as indicated by the P-value of 0.0000). This means that there is a 99.9% probability that the relationship among the variables is not due to mere chance. An R² value between 0.10 and 0.50 is acceptable when some of the explanatory variables are statistically significant (Ozili, 2023).

Table 4.4 Regression

Variables	Coefficient	Z-Value	P-Value	Hypothesis
LEV	2.4521*	2.06	0.039	
IOS	3.3878*	2.09	0.037	
LEVIOS	-4.4021*	-2.22	0.026	
FMS	-0.015	-0.16	0.869	
Constant	-3.0894**	-3.68	0.007	
R²	0.1995			
F-Statistics (Wald)		98.19	0.0000	

Sources: Output generated using STATA 13 (2023)

*** p<0.01, ** p<0.05, * p<0.1, Denotes Significance at 1%, 5% & 10%

H01: Leverage has no significant influence on the Financial Performance of Listed Deposit Money Banks in Nigeria.

The beta coefficient (β) of Leverage is 2.4521 and a p-value of 0.039, which is positive and statistically significant at a 10% level of significance. The null hypothesis was rejected and concluded that leverage has a significant positive effect on bank financial performance. This implies that when leverage increases, it will lead to an increase in the financial performance of the bank by 2.4%. Leverage and Financial Performance. This finding concurred with Samuel & Samuel (2018) report a positive relationship with performance, Ripon, Syed & Rashidah (2018) positive relationship with performance, but it contradicts the study of Desta (2020) reports a negative and insignificant relationship with performance.

H02: Institutional ownership structure has no significant effect on the Financial Performance of listed Deposit Money Banks in Nigeria.

The beta coefficient (β) of the Institutional ownership structure is 3.3878 and a p-value of 0.037, which is significant at 1% level of significance. The null hypothesis was rejected, and concluded that institutional ownership structure has a significant positive effect on bank financial performance. This implies that when the institutional ownership structure increases by 1% will lead to an increase in the financial performance of the bank. This finding is aligned with Hideaki & Naoki's (2020) positive significant effect on

financial performance, Huthaifa, Ashraf, & Mohamed (2019) positive significant effect on financial performance, but it contradicts the study of Ibrahim & Ahmed (2020). Negative effect on financial performance.

H03: Institutional Ownership Structure has no significant moderating effect on the relationship between Leverage and Financial Performance of Listed Deposit Money Banks in Nigeria.

The interaction of Institutional ownership structure and leverage, the study reveals a negative coefficient value of -4.4021 and a p-value of 0.026. This indicates that the moderation of Institutional ownership structure on leverage is negative and significant. This implies that an increase in Institutional ownership structure will decrease bank financial performance by -4.4021, thereby decreasing their financial performance. The result suggests that Institutional ownership structure has a significantly negative relationship with leverage on financial performance. It is on this basis that we reject the hypothesis that Institutional ownership structure has no significant moderating effect on the relationship between leverage and the financial performance of listed deposit money banks in Nigeria. The signalling theory is supported by the hypothesis

5.0 Conclusion and Recommendation

5.1 Conclusion

This study concluded that the interaction between institutional ownership structure and financial performance was found to be positive and significantly influenced financial performance.

The study shows that leverage has a positive and significant influence on financial performance. This implies that the lower the level of leverage, the higher the financial performance of the banks. This study also shows that Institutional ownership structures have a significant influence on the financial performance of listed deposit money banks. This implies that the higher the number of Institutional equity holders, the higher the financial performance of listed deposit money banks.

The result also indicated that institutional ownership structure has a significantly negative effect on the relationship between leverage and financial performance of listed deposit money banks. This implies that banks have a more debt financing profile than equity financing through institutional ownership structure. This further proves that when banks have more equity shareholders, higher return on equity is expected.

The study reveals that a significant positive correlation exists between leverage and return on equity, meaning that an increase in leverage will increase financial performance as measured by ROE. Banks should therefore maintain an

appropriate proportion of debt with equity in their capital structure if ROE is to be improved. Listed deposit money banks should control costs in the use of debt (leverage) to better performance. They must also be concerned with utilizing these debts effectively and efficiently. To achieve this, listed deposit money banks must use these debt funds to develop less risky assets that reduce the debt default rate, cost of capital should not exceed the expected return.

Institutional shareholding proves to moderate the relationship between leverage and financial performance significantly. However, since the coefficient is negative. It is therefore recommended that banks should maintain an appropriate proportion of debt with equity in their capital structure if return on equity is to be improved. They must also be concerned with utilizing these debts effectively and efficiently. Institutional investors are to increase their shareholdings in the listed deposit money banks to improve financial performance through their equity holdings. Institutional ownership structure is one of the identified variables that has proven empirically positive to a bank's financial performance in this study. There should be continuous monitoring of deposit money banks in line with the Central Bank of Nigeria policies on lending structure.

5.2 Recommendations

1. Deposit Money Banks (DMBs) should maintain an appropriate balance between debt and equity financing. This will help mitigate the negative moderating effect of institutional shareholding on leverage while enhancing return on equity.
2. Banks must ensure that borrowed funds are employed effectively and efficiently in productive ventures that generate sufficient returns to offset financing costs.
3. Institutional investors are encouraged to increase their equity holdings in listed DMBs. Evidence from this study suggests that institutional ownership contributes positively to financial performance through enhanced monitoring, governance, and accountability.
4. The Central Bank of Nigeria (CBN) should intensify its monitoring of banks' lending and capital structure policies to ensure compliance with prudential guidelines and financial stability.
5. The Securities and Exchange Commission (SEC) and other regulatory agencies should design policies that promote greater institutional equity participation in banks, as this has been empirically linked with improved financial performance.

References:

- Almajali, A.Y., Sameer A.A. and Yahya Z. A (2012) Examine the Factors Affecting the Financial Performance of Jordanian Insurance Companies Listed at Amman Stock Exchange, *Journal of Management Research*, Vol. 4, No. (2) 41- 50.
- Amelia, M. R. (2012). Effect of firm characteristics, financial performance and environmental performance on corporate social responsibility disclosure intensity on manufacturing firm listed in the Indonesia Stock Exchange. *Faculty of Economy, Gunadarma University* 1-22.
- Bacha, S & Attia, T. (2016). Ownership Structure, Financial Communication Quality and Debt cost: An Empirical Study of Tunisian Listed Companies. *International Journal of Business and Financial Management Research*, 4(6) 109-116.
- CBN (2019). Quarterly report on the standing lending facility (SLF).
- Desta. Z (2020) The Impact of Financial Leverage on the Performance of Commercial Banks: Evidence from Selected Commercial Banks in Ethiopia: *International Journal of Accounting, Finance and Risk Management*, Vol. 5, No. 1, 2020, pp. 62-68. ISSN: 2578-9368 (Print); ISSN: 2578-9376 (Online).
- El-Cindy. E, Zainul. K&N.N. S (2019) Effect of Liquidity Ratio, Solvability, Asset Growth and Inflation on Stock Return with Profitability as Intervening Variable at Building Construction Sector in Indonesian Stock Exchange: A Review of Theories and Evidence: *Archives of Business Research* Vol 7, No.8 226-236

- Fahmi. R Lisandri, Soelistijono B & Akhmad Y.S, (2018) Effect of Institutional Ownership and Managerial Ownership on Corporate Financial Performance: Mediating Earning Management: *Advances in Economics, Business and Management Research*, volume 64, 750-757.
- Farhan. A, Iqra. A & Muhammad. K (2019) Financial Leverage and Firms' Performance: Empirical Evidence from KSE-100 Index: *Journal Ekonomi*. Vol. 17 (1): 45 – 56. P-ISSN: 1412-8969; E-ISSN: 2461-0771.
- Hideaki. S & Naoki. W (2020) Institutional Ownership and Firm Performance under Stakeholder-Oriented Corporate Governance: *Journal of Sustainability* 2020, 12, 1021, 1-21.
- Huthaifa. K, Ashraf. B. B&Mohamed.M. B. (2019) Role of Capital Structure and Institutional Ownership to Improve the Financial Performance: Evidence from Jordan. *Journal of Business & Economic Policy*, Vol. 6, No. 3, 65-72. ISSN 2375-0766 (Print), 2375-0774 (Online).
- Ibrahim, M. B & Ahmed, A. Z (2020) Effect of executive compensation and share ownership on financial performance of listed deposit money banks in Nigeria. *Journal of Accounting and Taxation*, Vol. 12(1), 1-11. ISSN 2141-6664.
- Magpayo, C. L (2011). Effect of working capital management and financial leverage on the financial performance of Philippine firms. *College of Business, De La Salle University*, pp 2-6.
- Muhammad. K.S (2018) Impact of financial leverage on firm performance: the case of listed oil refineries in Pakistan. *International Journal of Research in Social Science*, Vol. 8 Issue 10. ISSN: 2249-2496
- Mohamed .M& Umer. A.A (2018) The Impact of Institutional Ownership on the Performance of Companies Listed in the Egyptian Stock Market: *International Journal of Economics and Finance (JEF)*, 5. Volume 7, Issue 1. Ver. III, 05-15. E-ISSN: 2331-5333, p-ISSN: 2221-5325.
- Mustapha A.M. (2014) Financial Leverage and Firm Financial Performance in Nigeria: A Panel Data Analysis Approach: *Global Journal of Management and Business Research: C Finance*, Volume 19 Issue 4. Online ISSN: 2249-4588 & Print ISSN: 0975-5853.
- Nweze. I.O (2017) Effect of Financial Leverage on Firm's Performance: A Study of Nigerian Banks (2006 -2015): *International Journal of Recent Scientific Research* Vol. 8, Issue, 7, pp. 18554-18564.
- Ozili P.K (2023) The acceptable R-square in empirical modelling for social sciences research. MPRA Paper no. 115,769 pp 9-14.
- Ripon.K. D, Syed. Z.H & Rashidah. A.R (2018) Effect of Corporate Financial Leverage on Financial Performance: A Study on Publicly Traded Manufacturing Companies in Bangladesh: *Asian Social Science*; Vol. 14, No 12 pp 124-133, ISSN 1911-2017 E-ISSN 1911-2025.
- Ruchi. K & Archana. S (2018) Institutional ownership and firm performance: evidence from Indian panel data: *International Journal Business and Emerging Markets*, Vol. 10, No. 3, pp 251 -269
- Sohail. A&Ulfat. A (2019) Effect of Debt Financing on Firm Performance: A Study on Non-Financial Sector of Pakistan: *Open Journal of Economics and Commerce*.

Volume 2, Issue 1, 2019, 8-15 ISSN:2638-549X.

Sunday. D. A & Samson. O.O (2019) Effect of Capital Structure on Financial Performance of Listed Banks in Nigeria: *Asian Journal of Economics, Business and Accounting*, 12(2): 1-14, ISSN: 2456-639X.

Timothy. A. J (2018) Effect of Non-Performing Loans on Bank Performance of Some Selected Commercial Bank in the Nigerian Banking Sector: *International Journal of new Technology research (IJNTR)* 4, (4) Pages 11-17, ISSN: 2454-4116

Yoon, E. & Jang, S. (2005). The effect of financial leverage on profitability and risk of restaurant firms. *Journal of Hospitality Financial Management*, 13(1); 21-38.