ASSET QUALITY OF DEPOSIT MONEY BANKS IN NIGERIA: THE FINANCIAL LEVERAGE IMPACT

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ABSTRACT

This study explored the impact of financial leverage on the asset quality of deposit money banks in Nigeria. Specifically, the objective was to examine the impact of debt-equity ratio and debt to total assets ratio on the asset quality of deposit money banks in Nigeria. The secondary data covering the period of the study were sourced from annual reports of the Nigerian Bureau of Statistics (from 2000 to 2022) and the Central Bank of Nigeria (CBN) Statistical Bulletin (2022). The ordinary least square was adopted to examine the relationship between the independent variable and the dependent variable to show the signal of prediction and the significance of this prediction. The findings revealed that debt to equity ratio negatively and significantly impacts asset quality in Nigeria. This indicates that increase in the proportion of debt to equity causes a decrease in the asset quality of deposit money banks in Nigeria. The study recommends that increase in debt of the bank should be buffered with commensurate increase in the equity in order to keep debt equity ratio as low as possible so as to improve the quality of assets of the banks in Nigeria.

1. INTRODUCTION

One crucial issue confronting bank management today is how to choose the combination of debt and equity to achieve optimum capital structure that would minimize costs and maximize return to the owners of the business. Since funds generated from the shareholders are inadequate to realize the required capital for business there is need to fund the deficit by borrowing from creditors. This form of capital is referred to as Financial Leverage (Pandey, 2008; Murikwa, 2017 & Dare and Sola, 2010). Banks are very conversant with financial leverage because of the capital-intensive nature of banking. Often times, because of the

benefits of leverage financing, which includes tax shield, banks resort to the use of leverage in financing their operations. Such capital is acquired at a cost which is payable to the creditor and it places an obligation on the borrowing firm to pay back the principal with interest as and when due based on the agreement.

Leverage refers to the proportion of debt to equity in the capital structure of a firm and is measured through the use of leverage ratios/gearing ratios. (Nwanna & Ivie, 2017; Andy, Chuck and Alison, 2002 & Saeed 2013 and Abubakar, 2017). Other than measuring the degree of debt financing, these ratios also measure a firm's financial risks. The three most commonly used leverage ratios are degree of financial leverage, debt ratio and debt-equity ratio. Leverage is a key component of a bank's financial policy because it determines the level of internal funding versus external funding and greatly affects the level of a firms cost. This in turn can have impact on the quality of banks' assets as huge debts directly reflect the proportionality of the financial risk a firm has (Emillios, 2015 & Iqbal and Usman, 2018).

Asset quality refers to the review or an evaluation, which assesses the credit risk associated with any particular assets that normally requires the payments of interest like investment and loans portfolios. The quality of assets is of a major concern not only to the banks concerned, but to the central banking authorities as well (Oke & Ikpesu, 2022; Abata, 2014; Richard & Prakash, 2019. Failure of a bank is most often caused by a major part of its loan portfolio becoming bad contributing to multiple organ failure in the bank. It also creates ripples in the financial system of the country. Therefore, the importance of asset quality cannot be overemphasized. Good quality of a bank's assets helps them to grow without creating any problems for the stakeholders. By the same logic, poor quality of assets impacts profit and growth (Oloye & Osuma, 2015; Iwedi, 2017; Paul & Prakash, 2019). One of the key indicators of asset quality adopted in several literatures is Non-performing Loan Ratio. It is the ratio of non-performing loans to the total loans issued by the banks. According to the CBN (2022), the Non-Performing Loans (NPL) ratio of commercial banks in Nigeria jumped to 5.3% in April 2022 from 4.84% held in February 2022.

Previous studies on financial leverage and asset quality have given varied responses on the subject matter (Saeed, Gull & Rasheed, 2013; Moghaddam & Abbaspour, 2017; Murikwa, 2017; Iqbal & Usman, 2018; Idada, Atu & Atu, 2018). Some research indicates that financial leverage positively impacts asset quality while some other studies have found a negative

impact of financial leverage on asset quality. As a result of this uncertainty, there is less research-based evidence for bank management to base their asset-financing decisions as none of these studies adopted data that extends beyond 2020. However, in this study, the impact of financial leverage is measured against asset quality which is proxied by non-performing loans ratio unlike other studies that centered on profitability measures like return on assets and return on equity.

1.1 Objectives of the Study

The main objective of this study is to examine the impact of financial leverage on the asset quality of deposit money banks in Nigeria. The specific objectives of the study are as follows;

1. to ascertain the impact of debt-equity ratio on the asset quality of deposit money banks in Nigeria.
2. determine the impact of debt to total assets ratio on the asset quality of deposit money banks in Nigeria.
3. to evaluate the impact of reserves for non-performing loans on the asset quality of deposit money banks in Nigeria.

1.2 Research Questions

a. What impact does debt-equity ratio have on the asset quality of deposit money banks in Nigeria?
b. What impact does debt to total asset ratio have on the asset quality of deposit money banks in Nigeria?
c. How does the reserves for non-performing loans impact the asset quality of deposit money banks in Nigeria?

1.3 Hypotheses

H_{01}: Debt-equity ratio has no significant impact on the asset quality of deposit money banks in Nigeria.

H_{02}: Debt to total assets ratio has no significant impact on the asset quality of deposit money banks in Nigeria.

H_{03}: Reserves for non-performing loans has no significant effect on the asset quality of deposit money banks in Nigeria..

2. LITERATURE REVIEW

2.1 Agency Cost Theory

This study is anchored on the Agency cost theory which was developed by Jensen and Meckling in 1976. The agency cost theory of capital structure emanates from the principal-agent relationship (Jensen & Meckling, 1976). In order to moderate managerial behavior, debt financing can be used to mediate the conflict of interest which exists between shareholders and managers on one hand and also between shareholder and bondholders on the other hand. The conflict of interest is mediated because managers get debt discipline which will cause them to align their goals to shareholders goals. Jensen and Meckling (1976) and Jensen and Ruback (1983) argue that, managers do not always pursue shareholders interest. To mitigate this problem, the leverage ratio should increase (Pinegar & Wilbricht, 1989). This will force the managers to invest in profitable ventures that will be of benefit to the shareholders. If they decide to invest in non-profit tax businesses or investment and are not able to pay interest on debt, then the bondholders will file for bankruptcy and they will lose their jobs. Berger 2002 argues that an increase in the leverage ratio should result in lower agency costs outside equity and improve firm's performance, all other things being equal. The contribution of the Agency cost theory is that, leverage firms are better for shareholders as debt can be used to monitor managerial behavior (Boodhoo, 2009). Thus, higher leverage is expected to lower agency cost, reduce managerial inefficiency and thereby enhancing firm and managerial performance (Jensen, 1986 & Aghion, Dewatnipont & Rey, 1999). This enhanced managerial performance will lead to prudent and efficient distribution of loans which will ultimately improve asset quality.

2.2 Empirical Review

Okeke (2023) focused on financial leverage and profitability of Nigeria's recapitalized banks from 2010 to 2021. The study adopted an ex post facto research design and relied on secondary data obtained from annual reports and financial statements of deposit money banks from 2010 to 2021. The population of the study comprised 8 listed deposit money banks in Nigeria. The study used the multiple regression statistic to analyze the data. The study found that financial leverage has a significant negative impact on banks' profitability (proxied by return on assets and net interest margin); and that bank size considerably increases profitability.

Velliscig, Floreani and Polato (2022) investigated the relationship of capital and asset quality, in terms of provisioning and coverage policies, with bank risk and performance during the period 2005Q1-2018Q4. Our results point out different relationships between risk-based and non-risk-based measures of capital with bank risk and performance profiles. In particular, the information content of the leverage ratio appears to be merely related to the bank dimensional feature, whereas the total capital ratio shows a positive and statistically significant relationship with bank stability and is also negatively related to insolvency risk, thereby suggesting a crucial role for capital for the overall bank resilience. In addition, more capitalized banks are associated with higher bank performance. Regarding asset quality, hefty coverage and provisioning policies are generally associated with both lower bank resilience and performance.

Ogburu (2019) investigated the relationship between asset quality and deposit money banks performance in Nigeria over a period of 30 years ranging from 1986 to 2016, utilizing time series data collected from the Nigeria deposit insurance corporation annual reports and accounts, CBN financial stability report and CBN statistically bulletin for various years. The variables of study include return on asset (ROA) proxy for Deposit Money Bank performance in Nigeria, ratio of non-performing loan to total loan (NPL), ratio of liquid assets to total assets (LAT) and ratio of liquid assets to short term liabilities (LAS) as measures of asset quality. The study utilizes both the descriptive and econometric techniques to analyze the time series data. The result shows that there is a short run relationship between asset quality and deposit money bank performance in Nigeria. Also, the co-integration result reveals the presence of a long run relationship between asset quality and deposit money bank performance in Nigeria while the granger causality result shows evidence of causality between asset quality and deposit money bank performance in Nigeria.

Paul and Prakash (2019) in their study spanning a period of ten years from FY 2005 to 2014 analyzed the impact of the Asset Quality on selected financial parameters such as efficiency, liquidity, profitability and solvency of public and private sector banks. Fourteen different ratios have been used under these broad parameters in the study. This study has applied the census method of sampling involving 46 banks of which 26 are public sector banks and 20 private sector banks. The data for the study has been primarily sourced from the Reserve Bank of India. The study has used descriptive statistics, correlation analysis, trend analysis, factor analysis, regression analysis and Anova and the results of the study revealed a positive

correlation between non-performing asset ratio and cost of funds, capital to risk weighted assets and funding structure.

Ahmadu, and Abdulkarim (2019) examined financial leverage and financial performance of quoted services firms in Nigeria. The study used return on equity as a measure of financial performance while financial leverage was measured using debt ratio, long-term debt ratio and total debt to equity ratio. Descriptive statistics and Fixed effects model of regression were used to present the data and test the hypotheses respectively. The findings revealed that debt ratio, long-term debt ratio and total debt to equity ratio had significant negative effects on the financial performance (return on equity). The study recommends that quoted firms in the service sector should increase the equity portion in their capital structure by 10 percent, using bonus and right issue.

Manacer, Saif-Alyousfi and Ahmad (2019) examined the impact of financial leverage on the Islamic banks' performance in the Gulf Cooperation Council (GCC) countries during the period from 2005-2017. The population of the study included the Islamic banks in the GCC countries. Data on financial leverage include equity to total liabilities ratio while return on assets (ROA) and return on equity (ROE) and Tobin's Q. Thirteen years data of 25 listed Islamic banks in the GCC countries were used. These data were retrieved from the Thomson Reuters DataStream. Their study utilized the fixed effect regression model. The findings show that the financial leverage has significant impact on the performance of the Islamic banks' performance in the GCC region. More specifically, the financial leverage has a positive and significant impact on ROA, ROE, and Tobin's Q of the Islamic banks in the GCC countries, thus indicating that the higher the financial leverage, the higher the performance of the Islamic banks in the GCC region. However, the results of this study do not provide evidence to support the Agency Cost Theory that implies a decrease in the performance when equity ratio is increased. On the other hand, the findings provide evidence to support the Signaling Theory that argues that banks are expected to have a better performance credibly in transmitting this information through the higher capital.

Kenn-Ndubuisi and Nweke (2019) studied the relationship between financial leverage and firm financial performance in Nigeria using 80 non-financial firms quoted on the Nigerian Stock Exchange from 2000 to 2015. The total debt to capital ratio (TDCR), debt to equity ratio (DER), cost of debt (COD), debt to asset ratio (DR) and long term debt to capital ratios

were proxies for financial leverage. Financial performance was measured using earning per share (EPS) and return on equity (ROE). Panel data technique in the form of the pooled regression model, fixed effect model, random effect model, and the marginal model had been applied to test hypotheses. The findings of the study revealed earnings per share is significant and negatively related to the debt to equity ratio and the total debt to total asset measures of financial leverage while the return on equity shows an insignificant relationship with the financial leverage measures in Nigeria while the direction of the relationship differs from one variable to the other. It was positive with the total debt to capital ratio and the cost of debt while the total debt to asset ratio, long term debt to capital ratios and the debt to equity ratio was negative.

Serwadda (2019) investigated the effects of capital structure components on banks' performance in Ugandan banks for a ten years period, 2006–2015 with a sample of 20 commercial banks. The study employed four performance indicators of return on equity, return on assets, net interest margin and cost to income ratio to determine bank performance. Panel regression models were used to determine the effects of capital structure on bank performance. Independent variables were sub-divided into capital structure variables namely; long-term debt to total assets, short-term debt to total assets and total debt ratio and then control variables were bank size and tangibility of assets. Results portrayed that there is a positive relationship between capital structure variables (long-term debts, total debt) and bank performance (net interest margin). There was also a positive relationship between total debt and return on assets as was the case between total debt and returns on equity. However, there is a negative relationship between short-term debt and return on assets. The results also signify a positive relationship between bank size and net interest margin and also between bank size and returns on equity plus return on assets. There was a negative relationship between the tangibility of assets and net interest margin and with return on equity.

Ahmed, Awais and Kashif (2018) investigated the optimal level of capital structure that firms can adopt to improve their financial performance given the industry dynamics and economic circumstances of the country using Hausman's specification test. Annual data for the period 2005 – 2014 of Karachi Stock Exchange (KSE) 100 index listed securities were collected to analyze the impact of financial leverage on the firms' performance. Return on assets, return on Equity, and TOBIN's Q were the proxies of financial performance analyzed against financial leverage for the KSE 100 index listed firms. The finding of the paper indicates that

capital structure, leverage, interest cover and sales growth as most significant variables impacting firms' profitability.

Idada et al. (2018) examined the impacts of leverage, repayment risk and liquidity on firm financial performance in Nigerian banks. A sample of twelve (12) banks was used for the study. Secondary data were collected from the firm for the period of 2007 to 2016. The data include return on asset (ROA) as a measure of financial performance and leverage ratio (LEV), coverage ratio (COV) and current ratio (CR) as measures of leverage ratio, repayment risk and liquidity respectively. The study used descriptive statistics, correlation analysis and panel least square to analyze the data for the study. The results show that leverage significantly affects the financial performance of banks, repayment risk has negative and significant effect on the financial performance of banks in Nigeria and liquidity affects the financial performance of banks but not significantly.

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3. MATERIAL AND METHOD

The researcher employed the e*x-post facto* research design. The time series data, which was used for the analysis, was sourced from the annual reports of the Nigerian Bureau of Statistics (from 2000 to 2022) and the Central Bank of Nigeria (CBN) Statistical Bulletin (2022). Specifically, the Non-Performing Loans Ratio (NPLR) of the commercial banks was sourced from NSE annual reports(2022) while the financial leverage ratios were computed from data obtained from the CBN statistical bulletin (2022). This study investigated the impact of financial leverage on the asset quality of banks in Nigeria. To properly achieve this, the study adopted similar models with the study of Iqbal and Usman (2018) in their study on the impact of financial leverage on firm performance. In their study, return on assets (ROA) was expressed as a function of debt to equity ratio and solvency ratio.

ROA = f(DER, SOR)………………………….Eqn 1

However, the present study expresses Asset Quality (ASQ) as a function of debt to equity ratio (DER), debt to total asset ratio (DTAR) and capital reserves (CAPR). The functional relationship between the variables is therefore expressed thus;

ASQ = f(DER, DTAR, CAPR)…………………….Eqn 2.

By ascribing econometric parameters to the functional model, it can be restated in econometric form thus;

$ASQ = \alpha_0 + \alpha_1 DER + \alpha_2 DTAR + \alpha_3 CAPR + \mu_t$……………………Eqn 3.

Where:

α_0 = the intercept or the constant term; which is the value of the left-hand variable irrespective of the right-hand variable.

α_1, α_2 and α_3 = the coefficients of the regression. μ_t is the error term of the regression.

4. RESULT AND DISCUSSIONS

4.1 Data Analysis

4.1.1 Descriptive Statistics

The Time series data on Asset quality (ASQ), Debt to Equity Ratio (DER), Debt to Total Asset Ratio (DTAR) and Capital Reserves for non-performing loans (CAPR) from 2000 to 2022 are shown in table below.

Table 1: Time Series Data on ASQ, DER, DTAR and CAPR (2000-2022)

Years	ASQ (%)	CAPR (N'Billion)	DTAR	DER
2000	1.5	77.78	0.87	9.02
2001	3.8	125.26	0.83	7.99
2002	4.7	139.70	0.81	6.69
2003	8.4	152.28	0.82	6.06
2004	5.6	157.96	0.81	5.64
2005	7.8	101.10	0.78	4.58
2006	7.6	206.51	0.8	5.46
2007	9.5	148.10	0.79	4.88
2008	7.2	150.71	0.78	4.35
2009	37.3	87.03	0.71	4.6
2010	20.1	95.65	0.87	14.57
2011	5.8	770.05	0.81	4.91
2012	3.7	1,338.80	0.82	5.49
2013	3.4	2,270.44	0.84	6.03
2014	3	3,578.54	0.83	5.93
2015	4.9	3,086.00	0.82	5.44
2016	12.8	3,439.99	0.82	6
2017	14.8	3,944.10	0.83	6.57
2018	11.7	4,704.92	0.84	8.39

2019	6	5,587.76	0.85	9.07
2020	6	9,404.85	0.83	8.49
2021	4.9	10,288.12	0.79	7.62
2022	4.5	11,784.86	0.77	7.35

Source: *Nigerian Bureau of Statistics (from 2000 to 2022); CBN Statistical Bulletin, 2022*

The data displayed in table 1 above shows that the maximum value of asset quality as proxied by non-performing loans to total loans ratio (37.3%) was recorded in 2009 following the Financial Crisis of 2008/2009 which was prompted by imprudent lending decision in the financial sector. Within that same period, capital reserves were seen to be among its lowest values. However, with policy interventions, Capital reserves were improved to make banking safer and more reliable recording steady increase over time. The table gives summary statistics that describes the trends in the variables better.

Table 2: Descriptive Statistics

	ASQ	**DER**	**DTAR**	**CAPR**
Mean	8.478261	6.744783	0.813913	2680.023
Median	6.000000	6.030000	0.820000	770.0525
Maximum	37.30000	14.57000	0.870000	11784.86
Minimum	1.500000	4.350000	0.710000	77.78190
Std. Dev.	7.601911	2.241124	0.034738	3559.901
Skewness	2.618171	1.900906	-0.955743	1.384248
Kurtosis	10.19215	7.413661	4.775597	3.799533
Jarque-Bera	75.84851	32.52025	6.522916	7.957835
Probability	0.000000	0.000000	0.038332	0.018706
Sum	195.0000	155.1300	18.72000	61640.52
Sum Sq. Dev.	1271.359	110.4980	0.026548	2.79E+08
Observations	23	23	23	23

Source: *E-views 11.0 Descriptive Statistics Output, 2024*

As shown in table 2 above, asset quality amounted to an average of 8.48% annually over the review period with its highest figure reaching 37.3% and a lowest value of 1.5%. Overall, the accumulated capital reserves of deposit money banks within the reviewed period has amounted to N61,640.52bn with an average of N2,680.02bn annually reaching an all-time

high of N11,784.86bn. The debt to equity ratio of deposit money banks in Nigeria have revolved around an average of 6.74 annually reaching a maximum of 14.57 and a minimum value of 4.32 within the reviewed period. On the other hand, Debt to Total Asset Ratio averaged 0.81 annually with a maximum of 0.87 and a minimum of 0.71 within the period under review.

4.2 Test of Research Questions

The time series data is analyzed using the Ordinary Least Square (OLS) regression analysis. The Ordinary Least Square regression analysis reveals the direction of impact of the independent variables on the dependent variable as well as the extent of the impact. The table below reveals the result of the Ordinary Least Square Regression indicating the regression coefficient, the probability of the t-statistics, the R-squared, the F-statistic and the probability of the F-statistic

Table 3: OLS Regression Result

Dependent Variable: ASQ

Method: Least Squares

Date: 02/10/24   Time: 00:32

Sample: 2000 2022

Included observations: 23

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DER	-2.501800	0.711832	3.514594	0.0023
DTAR	204.4521	44.86004	-4.557555	0.0002
CAPR	0.000809	0.000346	-2.333531	0.0308
C	160.1774	33.76992	4.743196	0.0001

R-squared	0.545702	Mean dependent var	8.478261
Adjusted R-squared	0.473971	S.D. dependent var	7.601911
S.E. of regression	5.513503	Akaike info criterion	6.409048
Sum squared resid	577.5756	Schwarz criterion	6.606526
Log likelihood	-69.70405	Hannan-Quinn criter.	6.458713
F-statistic	7.607597	Durbin-Watson stat	0.999771
Prob(F-statistic)	0.001540		

Source: *E-views 11.0 OLS Regression Results, 2024*

4.2.1 Research Question 1

What impact does debt-equity ratio have on the asset quality of deposit money banks in Nigeria?

As shown in table 3, Debt to Equity Ratio negatively impacts asset quality with a coefficient of -2.5018. This indicates that every unit increase in the debt to equity ratio of deposit money banks in Nigeria will cause asset quality to decrease by 2.5% while every unit decrease in the debt to equity ratio will cause a corresponding increase in the asset quality of deposit money banks in Nigeria.

4.2.2 Research Question 2

What impact does debt to total asset ratio have on the asset quality of deposit money banks in Nigeria?

Conversely, table 3 revealed that Debt to Total Asset Ratio positively impacts asset quality with a coefficient of 204.45. This indicates that every unit increase in the debt to total asset ratio of deposit money banks in Nigeria will cause asset quality to increase by 204.45% while every unit decrease in the debt to total asset ratio will cause a corresponding decrease in the asset quality of deposit money banks in Nigeria

4.2.3 Research Question 3

How does the reserves for non-performing loans impact the asset quality of deposit money banks in Nigeria?

Capital Reserves negatively impacts asset quality with a coefficient of 0.00081. This shows that every time the capital reserves of deposit money banks in Nigeria rises by a billion naira, asset quality will increase by 0.00081% while every billion naira decrease in the capital reserves will cause the asset quality of deposit money banks in Nigeria to decrease by the coefficient.

R-Squared

The R-squared value of 0.5457 indicates that about 54.57% of the variations in the asset quality of deposit money banks in Nigeria is explained by the combined trends of the independent variables (DER, DTAR and CAPR). This shows that the model of the study adequately explains the behavior of banks' asset quality as proxied by non-performing loans ratio in Nigeria.

F-Statistic

The F-statistic is 7.6076 and the probability value of 0.00154 reveals that the overall impact of the financial leverage variable on the asset quality of banks is significant. This indicates that financial leverage (as proxied by debt to equity ratio, debt to total asset ratio and capital reserves) has significant impact on asset quality of deposit money banks in Nigeria as is reversely proxied by non-performing loans.

4.3 Test of Hypotheses

To test the hypotheses of this study, the p-values of the Ordinary Least Square Regression test were employed. The decision rule is that the null hypothesis is rejected in favor of the alternate hypothesis, if the corresponding p-value is less than 0.05. However, if the corresponding p-value is greater than 0.05, the null hypothesis is accepted at the expense of the alternate hypothesis.

4.3.1 Hypothesis One

H_{01}: Debt-equity ratio has no significant impact on the asset quality of deposit money banks in Nigeria.

As shown in the table 3 above, the corresponding p-value for the regression coefficient between asset quality and debt to equity ratio is 0.0023 which is less than 0.05 indicating that the null hypothesis is rejected and the alternate is accepted. The findings revealed that debt to equity ratio negatively and significantly impacts asset quality in Nigeria. This indicates that increase in the proportion of debt to equity causes a decrease in the asset quality of deposit money banks in Nigeria. This finding corresponds with the priori expectation of the researcher. Okeke (2023) also found that financial leverage has a significant negative impact on banks' profitability; showing that with increased financial leverage, asset quality deteriorates and profitability follows. This is also confirmed by the findings in the study of Ahmadu and Abdulkarim (2019) which revealed that total debt to equity ratio had significant negative effects on the financial performance. This finding also confirms the findings of Iqbal and Usman (2018) which found that financial leverage has positive impact on firm performance if the amount of debts does not exceed from the amount of equity. Therefore, Debt-equity ratio has significant impact on the asset quality of deposit money banks in Nigeria.

4.3.2 Hypothesis Two

H_{02}:   Debt to total assets ratio has no significant impact on the asset quality of deposit money banks in Nigeria.

As shown in table 3, the corresponding p-value for the regression coefficient between asset quality and debt to total assets ratio is 0.0002 which is less than 0.05 indicating that the null hypothesis is rejected and the alternate is accepted. Debt to total asset ratio positively and significantly impacts asset quality of deposit money banks in Nigeria. This implies that an increase in the ratio of debt to total assets will cause the quality of assets to improve by reducing the ratio of non-performing loans to total loans. This indicates that the asset quality of deposit money banks in Nigeria improves as debt to total assets increase. The finding is consistent with what Aragle et al. (2015) found in their study that total debt to total assets positively impacts the banks' performance. Wabile et al. (2014) also found that there was positive correlation between the debt asset ratio and the EPS. According to the findings of Saeed et al. (2013), debt to asset ratios has positive association with asset growth. Therefore, as banks increase the ratio of the total assets financed by debt, their asset quality increases. Therefore, Debt to total assets ratio has significant impact on the asset quality of deposit money banks in Nigeria.

4.3.3 Hypothesis Three

H_{03}:   Reserves for non-performing loans has no significant effect on the asset quality of deposit money banks in Nigeria.

As shown in table 3, the corresponding p-value for the regression coefficient between asset quality and capital reserve is 0.0308 which is less than 0.05 indicating that the null hypothesis is rejected and the alternate is accepted. Capital reserves for non-performing loans has positive and significant impact on the asset quality of deposit money banks in Nigeria. This indicates that a decline in the asset quality of deposit money banks in Nigeria can be attributable to a decline in the capital reserved for non-performing loans. Similarly, Velliscig et al. (2022) found that total capital ratio shows a positive and statistically significant relationship with bank stability and is also negatively related to insolvency risk, thereby suggesting a crucial role for capital for the overall bank resilience. Furthermore, the results of the ordinary least square regression revealed that the overall impact of financial leverage on asset quality of deposit money banks is significant and that financial leverage helps to explain over 54% of the behavior of asset quality of deposit money banks in Nigeria.

Therefore, reserves for non-performing loans have significant impact on the asset quality of deposit money banks in Nigeria.

CONCLUSION AND RECOMMENDATION

The findings of this study bring the researcher to the conclusion that the asset quality of deposit money banks in Nigeria is significantly impacted by the level of financial leverage adopted by the banks. By implication, the financial leverage decisions are instrumental to the improvement of the quality of assets in the deposit money banks' portfolio.

The increase in debt of the bank should be buffered with commensurate increase in the equity in order to keep debt equity ratio as low as possible so as to improve the quality of assets of the banks in Nigeria. In order to reduce the ratio of non-performing loans to total loans, the banks should increase the proportion of its total assets which is financed by debt. This efficient source of funding will ultimately trickle down to an improvement in the asset quality of deposit money banks. Deposit money banks should be prompted by the monetary authorities to increase the amount of capital reserved for non-performing loans. This will engender more prudential lending that will ultimately see the quality of assets of deposit money banks improve drastically.

REFERENCES

Abata, M. A. (2014). Asset quality and bank performance: A study of commercial banks in Nigeria. Research Journal of Finance and Accounting, 5(18), pp. 39-44.

Abubakar, A. (2017). Effects of financial leverage on financial performance of non-financial quoted companies in Nigeria. *FUDMA Economic and Development Review, 1*(1), 37-53.

Aghion, P. Dewatripont, M. & Rey, P. (1999). Competition, financial discipline and growth. *Review of Economic Studies, 66*(2), 825-852.

Ahmadu, A. & Abdulkarim, G. (2019). Financial leverage and financial performance of quoted service firms in Nigeria. *Nigerian Journal of Management Technology and Development, 8*(2), 273-282

Ahmed, F., Awais, I. & Kashif, M. (2018). Financial leverage and firms' performance: Empirical evidence from KSE-100 Index. *Etikonomi, 17*(1), 45-56.

Andy, C., Chuck, C. & Alison, L. (2002). The Determination of Capital structure: Is national Culture a Missing Piece of the Puzzle? *Journal of International Business Studies, 3*(3), 14-43

Aragle, M. Beyene, A. & Shiferaw, N. (2015). Does capital structure matter on performance of banks? (A study of Commercial banks in Ethiopia). *International Journal of Scientific and Research Publication, 5*(12), 643-654.

Berger, A. N. & Patti, E. B. (2002). "Capital structure and firm performance: a new approach to testing agency theory and an application to the banking industry," Finance and Economics Discussion Series 2002-54, Board of Governors of the Federal Reserve System (U.S.).

Boodhoo, R. (2009). Capital structure and ownership structure: Are view of literature. *The Journal of Online Education, January Edition*, *1*(1), 1-8.

Dare, F. & Sola, O. (2010). Capital structure and corporate performance in Nigerian petroleum industry: Panel data analysis. *Journal of Mathematics and Statistics, Science Publications, 14*(9), 12-44.

Emillios, A. (2015). Bank leverage ratios and financial stability: A micro-and macroprudential perspective. *Working Paper, 849*(1), 1-56

Idada, A., Atu, O. & Atu, O. (2018). Impacts of leverage repayment risk and liquidity on firm financial performance in Nigerian banks. *International Journal of Management, Business and Entrepreneurship, 1*(4), 1-31.

Iqbal, U. & Usman, M. (2018). Impact of financial leverage on firm performance. *Journal of Management, 1*(2), 71-78.

Iwedi, M., (2017). Bank Failure in Nigeria: Evidence of Prudential Regulator Laxity. *Frontiers in Management Research*, *1*(4), 141-150.

Jensen, M. & Meckling, W. (1976). Theory of the firm: Managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics, 3*(4): 305-360.

Jensen, M. & Ruback, R. (1983). The market for corporate control: The scientific evidence. *Journal of Financial Economics, 11*, 5-50.

Jensen, M. (1986). Agency Cost of free cash flow, corporate finance and takeovers. *American Economic Review Papers and Procedings, 76*, 323 – 329.

Kenn-Ndubuisi, J. & Nweke, C. (2019). Financial leverage and firm financial performance in Nigeria: A panel data analysis approach. *Global Journal of Management and Business Research, 19*(4), 13-19

Manacer, A., Saif-Alyousfi, A. & Ahmad, N. (2019). The effect of financial leverage on the Islamic banks' performance in the Gulf Cooperation Council (GCC) countries. *International Journal of Financial Research, 11*(1), 13-24.

Moghaddam, A. & Abbaspour, N. (2017). The effect of leverage and liquidity ratios on earnings management and capital of banks listed on the Tehran Stock Exchange. *International Review of Management and Marketing, 7*(4), 99-107.

Murikwa D.K. (2017). The Relationship between leverage and financial performance of commercial banks listed at the Nairobi securities Exchange. Research project submitted to the department of Business Administration, University of Nairobi.

Nwanna, I. & Ivie, G. (2017). Effect of financial leverage on firm's performance: A study of Nigerian banks (2006 -2015). *International Journal of Recent Scientific Research, 8*(7), 18554 - 18564

Ogburu, M. (2019). Asset Quality and Deposit Money Banks Performance in Nigeria. *American International Journal of Business and Management, 1*(1), 38 - 47

Oke, B. O. & Ikpesu, F. (2022). Capital Adequacy, Asset Quality and Banking Sector Performance in Nigeria. *AUDOE*, 18,(5), 37-46

Okeke, C. (2023). Financial leverage and profitability of recapitalized banks in Nigeria from 2010 – 2021. *Nigerian Journal of Management Sciences, 24*(1a), 362-369

Oloye, M. & Osuma, G., (2015). Impacts of Mergers and Acquisition on the Performance of Nigerian Banks (A Case Study of Selected Banks): *Pyrex Journal of Business and Finance Management Research, 1*(4), 23-40.

Pandey, I. (2008). *Financial Management*: Vikas Publishing House PvT Limited, New Delhi.

Paul, R. & Prakash, N. (2019). Impact of asset quality on financial performance of banks in India: A comparative study of public and private sector banks. *International Research Journal of Commerce, Art and Science, 10*(7), 39-50

Pinegar, J. & Wilbricht, L. (1989). What Managers Think of Capital Structure Theory: A Survey. *Financial Management*, *1*(2), 82-91. Journal of Applied Economics & Business Research, 6(3), pp. 218-231.

Richard, V.R. & Prakash, N (2019). Impact of asset quality on financial performance of banks in India: A comparative study of public and private sector bank. International Research Journal of Commerce, Arts and Science, 10(7)

Saeed, M., Gull, A. & Rasheed, M. (2013). Impact of capital structure on banking performance (A Case Study of Pakistan). *Interdisciplinary Journal Of Contemporary Research In Business, 4*(10), 393-403.

Serwadda, I. (2019). The effects of capital structure on banks' performance, The Ugandan Perspective. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis, 67*(3), 853–868.

Velliscig, G., Floreani, J. & Polato, M. (2022). Capital and asset quality implications for bank resilience and performance in the light of NPLs' regulation: a focus on the Texas ratio. *Journal of Banking Regulation 24*(1), 66 – 88

Wabwile, E.C., Chitiavi, M.C., Alala, B.O. & Douglas, M., (2014), Financial leverage and performance variance among banks: Evidence of tier 1 commercial banks listed on Nairobi Security Exchange Kenya, *International Journal of Business and Management Invention, 3*(4).