

EVALUATING PORTFOLIO MANAGEMENT STRATEGIES IN ENHANCING THE PERFORMANCE OF LISTED BANKS IN NIGERIA

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Abstract

This study was carried out to examine the effect of portfolio management on performance of listed deposit money banks (DMBs) in Nigeria. The study anchored on the Modern Portfolio and Shiftability Theory adopted an ex post facto approach. Hence, data were collected from the annual reports and accounts of banks with international authorization for the period 2016-2020. The study used linear regression model in the data analysis. The empirical result of the research indicates a significant and positive relationship between credit risk management; liquidity risk management and performance (NAPS) of deposit money banks in Nigeria. Thus, the study concludes that portfolio management enhances and improves the financial performance of deposit money banks in Nigeria. In lieu of this, the study recommended the need for deposit money banks to monitor and take a closer look at their liquidity and also maintain optimum liquidity which will go a long way in improving their financial performance. Also, DMBs should determine the optimum level for their loan-deposit mix up to when marginal cost (MC) is equal to marginal revenue (MR). Thus, would help to bring the non-performing loans to a minimal level.

Keywords: Portfolio Management, Credit Risk Management, Liquidity Risk Management, Deposit Money Banks.

1.0 Introduction

The importance of portfolio management to banks cannot be overemphasized and it also forms an integral part of the loan process. Portfolio management maximizes bank risk, adjusted risk rate of return by maintaining credit risk exposure with view to shielding the bank from the adverse effects of credit risk (Njoku & Ezeudu, 2017). Deposit money banks are major players in the financial sector of every economy. The failure or success of these banks will have either positive or negative impact on the economy. According to Uwalomwa, Uwuigbe and Oyewo (2015), some deposit money banks have been wound as a result of poor management of their credit risk and liquidity risk. High level of non-performing loans in the balance sheet reduces bank's profitability and thereby affects performance of banks.

According to Jenkinson (2008), banks are exposed to a large number of risks which include liquidity risk, credit risk, foreign exchange risk, market risk, interest rate risk among others. These risks have to be well managed in order to ensure their survival and profitability. Banks are expected to have credit administration department that ensures proper maintenance and administration of credits.

Portfolio management is a serious threat to the performance of banks, as some of the a priori expectations showed a negative effect; which calls for its proper management. Portfolio management provides a leading indicator of the quality of banks credit portfolio which is because it greatly influences or prevents the failure of a bank, as the failure of a bank is influenced to a large extent by the quality of credit decisions and thus the quality of the risk assets, which can be deterred as a result of poor corporate governance such as CEO duality etc (Charles & Kenneth, 2013). The importance of strong credit and liquidity risk management for building quality loan portfolio is of paramount importance to performance of deposit money banks as well as overall economy. The growing stock of studies in accounting, finance and economics, underscores the failure in credit risk management as one of the main sources of banking sector crises which possibly led to economic failure experienced in the past, including 2001 global financial crises (Fofack, 2005).

Empirical evidence on effect of portfolio management on bank's performance in Nigeria centered on traditional measures of performance such as return on equity, return on asset, earnings per share etc. with none to the best of the researchers knowledge on market (valuebased) measures of performance, as the traditional measures of performance do not take into consideration the cost of capital and moreover, they are influenced by accrual based accounting conventions in addition to overemphasis to achieve and maintain short-term financial results. While market measures of performance are promoted and conceded as measures for corporate real profitability, in terms of performance. Since value creation has become a primary concern to investors, the proponents of value based measures claim that those measures are the only performance measures tied directly to stock's intrinsic value (Stewart, 1991; 1999; Grant, 2003).

In addition, the study seeks to examine how portfolio management could affect banks performance as extant literature reported that inappropriate management of credit and liquidity risk caused the liquidation and takeover of many banks in Nigeria.

However, in Nigeria, literature on this subject is very limited or the issues have not been localized or well-treated, like the inclusion of net assets per share (NAPS) as a market measure for banks performance. Little or no attention is paid to this area by academics, financial economist or corporate directors and regulators as evidenced by little literature and contribution to this discourse. To achieve this purpose, the following hypotheses were formulated:

H₀₁: Credit Risk Management has no significant effect on banks Performance

H₀₂: Liquidity Risk Management has no significant effect on banks Performance

2.0 Review of Related Literature

2.1.1 Portfolio Management

In recent years, the importance of portfolio management has been evidenced in the corporate sector. Portfolio management (PM) is important and its effectiveness improves company's performance by contributing to reduce

fraud, managing potential threats, and more efficient use of resources. Taking and managing risk is the very essence of business survival and growth (Axelos Global Best Practise, 2014).

According to Omaliko, Nwadiakor and Nweze (2020), a sound framework for managing risk and ensuring an effective internal control system is essential for achieving the strategic objectives of the Company. The following are recommended by Nigerian Code of Corporate

Governance (2018) as regard to RM;

The Board should ensure the establishment of a risk management framework that:

- Defines the Company's risk policy, risk appetite and risk limits; and
- Identifies, assesses, monitors and manages key business risks to safeguard shareholders' investments and the Company's assets.
- Formally approve the risk management framework and ensure that it is communicated in simple and clear language to all employees.
- Ensure that the risk management framework is integrated into the day-to-day operations of the business and provide guidelines and standards for management of key risks.
- Articulate, implement and review the Company's internal control systems to strengthen the risk management framework.
- Conduct at least annually, or more often in companies with complex operations, a thorough risk assessment covering all aspects of the Company's business and ensure that mitigating strategies have been put in place to manage identified risks.
- Obtain and review relevant reports periodically to ensure the ongoing effectiveness of the Company's risk management framework.
- Ensure that the Company's risk management framework is disclosed in the annual report; and
- Ensure that the risk management function is headed by a member of senior management who is a professional with relevant qualifications, competence, objectivity and experience.

2.1.1.1 Credit Risk Management

The goal of credit risk management is to maximize banks risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters. Banks need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions. The effective management of credit risk is a critical component of a comprehensive approach to risk management and essential to the long-term success of any banking organization (Ahmad, 2017).

Demirguc-Kunt and Huzinga (1999) opined that credit risk management is in two-fold which includes, the realization that after losses have occurred, the losses become unbearable and the developments in the field of financing commercial paper, securitization, and other nonbank competition which pushed banks to find viable

loan borrowers. The effective management of credit risk is a critical component of a comprehensive approach to risk management and essential to the long-term success of any banking organization. Credit risk management arises any time bank funds are extended, committed, invested, or otherwise exposed through actual or implied contractual agreements, whether reflected on or off the balance sheet.

Credit risk according to Basel Committee of Banking Supervision (2001) is the possibility of losing the outstanding loan partially or totally, due to credit events (default risk), failure to pay a due obligation, repudiation/moratorium or credit rating change and restructure.

2.1.1.2 Liquidity Risk Management

According to Wuava, Yua and Yua (2020), liquidity is the ability of a bank to fund increases in assets and meet obligations as they come due, without incurring unacceptable losses while effective liquidity risk management helps ensure a bank's ability to meet cash flow obligations, which are uncertain as they are affected by external events and another agents' behavior. Liquidity risk management is of paramount importance because a liquidity shortfall at a single institution can have system-wide repercussions. In carrying out the role of financial intermediation especially as it relates to maturity transformation of short-term deposits into long-term loans, banks are inherently exposed to liquidity risk both at an idiosyncratic (institution-specific) level or system-wide. Liquidity risk is the possibility of negative effects on the interests of owners, customers and other stakeholders of the financial institution resulting from the inability to meet current cash obligations in a timely and cost-efficient manner. Liquidity risk usually arises from management's inability to adequately anticipate and plan for changes in funding sources and cash needs (Awojobi, 2011). According to Omaliko, Okeke and Obiora (2021), Liquidity risk management is of paramount importance because a liquidity shortfall at a single institution can have system-wide repercussions

According to Owojori, Akintoye and Adidu (2011), liquidity risk management centers on liquidity facilities and portfolio structure. Recognizing liquidity risk leads the banks to recognize liquidity itself as an asset, and portfolio design in the face of illiquidity concerns as a challenge.

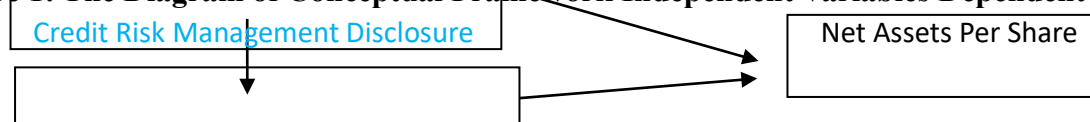
2.1.2 Performance

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation (Omaliko and Okpala, 2020).

Cheng, Wang, Lee and Teng (2012) defined performance as the degree of measure organization put in to achieve their goals and advocated that performance goal should be synonyms. Firm Performance should include efficiency and effectiveness. Efficiency means doing the thing right, quantitatively determined by the ratio of output to input. Effectiveness is "doing the right thing" a relatively vague, non-quantitative concept, mainly

concerned with achieving objectives. The function of firm performance measurement is not just informing managers but providing a better way to examine the long-term competitive ability and enterprise value. For the purpose of this study, performance was measured using net assets per share as used by Omaliko, Nweze and Nwadiakor (2020), Omaliko and Onyeogubalu (2021). This was captured as Net Assets divided by Paid up Capital

Figure 1: The Diagram of Conceptual Framework Independent Variables Dependent Variable



Source: Liquidity Risk Management Disclosure Researcher's Concept (2021)

2.2 Theoretical Framework

2.2.1 Modern Portfolio Theory

Modern Portfolio Theory (MPT) Modern Portfolio theory was introduced by Harry Markowitz in 1952. It attempts to maximize portfolio expected return for a given amount of portfolio risk, or equivalently minimize risk for a given level of expected return, by carefully choosing the proportions of various assets. The portfolio theory integrates the process of efficient portfolio formation to the pricing of individual assets. It emphasized that risk is an inherent part of higher reward. The theory also explained that some sources of risk associated with individual assets can be eliminated or diversified away, by holding a proper combination of assets (Bodie, Kane & Marcus, 1999).

Some of the issues not addressed by the theory include; how banks can form a portfolio of loans that minimize risk and maximize return. It does not outline ways of determining a risk-free portfolio. Lastly, the theory does not address various risks that are faced by banks when managing a loan portfolio. Therefore, the theory cannot apply holistically in portfolio management in banks. Hence, shiftability theory.

2.2.2 Shiftability Theory

The theory was propounded by M.G Mouton in the year 1918 and published in his article named commercial banking and capital formation. The theory states that a bank's liquidity is adequately maintained if it holds assets that could be shifted or sold to other lenders or investors for cash even during period of crisis or distress. The shiftability theory focuses on the liability side of the balance sheet. The theory contends that supplementary liquidity could be derived from the liabilities of a bank, therefore, shiftability, marketability or transferability of a bank's assets is a basis for ensuring liquidity. The theory further contends that highly marketable security held by a bank is an excellent source of liquidity. The proponents of this view argued that a bank's liquidity could be

enhanced if it holds specified liquid assets required to sell to the Central Bank and the discount Market (interbank window) provided they are ready to purchase the asset offered at discount.

Nwankwo (1991) argues that since banks can buy all the funds they need, there is no need to store liquidity on the asset side (liquidity asset) of the balance sheet. It is pertinent to note that liquidity management theories have been subjected to critical review by various scholars. The general consensus however is that during period of distress or crisis, banks with grave financial conditions and downgraded status may be challenged in obtaining the desired liquidity because the investors/deposits confidence in them has been eroded. This is however not the case with healthy or financially sound banks, which liabilities (deposits, market funds and other creditors) constitute a major component of their liquidity sources as their liquidity strain may be less severe.

2.3 Empirical Review

Olusanmi, Uwuigbe and Uwuigbe (2015) investigated the impact of effective risk management on bank's financial performance from 1998-2014. The ordinary least square regression was employed in testing the hypothesis formulated. Data was collected from the annual reports of banks listed on the floor of the Nigerian Stock Exchange. The study observed that there exists a negative non-significant relationship between risk management proxies and bank's performance as captured with return on equity. Thus, financial performance cannot be explained away by the compliance or non-compliance to Basel's regulation by financial institutions, but could be as a result of the accumulation of minor difficulties and inconsequential malfunction of the individual actors resulting in a massive breakdown.

Kolapo, Ayeni and Oke (2012) carried out an investigation into the quantitative effects of credit risk on the performance of five deposit money banks in Nigeria over the period of 11 years (2000-2010). Panel model analysis was adopted to estimate the determinants of the profit function. The results showed that the effect of credit risk on bank performance is cross-sectional invariant. They recommended that banks in Nigeria should enhance their capacity in credit analysis and loan administration while the regulatory authority should pay more attention to banks compliance to relevant provisions of the Bank and guidelines.

Taiwo and Abayomi (2013) evaluated the impact of credit risk management on bank profitability of some selected deposit money banks in Nigeria using econometric analysis method on annual time series data of ten banks over the period of 2006 to 2012. The results from Panel Least Square (PLS) estimate found that that credit risk management had a significant impact on the profitability of Nigeria banks. They therefore suggested that, management need to be cautious in setting up a credit policy that might not negatively affects profitability and also, they need to know how credit policy affects the operation of their banks to ensure judicious utilization of deposits. Also, that capitalization and total assets of the bank should be periodically evaluated.

Adeusi, Akeke, Adebisi and Oladunjoye (2014) carried out a study to examine the effect of association of the risk management practices on bank financial performance in Nigeria. The study employed a panel of ten commercial banks for a period of four years covering 2006 to 2009. Using two variables of financial performance, return on assets and return on equity to develop two models with liquidity, credit and capital risks, the regression result showed that there is a significant relationship between bank performance and risk management.

Wanjohi (2013) carried out a study on the financial risk management on financial performance of Kenyan commercial banks. The study employed five components of risk management including the risk management environment of the institution, risk measurement skills, risk mitigation procedures, risk monitoring and adequate internal controls of the organization as the independent variables. The dependent variable was the mean of ROA for a period of five years covering 2008 to 2012. The study found that financial risk management strongly affected the financial performance of Kenyan commercial banks.

Li yuqi (2007) examined the determinants of banks profitability and its implications on risk management practices in the United Kingdom. The study employed regression analysis on a time series data between 1999 and 2006. Six measures of determinants of bank's profitability were employed. They indicated Liquidity, credit and capital as internal determinants of banks' performance. GDP growth rate, interest rate and inflation rate were used as external determinants of banks profitability. The six variables were combined into one overall composite index of bank's profitability. Return on Asset (ROA) was used as an indicator of bank's performance. It was found that liquidity and credit risk have negative impact on bank's profitability.

Al-Khouri (2011), studied the impact of bank's specific risk characteristics, and the overall banking environment on the performance of 43 deposit money banks operating in 6 of the Gulf Cooperation Council (GCC) countries from 1998-2008. Fixed effect regression analysis was used. The results showed that credit risk, liquidity risk and capital risk were the major factors that affect bank performance measured by return on assets while liquidity risk only affects return on equity. He recommended that bank should be more efficient in risk management.

Ara, Bakaeva and Sun (2009) they observed that credit risk management has effect on performance of the financial institutions. Regression model was used on the data collected from the sample banks annual report from 2000-2008. The study found that the impact of credit risk management on the financial performance is not the same on all four deposit money banks sampled. They recommended that Banks should improve on credit risk management strategies to improve their profitability.

Soyemi, Ogunleye and Ashogbon (2014) investigated the effect of risk management practices on financial performance of banks in Nigeria. A cross-sectional model of eight quoted commercial banks was collected in 2012 for the study. The variables of risk management employed are non-performing loan ratio, liquidity ratio, cost to income ratio, capital adequacy ratio while two dependent variables used to form two models for the study

were Return on Assets (ROA) and Return on Equity (ROE). The OLS regression result showed that financial performance is greatly determined by risk management practices.

Omaliko and Onyeogubalu (2021) in their study on voluntary risk disclosures and organizational sustainability reported that effective risk management practices ensure corporate sustainability.

Oforu-Hene and Amoh (2016) investigated the relationship between risk management and bank performance among the listed banks on Ghana Stock Exchange over the period 2007– 2014. The performance of banks was measured using ROA and ROE while the explanatory variables included risk index, size of bank, bank solvency, bank liquidity, non-performing loans, inflation, and exchange rate. The regression result showed that risk management is positively related to performance.

Olusanmi, Uwuigbe and Uwuigbe (2015) examined the impact of effective risk management on banks' financial performance in Nigeria. The data set covered a sample of 14 banks listed on the floor of the Nigerian Stock Exchange over a period of 6years (2006-2012). The dependent variable was Return on Equity (ROE) while the explanatory variables included non-performing loan ratio, Capital Ratio, Loan to Total Deposit and Risk Disclosure. The results from Ordinary least square regression showed that there is a negative and insignificant relationship between risk management proxies and bank's performance.

3.0 Methodology

Ex Post Facto Design was adopted for the study. This was based on the fact that our data is secondary data that exists already which cannot be manipulated or controlled. The population of the study consists of the entire 8 listed deposit money banks in Nigeria with Commercial Banking License & International Authorization as at 2021 Business List. It ranges from Access Bank Plc, Fidelity Bank Plc, First Bank Plc, First City Monument Bank Plc, Guaranty Bank Plc, Union Bank Plc, United Bank for Africa Plc to Zenith Bank Plc. The study covers the period of 2016-2020.

The use of listed deposit money banks in Nigeria with commercial banking license and international authorization could be justified as these banks are keenly involved in the management of credit and liquidity risk than the listed deposit money banks with national license and authorization.

The data collected were analyzed using linear regression model with the aid of STATA V.

15. The study adopted this technique in order to ascertain the effect of portfolio management (CRDR & LIQR) on banks performance which was measured using net assets per share (NAPS). Various robustness tests such as test for multi-collinearity between the independent variables were carried out to improve the validity of the results obtained.

3.1 Operationalization and Measurement of Variables

3.1.1 Dependent Variable

The dependent variable in this study is Banks Performance and it was proxy and measured using Net Assets Per Share (NAPS) as used by Omaliko, Nweze and Nwadiolor (2020). This was captured as Net Assets divided by Paid up Capital

3.1.2 Independent Variable

The independent variable of portfolio management was measured using, Credit Risk Management and Liquidity Risk Management. The measurements for the variables are shown on Table 1 as thus:

Table 1: Measurements for Independent Variables

Variables	Measurements	A Priori Expectations
Credit Risk	Total Liabilities/Total Assets (TL/TA)	Sathyamoorthi, Mogotsinyana, and Mphoeng Mashoko (2019)
Liquidity Risk	Liquid Assets/Current Liabilities (LA/CL)	Ofeimum and Okeke (2019)

Source: Empirical Survey (2021)

3.2 Model Specification

In line with the previous researches, the researcher adapted and modified the model of Lawal and Ibrahim (2017) in determining the effect of portfolio management on banks' performance. This is shown below as thus:

ROA = F (CRD, LQD) -----I The modified functional model is shown below as thus:

ROE = F (CRDR & LIQR) -----II The econometric form of the regression modified for the study is expressed as thus:

MODEL:

$$\text{NAPS}_t = \beta_0 + \beta_1 \text{CRDR}_t + \beta_2 \text{LIQR}_t + \mu$$
 -----III

Where:

ROA = Return on Assets

CRD = Credit Risk

LQD = Liquidity Risk

NAPS = Net Assets Per Share

CRDR = Credit Risk

LIDR = Liquidity Risk

4.1 Data Analysis

Table 2: Descriptive Statistics of our Variables from Banks

	NAPS	LIQR	CRDR
Mean	19.4045	1.8052799	1.164576
Std. Dev.	9.03822	0.1400175	0.2172159
Maximum	85	0.976536	1.991820
Minimum	2.14	0.346578	0.787322
Observations	40	40	40

Source: Researcher's Computation (2021).

Table 2 helps to provide some insight into the nature of the selected listed deposit money banks (DMBs) in Nigeria that have commercial license and international authorization. Firstly, it can be observed that on the average, in a 5-year period (2016-2020), the selected banks in Nigeria were characterized by positive Net Assets Per Share (NAPS) value = 19.4045. This is an indication that the entire deposit money banks in Nigeria with international authorization have positive NAPS with a standard deviation value of 9.03822. The average LIQR for the sampled banks was 1.8052799 with a standard deviation value of 0.1400175. This means that banks with LIQR values of 1.8052799 extremely involved in liquidity risk management. There is also a high variation in maximum and minimum values of LIQR which stood at 0.976536 and 0.346578 respectively. This wide variation in LIQR values among the sampled (DMBs) justifies the need for this study as the researcher assumes that banks with higher LIQR values are higher profit-making firms than those banks with low LIQR values.

Similarly, Credit Risk Management Disclosure (CRDR) was characterized by a mean value of 1.164576 with a standard deviation value of 0.2172159. This means that banks with CRDR values of 1.164576 extremely involved in credit risk management. Also, there is also a high variation in maximum and minimum values of CRDR which stood at 1.99182 and 0.787322 respectively. This wide variation in CRDR values among the sampled banks justifies the need for this study as the researcher assumes that banks with higher CRDR values are higher profit-making banks than those banks with low CRDR values.

4.0: Data Analysis and Results

Variance Inflation Factor (VIF), Tolerance Value (TV), Breusch Pagan and Cook-Weisberg Heteroskedasticity Test, Ramsey Reset Test (RRT) were explored for test of multicollinearity existence and auto correlation of the regressors. Linear Regression Model on the hand was used to test the linear relationship between the dependent and independent variables. It was operated using STATA version 15 as shown on the tables below:

Table 3: Collinearity Statistics. estat vif

Variable | VIF 1/VIF

-----+-----

CRDR | 1.00 0.999524

LIQR | 1.00 0.999524

-----+-----

Mean VIF | 1.00

From the table above, the TV ranges from 0.999 to 0.999 which suggests non multicollinearity feature. The VIF which is simply the reciprocal of TV ranges from 1.00 to 1.00 also indicates non-multi-collinearity feature.

Table 4: Breusch Pagan/Cook Weisberg Heteroskedasticity for the Model. estat hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of NAPS $\chi^2(1) = 4.80$ Prob > $\chi^2 = 0.613$

The above result was obtained from the test for heteroskedasticity. The probability value of 0.613 resulting from the test for heteroskedasticity implies that the model is free from the presence of unequal variance. Thus, implies that our probability values for drawing inference on the level of significance are reliable and valid. The absence of heteroskedasticity validates the regression model results, which means there is no need for robust or weighted least square regression.

Table 5: Ramsey Reset Test for the Model. estat ovtest

Ramsey RESET test using powers of the fitted values of NAPS

Ho: model has no omitted variables

$F(3, 34) = 0.61$

Prob > F = 0.6150

The above result was obtained from the test for miss-specification or omitted variables using Ramsey RESET Test. The probability value of 0.6150 resulting from the test implies that the model has no omitted variables.

Table 6: Result on Effect of Portfolio Management on Performance of Listed Deposit Money Banks in Nigeria.

Source | SS df MS

Number of obs = 40

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-----+-----
Model | 1299.58018 2 649.790089          F( 2, 37) = 1.87
Residual | 12836.1132 37 346.921979      Prob > F = 0.0023
-----+-----
Total | 14135.6934 39 362.453677        R-squared = 0.6232
                                           Adj R-squared = 0.5291
                                           Root MSE = 0.1862
-----+-----
NAPS | Coef. Std. Err. t P>|t| [95% Conf. Interval]
-----+-----
0.002 2.922719 83.41797
LIQR | .5222151 .1373395 3.38 0.000 22.60637 33.04887
_cons | 2.190866 .2338567 3.82 0.000 66.47052 28.29723
Source: Result output from STATA 15.

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4.1 Discussion of Findings

Credit Risk Management (CRDR) does not have a significant influence on banks performance.

Credit Risk Management based on the P-value of 0.002 in table 6 above, was found to have a positive influence on our sampled listed deposit money banks net assets per share. Although this influence is statistically significant since its P-value is less than 5% significant level. This result, therefore suggests that we reject the null hypothesis two (H_{02}) which states that credit risk management does not significantly influence banks performance. We therefore accepted the alternative hypothesis. This means that in Nigeria, credit risk management determines whether the deposit money banks will record higher returns (NAPS) or not as the influence is statistically significant.

This result agrees with a priori expectation of Kolapo, Ayeni and Oke (2012) and Taiwa and Abayomi (2013) who found significant and positive association between credit risk management and returns of deposit money banks.

Liquidity Risk Management has no significant effect on banks Performance

Liquidity Risk Management (LIQR) based on the P-value of 0.000, in table 6 above, was found to have a positive influence on the sampled listed deposit money banks (DMBs) net assets per share in Nigeria and this influence is statistically significant since its P-value is within 5% significant level. This result, therefore suggests that the researcher rejects hypothesis three (H_{03}) which states that liquidity risk management does not significantly influence banks performance, to accept the alternative hypothesis. Thus, implies that in Nigeria, liquidity risk management drives net assets per share of deposit money banks positively. In other words, management that wants to record higher net assets per share should have a closer observation to their liquidity risks management process.

5.1 Conclusion

The study from the statistical analysis concludes that portfolio management has significant influence on banks' performance in Nigeria. This is to say that corporate risk management practices drive performance.

5.2: Recommendations

1. The study found that credit risk management has significant influence on deposit money banks' net assets per share, thus, the study recommends that DMBs should determine the optimum level for their loan-deposit mix up to when marginal cost (MC) is equal to marginal revenue (MR). Thus, would help to bring the nonperforming loans to a minimal level.
2. The study also established a positive association between liquidity risk management and banks performance. Based on this, the study suggests the need for deposit money banks to monitor and take a closer look at liquidity management which will go a long way in improving the financial performance of the banks. Adequate liquidity is a *sin qua non* for banking financial health.

References

- Adeusi, S. O., Akeke, N. I., Adebisi, O. S., & Oladunjoye, O. (2014). Risk management and financial performance of banks in Nigeria. *European Journal of Business and Management*, 6(31), 336-342.
- Ahmad, A. (2017). Effect of credit risk management on market performance of listed deposit money banks in Nigeria. A dissertation presented to the school of post graduate studies, Ahmadu Bello University Zaria.
- Al-Khouri, R. (2011). Assessing the risk and performance of the GCC banking sector. *International Journal of Finance and Economics*, 65, 72-89.
- Ara, H., Bakaeva, M., & Sun, J. (2009). Credit risk management and profitability in commercial banks in Sweden. Master Thesis. University of Gothenburg.
- Awojobi, O. (2011). Analyzing risk management in banks: Evidence of bank efficiency and macroeconomic impact. *Journal of Money, Investment and Banking*, (22).
- Axelos Global Best Practice (2014). *Risk Management Disclosures*
- Basel Committee on Banking Supervision, (2001). Risk Management Practices and Regulatory Capital: Cross sectional Comparison. Basel Committee on Banking Supervision. Retrieved from www.bis.org.
- Bodie, J., Kane, R., & Marcus, G. (1999). *Essentials of Investments*, (5th ed). New York: McGraw-Hill, 1999.

- Charles, O. Kenneth U. O. (2013). Effect of credit risk management and capital adequacy on the market performance of commercial banks in Nigeria. *J. Emerging Issues Econs. Finance Bank* 2, 78-92
- Cheng, M.C., Wang H.C., Lee, C.C., & Teng P.Y. (2012). The new measure performance indicator as determinants of executive compensation and reward, Taiwan.
- Demirgüç-Kunt, A., & Huizinga, H. (1999). Determinants of commercial bank interest margins and profitability: Some international evidence. *The World Bank Economic Review*, 13(2), 379-408.
- Fofack, H. (2005). Non-Performing Loans in Sub-Saharan Africa: Causal Analysis and Macroeconomic Implications. *World Bank Policy Research Working Paper No. WP 3769*.
- Grant, J. (2003). *Foundations of Economic Value Added*, Second Ed., New York: John Wiley & Sons.
- Jenkinson, N. (2008). Strengthening regimes for controlling liquidity risk: Euro money conference on liquidity and funding risk management, bank of England, London, 9-23, Kolapo, T. F. Ayeni, R. K., & Oke, M. O. (2012). Credit risk and deposit money banks' performances in Nigeria: a panel model approach. *Australian Journal of Business and Management Research*, 2(2), 31-38
- Lawal, M., & Ibrahim, Y. (2017). Impact of credit and liquidity risk on profitability of listed deposit money banks in Nigeria. *KASU Journal of Accounting Research and Practice*, 6(1), 42-52
- Li Yuqi. (2007). Determinants of bank profitability and its implication on risk management in UK. *Journal of Financial Economies*, 3(4), 50-56
- Markowitz, H. (1988). Portfolio selection, *Journal of Finance*, 39, 77- 97.
- Moulton, H. G. (1918). *Commercial banking and capital formation: III*. *Journal of Political Economy*, 26(7), 705-731.
- Njoku, O., & Ezeudu, J. (2017). The impact of credit risk management on deposit money banks performance in Nigeria. *Nigerian Journal of Management Sciences*, 6(1), 174186
- Nwankwo G. O. (1991). *Bank Management Principles and Practices*. Lagos: Malthouse Press

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Research Article

- Ofeimum, G., & Okeke, I. (2009). Liquidity risk management as a determinant of financial performance of listed deposit money banks in Nigeria. *Journal of Accounting and Financial Management*, 5(4), 12-20
- Ofosu-Hene, D. & Amoh, P. (2016). Risk management and performance of listed banks in Ghana. *European Journal of Business Science and Technology*, 2(2), 107 – 121
- Okere, W., & Isiaka, M.A. (2018). Risk management and financial performance of deposit money banks in Nigeria. *European Journal of Business, Economics and Accountancy*, 6(2), 30-42
- Olusanmi, O., Uwalomwa, U., & Uwuigbe, O. R. (2015). The effect of Risk management on bank's financial performance in Nigeria. *Journal of Accounting and Auditing: Research & Practice*, 7.
- Olusanmi, O., Uwuigbe, U. & Uwuigbe, O. R.(2015). The effect of risk management on bank's financial performance in Nigeria. *Journal of Accounting and Auditing: Research & Practice*, 23,112-124
- Omaliko, E., & Okpala, N. (2020). Effect of financing mix on financial performance of health care firms in Nigeria. *International Journal of Banking and Finance Research*, 6(3), 63-77
- Omaliko, E., & Onyeogubalu, O. (2021). Voluntary risk management disclosures and organizational sustainability; Nigerian experience. *University-Led Knowledge and Innovation for Sustainable Development, Nnamdi Azikiwe University Book Series on Sustainable Development*
- Omaliko, E., Nwadiolor, E., & Nweze, A. (2020). Effect of non-financial disclosures on performance of non-financial firms in Nigeria, *Journal of Accounting and Financial Management*, 6(1), 16-39
- Omaliko, E., Nweze, A., & Nwadiolor, E. (2020). Effect of social and environmental disclosures on performance of non-financial firms in Nigeria, *Journal of Accounting and Financial Management*, 6(1), 40-58
- Omaliko, E., Okeke, P., Obiora, F. (2021). Impact of covid-19 pandemic on liquidity and profitability of firms in Nigeria. *International Journal of Academic Research in Business and Social Sciences*, 11(3), 1331-1344
- Owojori, A. A., Akintoye, R. I., and Adidu, A. F. (2011). The challenge of risk management in Nigerian banks in the post consolidation era. *Journal of Accounting and Taxation*, 13(2), 23-31

- Sathyamoorthic, C., Mogotsinyana, M., Mphoeng, M., & Mashoko, D. (2019). Impact of financial risk management practices on financial performance; evidence from commercial banks in Botswana. *Applied Finance and Accounting*, 6(1), 25-39
- Soyemi, K. A., Ogunleye, J. O. & Ashogbon, F.O. (2014). Risk management practices and financial performance: evidence from the Nigerian deposit money banks (DMBs). *The Business & Management Review*, 4 (4), 345 – 354.
- Stewart, G. B. (1991). *The Quest for Value: A Guide for Senior Managers*, First Ed., New York: Harper Business.
- Stewart, G. B. (1999). *The Quest for Value*, Second Ed., New York: Harper Business.
- Taiwo, A. M., & Abayomi, S. T. (2013). Credit management spur higher profitability? evidence from Nigerian banking sector. *Journal of Applied Economics and Business*, 1(2) 46-53.
- Uwalomwa, U. Uwuigbe, O., & Oyewo, B. (2015). “Credit Management and Bank Performance of Listed Banks in Nigeria. *Journal of Economics and Sustainable Development*, 6(2), 27-32.
- Wanjohi, C.M. (2013). Research on relationship between financial risk management and financial performance of banks in Kenya. *Unpublished MBA project School of Business, University of Nairobi*
- Wuava, T., Yua, H., & Yua, P. (2020). Effect of liquidity management on the financial performance of banks in Nigeria. *European Journal of Business and Innovation Research* 8(4), 30-44