DOI: https://doi.org/10.67862/jbfr.2025.jxujnf3a

Journal of Banking and Finance Research (JBFR)
2025, Vol. 1, No.1, Pp. 69 – 83

P-ISSN: 3121-8121; E-ISSN: 3141-4389

Effect of CAMELS Rating on Financial Performance of Systemically Important Banks (SIBS) Listed in Nigeria

Mangai Ishaya Musa[1*], Dr. Christopher Osega Otubor[2], Dusu Samuel Pam[3]
[1]Department of Banking and Finance, Plateau State Polytechnic, Barkin-ladi, Plateau State, Nigeria
[2]Department of Banking and Finance, Faculty of Management Sciences, University of Jos, Jos, Plateau State, Nigeria
[3]Department of Banking and Finance, Plateau State Polytechnic, Barkin-ladi, Plateau State, Nigeria

Email:
[1]mangi.mni35@gmail.com
[2]chrisotubor1968@yahoo.com/otuborc@unijos.edu.ng
[3]skwon266@gmail.com

Abstract: *This study examines the effects of CAMELS rating on the financial performance of SIBs listed in Nigeria, using CAMELS model rating; capital adequacy, asset quality, management quality, earnings ability, liquidity and sensitivity to market risk. Data were collected from the annual reports and accounts of seven systemically important banks (SIBs) in Nigeria, such banks include: First Bank of Nigeria, Guaranty Trust Bank, Zenith Bank, United Bank for Africa, Access Bank, Fidelity Bank, and Ecobank Nigeria as sampled banks over the period 2015-2024 and analysed using Pearson correlation and multiple regressions. The study finds that capital adequacy, asset quality, earnings ability, management quality and sensitivity to market risk are strong determinants of the financial performance of SIBs in Nigeria. Consequently, the study recommends an upward review of capital level periodically in order to enable deposit money banks in Nigeria diversify their business operations, absorb unexpected losses, strengthen their liquidity position and consequently, compete internationally, just like the recent on-going recapitalisation policy of the CBN. Here the up-grade for deposit money banks (commercial banks) going international is 500 billion, national 200 billion and regional 50 billion naira as a recent monetary policy of the Central Bank of Nigeria, which was introduced in March, 2024.*

Keywords: CAMELS Rating, Financial Performance, SIBs in Nigeria, ROA, ROE.

INTRODUCTION

Globally, in Sub-Sahara Africa and in Nigeria, Banks played a pivotal role in every economy with its capital adequacy and asset quality having attracted much attention world over due to the role they play in developing International, National, Regional and Local economies. They facilitate economic growth through the provision of efficient monetary intermediation, by mobilising savings and channelling them between surplus and deficit units of the economy.

As major agents of economic life, banks sub-sector occupies a significant place in the economy of every nation. Governments, regulators, managers, creditors, investors and the general public are concerned about how competently banks transform their expensive ideas into various financial products and services.

The concept of systemically important banks (SIBs) was introduced by the Basel Committee on Banking Supervision (BCBS) in November, 2011 on how to identify and measure banks of systemic importance at both global and local levels. Systemically important banks (SIBs) are banks whose distress or disorderly failure would cause significant disruption to the wider financial system and economic activity due to their size, complexity, cross-jurisdictional activity, lack of substitutability and systemic interconnectedness (Financial Services Board – FSB, 2010; Bank of International Settlements – BIS, 2013).

The description of some banks as systemically important banks is based on what was generally observed during the global financial crisis of 2007-2009, which was said to be the most severe in the past four decades with devastating spillover effects on the global financial system. It was found during the crisis that problems faced by certain large, complex and highly interconnected financial institutions have hampered the orderly functioning of the financial system, which in turn, negatively impacted the real economy.

SIBs therefore are banks which financial regulators believe that if any of them fail there would be significant disruption to the essential services it provides to the banking system or even the overall real economy (Chen, Shi, Wei & Zhang, 2018) and are therefore commonly referred to as "too-big-to-fail (TBTF)" in the banking and finance literature (Gu, & Zhu, 2016). The bank consolidation exercise of 2005 created scenarios where large-sized banks acquired smaller and weaker ones and large-sized banks who were notable players merged to form a bigger bank.

Somoye (2018) noted that between 2005 and 2008, Nigerian banks witnessed phenomenal growth in terms of volumes of risk assets (loan) translating into huge profit and part of which was expropriated to reserves and expansion in branch network.

Another major development in the banking industry was the bailout of some banks that failed the audit test carried out by the Central Bank as a result of high non-performing loans (CBN Bulletin, 2021). It also looks at Sanusi policy of one tenure term of Chief Executive Officers (CEOs) in office, Currency redesigned and the present on-going recapitalisation in order to strengthen SIBs and other banks financial institutions. Nigeria joined the list of countries that classified their banking system into SIBs and non-SIBs.

In November, 2013, the Central Bank of Nigeria (CBN) officially released a memo in which it classified eight (8) banks; First Bank of Nigeria, Guaranty Trust Bank, Zenith Bank, United Bank for Africa, Access Bank, Skye Bank, Ecobank Nigeria and Diamond Bank as SIBs or 'too big to fail' (Asuzu, 2018; Dosekun & Senbore, 2019). Among these eight banks mentioned above Skye Bank is known as Polaris Bank and Diamond Bank Merged as Access Bank. According to the Nigeria's apex bank, the banks were chosen SIBs based on the fact that their failure could pose a systemic risk to the banking industry and the larger economy as the banks alone account for 75 per cent of the banking sector in terms of earnings, profitability assets, customer deposits and branch networks.

On the average, the banks also account for 72%, 69% and 70% of the aggregate industry loans, industry total assets and total industry deposits in 2015, 2016 and 2017 respectively (CBN, 2016, 2017, 2018). Assessing the financial performance of SIBs has continued to attract a lot of attention in the finance literature. Existing literature has shown that the stability of banks as a whole in the economy depends on its financial performance level as

high level has the tendency to absorb risks and shocks that banks could face from time to time and is a strong indicator of its efficiency (Wapmuk, 2016).

One of the measures of financial information that has been developed and used in assessing the overall financial performance and soundness of banks is the CAMELS financial indicators (Dang, 2017). As an acronym, CAMELS stand for six components of bank safety and soundness, namely; capital adequacy, assets quality, management efficiency, earnings ability, liquidity and sensitivity to market risk.

As an indicator, it focuses on performance evaluation of financial institutions by examining their profit and loss statement and balance sheet on the basis of each of the components (Deyoung, Flannery, Lang & Sorescu, 2001) in order to determine a bank's overall soundness; identify its financial, operational and managerial strengths and weaknesses; and assess its preparedness to address the emerging risk issues in banking business. To examine the relationship between CAMELS rating components and the financial performance of SIBs listed in Nigeria, to assess the individual effect of Capital Adequacy on the financial performance of SIBs, to analyse the impact of Asset Quality on the profitability and stability of listed SIBs, to evaluate how Management Efficiency influences the financial performance of SIBs in Nigeria, **t**o investigate the effect of Earnings Quality on the overall performance of systemically important banks, to determine the role of Liquidity in shaping the financial strength and risk resilience of listed SIBs.

Also, to assess the influence of Sensitivity to Market Risk on the performance and risk exposure of the banks, **t**o provide policy recommendations based on CAMELS indicators to enhance the performance and supervision of SIBs in Nigeria. The CAMELS model has proved to be an appropriate tool for analysing bank performance since it touches on various aspects of bank operations as well (Tom, 2022). CAMELS were originally adopted by the regulators of North American commercial banks.

Though CAMELS is designed as a comprehensive yardstick for assessing the soundness of any commercial bank, it can be expected that changes in CAMELS can affect the financial performance of banks.

CONCEPTUAL REVIEW

Concept of Camels Rating

CAMELS is an acronym for **Capital adequacy, Asset quality, Management quality, Earnings, Liquidity, and Sensitivity to market risk**. It is a standardized framework used globally by bank regulators to assess the health, stability, and risk of banks. Focusing on the biggest banks (tier-1 banks). It is originally developed in the U.S. (Uniform Financial Institutions Rating System), but adapted in many jurisdictions, including Nigeria, mainly focusing on SIBs (Systemically Important Banks)

The CAMELS Rating system was developed in 1979 in the United States as a supervisory rating system with which the overall financial conditions of banks are evaluated (Federal Financial Institutions Examination Council, 1979). It is also called "Uniform Financial Institutions Rating System (UFIRS)". Although, its root can be traced to the U.S., it has gained global adoption and acceptance among comity of bank regulators, the world over, following a recommendation by the U.S Federal Reserve Bank (Manju & Ashok, 2017).

It is a system for on-site examination of banking institutions which ensures a bank's health condition is x-rayed and reviewed using hybrid performance metrics, based on variety of information sources such as financial statement, funding sources, macro-economic data, budget and cash flow (Opez 1999; Altan, Yusufazari & Beduk 2014; Chaudhuri, 2018). Following the financial crisis of 2007-2008 and the consequent nationalisation of some banks, the Central Bank of Nigeria repealed the Universal Banking Model adopted by Nigerian banks.

It is believed that this banking system, otherwise called "financial supermarket", contributed to the banks' loss of operational and strategic focus, exposure to greater risks that challenge the stability of the financial system and encouraged financial recklessness. Universal Banking system is a banking model that allows commercial banks to offer wide-range of non-core banking services, such as asset management, insurance, nomine e, pension fund administration, proprietary trading, re-insurance services, loss adjusting services amongst others, together with the banking business for which they were licensed. To give effect to the above repeal, Regulations No. 01, 2010 which centres on CBN Scope, Conditions & Minimum Standards for Commercial Banks was issued by the CBN on 7 September, 2010. Any bank with this licence is required to maintain a minimum paid-up share capital of Ten Billion Naira (N10, 000,000,000.00) or such other amount as may be prescribed by the CBN from time to time and are also prohibited from carrying out settlement bank activities. Banks such as Suntrust Bank Nigeria Limited and Providus Bank Plc have regional banking authorisation (CBN, 2017). A Commercial Bank with national banking licence is permitted to undertake banking business operations in all the States of the Federation including the Federal Capital Territory, maintain a minimum paid-up share capital of Twenty Five Billion Naira (N25,000,000,000.00) or such other amount as may be prescribed by the CBN from time to time. Banks with national banking licence include: Citi, Ecobank, Heritage, Keystone, StanbicIBTC, Standard Chartered, Sterling, Unity and Wema.

However, a Commercial Bank is deemed to hold an international banking authorisation where it is permitted to carry on its banking business operations within all the states of the Federation, as well as to establish and maintain offshore banking operations in jurisdictions of its choice, subject to the approval of the CBN and compliance with regulatory requirements of host country.

Such banks are required to maintain a minimum paid-up share capital of Fifty Billion Naira (N50, 000,000,000.00) or such other amount as may be prescribed by the CBN from time to time. Banks with international banking authorisation include: Access, Diamond, Fidelity, First City Monument Bank, First Bank, Guaranty Trust, Skye, Union, United Bank for Africa and Zenith. But now the minimum capital requirement is (N500, 000,000,000). SIBs are banks whose failure would have a large adverse impact on the broader financial system.

They tend to be larger, more interconnected, more complex. Because of their systemic importance, their stability and performance are under closer scrutiny by regulators, investors, and other stakeholders. Thus, the CAMELS components may play an even more critical role.

In Nigeria, certain banks are designated domestic systemically important banks (D-SIBs). Their performance has greater implications for financial stability.

For SIBs in Nigeria, each component of CAMELS can influence performance indicators such as Return on Assets (ROA), Return on Equity (ROE), Net Interest Margin (NIM), and share price. The conceptual pathways are:

Concept of Capital Adequacy

Strong capital acts as a buffer against losses, increases investor confidence, lowers cost of borrowing. Adequate capital may reduce risk of insolvency, enabling more sustainable growth and higher returns. However, excess capital might imply underutilisation, potentially lowering return on equity

Concept of Asset Quality

Good asset quality means low non-performing loans (NPLs), fewer write-offs, and better income generation. Poor asset quality increases risk, reduces net income, reduces profitability

Concept of Management Quality

Competent management can improve efficiency, make good decisions about risk, cost control, innovation, growth — all of which improve financial performance. Conversely, weak management leads to inefficiency, risk mismanagement.

Concept of Earnings

Earnings strength (profitability, margin) is both an output of good management and capital/asset efficiency, and a determinant of capacity to invest, grow, and retain capital. Higher earnings → better performance

Concept of Liquidity

Banks need enough liquid assets to meet obligations. Liquidity risk can force banks into distress or higher costs. Good liquidity management supports stability, lowers borrowing costs, and improves performance.

Concept of Sensitivity to Market Risk

Sensitivity to interest rate changes, exchange rate, etc. High sensitivity can expose banks to losses if market conditions change unfavourably. If well managed, sensitivity risk can be mitigated, improving stability and performance.

REVIEW OF EMPIRICAL LITERATURE

Several studies have been conducted to ascertain the effects of CAMELS rating on financial performance of SIBs in both developed and developing countries. In both single and panel country studies, empirical evidence suggests that bank financial performance is a function of both internal and external factors. The internal factors influencing the bank financial performance include bank specific characteristics like capital adequacy, operating expenses, liquidity while external determinants include macroeconomic variables like financial structure, inflation rate, economic growth (Aburime, 20018, 20019; Al-Tamimi, 20019; Demirguc-Kunt & Huizinga, Naceur, 2003).

Nurazi and Evans (2021) carried out a study on the application of CAMELS ratio as predictors of Bank failure using commercial banks in Indonesia. They sourced their data in three sets namely: A, B, and C. Set A identified Indonesia commercial banks operating from 1992 to 1996; Set B Identified Indonesia commercial banks operating from 1993 to 1998; and

Set C identified all Indonesian Commercial Banks listed in Jakarta Stock Exchange from 1993 to 1998. They argued that a systematic source of data was used to eliminate liquidated banks within these periods.

CAMELS were used as independent variables while "failed banks" and "not failed banks" were used as proxy of financial performance. After controlling bank size, the study revealed that all the independent variables except sensitivity to market risk showed statistically significant relations hip with bank failure.

Iwanicz-Drozdowska and Witkowski (2016) analysed the determinants of the level of return on equity (ROE) for two groups of banks, those designated by the Financial Stability Board as global systemically important banks (G-SIBs) and their subsidiaries operating in Central, Eastern and South Eastern Europe (CESEE) as well as their banking sectors. The study based its analysis on the banks' capital links interrelatedness and some CAMELS variables over the period 2011–2013. The study found no significant differences in the level of ROE among the analysed groups but identified a different set of determinants of ROE. The result may not apply to Nigerian banks because of environmental and regulatory differences.

Using CAMELS variables, Bergendorff and Osbäck (2017) investigated the impact of the capital Requirements launched by the European Commission on 30 SIBs of the European Union countries. The study used secondary data extracted from the annual reports of the sample banks for the period 2015-2020. The study found that there have been clear changes in the banking sector during the observed time span in terms of increase in capital ratios and decrease in the profitability and liquidity of the banks. The domain of the study is different from Nigeria and the structural and regulatory factors are also different. Therefore, the findings may not apply to Nigerian context.

THEORETICAL REVIEW

Agency Theory

This theory is associated with conflicting interests of shareholders and management of organisations, suggesting that the less informed party will have to demand for information that monitors the behaviour of better-informed manager (Akinbuli, 2010). Agency theory can be used to explain the supply side of the audit market.

Financial Intermediation Theory

This theory emphasises banks' role as intermediaries between savers and borrowers. Efficiency, asset quality, liquidity are essential for intermediation. Poor CAMELS ratings may threaten intermediation, hurting deposit mobilisation, loan granting, etc., which then hurt banks' returns.

METHODOLOGY

The study used a sample of seven SIBs in Nigeria and correlation research design to determine the effect of CAMELS variables on financial performance of SIBs in Nigeria. The population of the study comprised and made up of seven (7) banks: namely, First Bank of Nigeria, Guaranty Trust Bank, Zenith Bank, United Bank for Africa, Access Bank, Fidelity Bank, and Ecobank Nigeria, which are classified as SIBs by CBN as at 2024. The selection was based on the banks that have maintained their names during the period of study from

2015 to 2024. These 7 banks were selected because they meet-up with the required capital based as required by the CBN policy.

The study used probability sampling technique to determine the sample size.

Using return on asset and return on equity as proxies or parameter used for financial performance, the following models are formulated:

$ROA_{it}=\beta_0+\beta_1 CADCY_{it}+\beta_2 ASQTY_{it}+\beta_3 MGQTY_{it}+\beta_4 EARNG_{it}+\beta_5 LQDTY_{it}+\beta_6 SMRSK_{it}+\varepsilon_{it}$……i

$ROE_{it}=\beta_0+\beta_1 CADCY_{it}+\beta_2 ASQTY_{it}+\beta_3 MGQTY_{it}+\beta_4 EARNG_{it}+\beta_5 LQDTY_{it}+\beta_6 SMRSK_{it}+\varepsilon_{it}$……ii

Where;

$CADCY_{it}$	=	capital adequacy of bank i in year t
$ASQTY_{it}$	=	assets quality of bank i in year t
$MGQTY_{it}$	=	management quality of bank i in year t
$EARNG_{it}$	=	earnings of bank i in year t
$LQDTY_{it}$	=	liquidity of bank i in year t
ROA_{it}	=	return on assets of bank i in year t
ROE_{it}	=	return on equity of bank i in year t
ε_{it}	=	error term where i is cross sectional and t time identifier
β_0	=	Intercept
β_i to β_6	=	Coefficient Parameters

The study employed multiple regression technique as a tool for data analysis. In addition to Pearson correlation analysis, the models were estimated using linear regression analysis specifically, the Ordinary Least Squares (OLS). Ordinary Least Squares (OLS) is a widely used statistical method in empirical literature review for estimating the relationships between variables. The variables of the study and their measurements are as presented in Table 3.

Table 3.1: Variable Definition and Measurement

Variables	**Definition/Measurements**
DEPENDENT	
Return on Assets (ROA)	Profit after tax/total assets
Return on Equity (ROE)	Profit after tax/total shareholders' funds
INDEPENDENT	
Capital Adequacy (CADCY)	Equity capital/total assets
Asset Quality (ASQTY)	Non-performing loans/total loans
Management Quality (MGQTY)	Interest expense/total loans
Earnings Quality (EARNG)	Net interest income/earning assets.
Liquidity LQDTY	Total loans/total liabilities
Sensitivity to Market Risk (SMRSK)	Investment securities to total assets
CONTROL VARIABLES	
Bank Size (BNKSZ)	Natural logarithm of total assets

***Source**: Authors' Research Work*

RESULTS AND DISCUSSION

This section first presents the descriptive statistics for the data analysis of the study. The summary of the descriptive statistics of the data collected is as seen in Table 4.1 as follows;

Table 4.1: Descriptive Statistics

Variables	Mean	SD	Min.	Max.	Skewness	Kurtosis	N
ROA	0.0168	0.0255	-0.0987	0.1396	-0.2172	15.3791	72
ROE	0.0800	0.2362	-1.3369	0.3171	-4.0705	22.7217	72
CADCY	0.1589	0.0684	-0.1608	0.3236	-1.0282	8.3043	72
ASQTY	0.0951	0.0974	0.0045	0.5712	2.2370	9.6257	72
MGQTY	0.0745	0.0333	0.0291	0.2225	1.8516	8.0917	72
EARNG	0.1821	0.0689	0.1036	0.5035	1.9288	8.4568	72
LQDTY	0.6114	0.4098	0.2842	3.7027	6.0832	46.3503	72
SMRSK	0.1089	0.1241	0.0001	0.8066	2.9166	15.3463	72
BNKSZ	13.3581	0.9885	10.4618	14.8591	-0.7946	3.2119	72

***Source**: Output of data analysis using STATA, 2022*

From Table 4.1, the mean for ROA of the SIBs in Nigeria is 0.0168 which represents1.68% with the highest at 13.96% and the lowest at -9.87%. The mean of 1.68% indicates that the sample banks assets employed were able to generate positive earnings. The difference between the maximum value of 0.1396 and minimum value of -0.0987 clearly shows that there are large differences in the financial performance among the banks.

The mean for ROE of the deposit money banks in Nigeria is 0.0080 which represents 0.8% with the highest at 31.71% and the lowest at -13.36%.

The mean of 0.8% indicates that the sample banks' capital employed was able to generate positive return. The difference between the maximum value of 0.3171 and minimum value of -1.3369 clearly shows that there is improvement financial performance among the banks.

The capital adequacy (CADCY) of the deposit money banks in Nigeria reveals a mean of 0.1589which represents 15.89% with the highest at 32.36% and lowest at -16.08%.

The mean of 15.89% indicates that the sample banks average capital adequacy ratio is above the regulatory minimum capital requirement of 15% for international bank in the industry (NDIC, 2012).

The asset quality (ASQTY) of the deposit money banks in Nigeria reveals a mean of 0.0951 which represents 9.51% with the highest at 57.12% and lowest at 0.45%.

The mean of 9.51% indicates that the exposure of the banks' assets to specific risk is low and well managed. More so, the mean of 9.51% also indicates that the level of non-performing loan of the sample banks is relatively higher than the industry ratio of 3.51% as at December, 2012 (NDIC, 2012).

The mean for management quality (MGQTY) of the deposit money banks in Nigeria is 0.0745 which represents 7.45%. This indicates that the sample banks' management is efficient in controlling interest expenses and minimising operating cost as revealed by the minimum and maximum value of 2.91% and 22.25% respectively.

Furthermore, the mean value of 7.45% is an indication that the management of the banks is operating within the accepted banking practices and compliance with internal control policies.

The mean for earnings quality (EARNG) of the deposit money banks in Nigeria has a mean value of 0.1821 with a standard deviation of 0.0689. The mean value of 18.21% of the earning assets of the sample banks is an indication of better earnings. It can be explained that the banks are more focused on strategies that would boost their profitability level.

The mean value for liquidity (LQDTY) of the deposit money banks in Nigeria is 0.6114 which represents 61.14%. The mean of 61.14% indicates that the banks' average liquidity ratio is above the regulatory requirement of 30%(NDIC,2012). It further shows that the banks are in a better liquidity position and with possibilities of better managing this position effectively and cautiously.

The mean value for Sensitivity to Market Risk (SMRSK) of the deposit money banks in Nigeria is 0.1089which represents 10.89%.

The mean of 10.89% indicates a low market risk for the sample banks in relation to the value of investment securities. Furthermore, the maximum rate of 80.66% explains how large changes in interest rate, equity prices can influence the earnings or equity of the sample banks.

The average bank size (BNKSZ) of the deposit money banks in Nigeria which is the natural logarithm of total assets is 13.3581 with standard deviation of 0.9885, signifying that the size deviates from both sides of the mean value by 0.9885.

The minimum and maximum values of bank size during the period are 10.4618 and 14.8591 respectively. The mean value of 13.3581 is an indication that the sample banks enjoyed economies of scale as justified by the maximum value of 14.8591. In addition, the mean value of 13.3581 describes increased in average total assets through expansion of branch network. The study summary of the Pearson correlation coefficients is as seen in Table 4.2 below.

Table 4.2: Correlation Matrix

Variables	ROA	ROE	CADCY	ASQTY	MGQTY	EARNG	LQDTY	SMRSK	BNKSZ
ROA	1.0000								
ROE	0.3175 1.0000								
CADCY	-	0.2584	1.0000						
ASQTY	0.0865	-	-	1.0000					
MGTY	-	-	-	0.3649	1.0000				
EARNG	0.0517	0.0807	0.0464	0.3540	0.2852	1.0000			
LQDTY	-	0.0219	0.2015	-0.1393	-0.1382	-0.1802	1.0000		
SMRSK	0.0350	-0.1559	-0.3646	0.0422	0.1499	-0.4347	-0.0721	1.0000	
BNKSZ	-0.0548	-0.1015	-0.1609	-0.1345	-0.1645	-0.2976	0.1135	0.2171	1.00

***Source**: Output of data analysis using STATA, 2022*

Table 4.2 indicates a significant negative relationship between return on assets and capital adequacy (CADCY) of the sample banks as represented by the correlation coefficient of -0.2899.

However, the result revealed a significant positive relationship between return on equity and capital adequacy (CADCY) as represented by the correlation coefficient of 0.2584. The negative relationship between ROA and capital adequacy indicates that an increase in capital ratio will lead to decrease in the return on assets while the positive relationship between ROE and capital adequacy indicates that an increase in capital adequacy ratio will lead to an increase in ROE.

In relation to management quality (MGQTY), the results show a negative relationship with return on asset and return on equity as represented by the correlation coefficient of -0.0555 and -0.3894 respectively. This indicates that the less efficient the banks are in terms of increase in the cost of interest expense, the returns in both assets and equity tend to reduce during the period of the study.

Similarly, earnings quality (EARNG) as shown in Table 4.2 reveals a positive relationship with Return on asset and return on equity. This shows that an increase in banks earning assets (loans and advances) through increase in interest rate would increase the returns on assets and equity**.**

In terms of liquidity (LQDTY), the result in Table 4.2 reveals a negative relationship with return on assets while a positive relationship with return on equity of the sample banks. A high level of total deposit liabilities over total loans connotes the concentration of idle cash which has no liquidity level would lead to a decrease in the return on assets. On the other hand, where the loan portfolio of the banks is adequately invested there will be an increase in return on equity.

The control variable – 'Size' shows a negative relationship with return on assets and return on equity. This implies that the increase in bank size resulting to additional cost could reduce both returns in terms of assets and equity. Significant effect on the profitability of the banks. Therefore, the result implies that an increase in bank size resulting to additional cost could reduce both returns in terms of assets and equity.

Capital Adequacy Ratio and Financial Performance

The result in Table 4.3 shows that the coefficient of capital adequacy has a significant positive impact on financial performance in relation to return on asset at 5% level (β=0.2377, $p>0.05$). On the other hand, the coefficient of capital adequacy was positive but not statistically significant in relation to return on equity. The findings of the study that there exists a significant positive impact of capital adequacy on financial performance implies that banks with larger capital are able to diversify their business operations by strengthening their ability to assume risk and attract funds at low cost which consequently enhance their liquidity position.

The overall effect will be an improvement of their lending position resulting to positive impact on returns. Athanasoglou et al. (2006) observed that a bank with a sound capital position would be able to pursue business opportunities more effectively and would have more time and flexibility to deal with problems arising from unexpected losses, thus achieving increase in returns.

This result is consistent with previous studies of Bashir and Hassan, 2003; Srairi 2010; Ongore and Kusa, 2012 providing evidence to the argument that banks with a strong capital base are able to pursue business opportunities more effectively than less capitalised banks. The suggestion that a higher capital is a positive signal to the market value of a bank is consistent with the signaling theory noted by Ommeren (2011).

Quality and Financial Performance

Table 4.3 shows that the coefficient of asset quality has a significant positive and negative impact on financial performance in relation to return on asset and return on equity at 1% level respectively. The evidence from the study that there exists a significant positive impact of asset quality on financial performance explained the fact that banks that institute a quality credit administration and management as a guide to paying particular attention to asset quality tend to be very profitable in terms of their returns.

Zantioti (2009) argues that the presence of higher credit risk leads to higher performance and subsequently brings more returns to financial institutions. The finding is consistent with the study of Fuentes and Vergara (2003), Hassan (2005) and Srairi (2010).

The significant negative impact on financial performance can be explained by the fact that the Value of loans and advances in a bank's financial statement is a critical success factor on the returns of a bank; hence, a poor asset quality arising from high level of non-performing loan tends to reduce the earnings significantly. More so, provisioning as an expense has inverse relationship to returns. This is consistent with study of Ongore and Kusa (2012), Jha and Hui (2012), Chen (2009).

Management Quality and Financial Performance

Table 4.3 provides evidence that the coefficient of management quality has a negative impact on financial performance in relation to return on asset but not significant. On the other hand, the coefficient shows a significant negative impact on return on equity at 1% level.

The result implies that inefficient management of banks' interest expenses leading to rise in cost of operations reduces the financial performance of the banks in terms of returns. More so, it is important to know that reducing the cost of operations could reduce the incidence of failure of the banks and hence strengthen the confidence of the shareholders and the public through improved financial performance of the banks.

The findings are consistent with the study of Mhiri and Ben Ameur (2013) posit that the more efficient a bank is the higher its performance in terms of returns.

Also, the finding is in line with Athanasoglou et.al, (2006), Olweny and Shipho (2011) and Alabede (2012). The study is also in agreement with the efficiency structure theory which suggests that a well-managed bank will earn higher profit than the less efficient ones.

Earnings Quality and Financial Performance

Table 4.3 shows that the coefficient of earnings quality has a significant negative impact on financial performance in relation to return on assets at 5% level and a significant positive impact on financial performance in relation to return on equity at 1% level. The finding implies that the earning assets of the banks were not efficiently utilised to generate sufficient interest income.

This is supported by the study of Guisse (2012). On the other hand, a significant positive impact reveals that banks management has been able to keep the growth of interest income ahead of interest expenses. In other terms, it connotes efficient utilisation of bank assets in forms of personal and commercial loans, mortgages and securities.

In addition, it justifies the efficiency of the banks and their ability to respond to the changes in economic conditions. This study is consistent with the findings of Jha and Hui (2012), Jannatu (2012).

Liquidity and Financial Performance

Table 4.3 provides evidence that the coefficient of liquidity has a negative impact on financial performance in relation to return on asset and return on equity and not statistically significant. The negative relationship between liquidity and financial performance implies that high excess liquidity decreases bank profitability in terms of performance. Saxegaard (2006) argued that excess liquidity is a sign that bank lending is low owing to banks holding more money than statutorily required for precautionary purposes. The result is contrary to our expectation on the understanding that liquidity is a double-edged effect on banks because more of it implies idle cash which results to reduction in profits and lack of it implies liquidity risk which can endanger bank smooth operations due to adverse shocks. The result of the study is consistent with Al-Tamimi (2009); Berger and Bowman, (2009)

Sensitivity to Market Risk and Financial Performance

The result in Table 4.3 shows that the coefficient of sensitivity to market risk has a significant negative impact on financial performance in relation to return on asset at 5% level while it shows a positive relationship with return on equity but not statistically significant. The significant negative relationship between sensitivity to market risk and financial performance is premised on the fact that market risk denotes the change in the value of an investment due to movement in market factor such as interest rate, stock price.

A typical example is the crash of the Nigerian Stock market due to the global crisis on sub-prime mortgage which consequently affected the stock market. In view of this, the stock market investments created a negative return for banks by writing off non-performing loans secured by stock. The negative impact is supported in the study of Choi Tai (2000); who suggested that banks with low market power and less efficient in their operations may not efficiently manage their risk exposures resulting in negative effects of interest rate risk from the maturity mismatching of their assets and liabilities and consequently affect returns.

The positive impact on financial performance is supported by Demirgur–Kunt and Huizina Ga (1999) in their study which posits that high interest rate is associated with higher interest margins and profitability. This finding is corroborated in the study of Dietrich and Wanzennried (2009).

CONCLUSION AND RECOMMENDATIONS

From the analysis conducted using multiple regressions, the study reveals that Capital adequacy, Asset quality and Earnings quality have a significant impact on financial performance of Nigerian Deposit money banks in a positive manner while management quality and sensitivity to Market Risk have significant but negative effect on the financial performance of deposit money banks in Nigeria. Liquidity of Deposit Money Banks in

Nigeria has no significant impact on their financial performance taking Return on Equity and Return on Assets.

Consequently, the study concludes that Capital adequacy, Asset quality, Earnings quality, Management quality and Sensitivity to market risk are determinants of financial performance of the deposit money banks in Nigeria.

In line with the findings and conclusions from this research, the study recommends the following:

RECOMMENDATIONS

1. The Monetary Policy Committee (MPC) should concentrate on upward review of capital adequacy level and it should be done periodically in order to enable deposit money banks in Nigeria diversify their business operations, absorb unexpected losses, strengthen their liquidity position and consequently compete internationally.
2. Since asset quality has a significant impact on financial performance, MPC should mandate deposit money banks in Nigeria to institute a strong credit risk management and administrative system in order to assist in the identification, measurement, monitoring and supervision of non-performing loans knowing full well that increase in loans result to increase in profitability and increase in non-performing loan reduces banks' returns.
3. Nigerian deposit money banks should focus more on demand deposit which attract low interest expense and explore the possibility of borrowing from the foreign debt market which usually provides cheaper financing than the local debt market. However, the effects of the interest rate parity should be considered before going to the global debt market.
4. Nigerian Deposit Money banks should diversify their income through having a good mix of income in order to strengthen the earning quality of the banks.

   More so, considerable attention should be accorded to fee-based incomes arising from guarantees which are less exposed to credit risk.

REFERENCES

Aburime, U., (2018). Determinants of Bank Profitability: Company-Level Evidence from Nigeria (online). October, 2018.

Adedipe, B., (2019). Impact of global financial meltdown on the Nigerian financial system and Suggested way out. Being text of paper presented in workshop organised by CBN in Lagos. Alabede, J.O., (2016). The Intervening Effect of Global Financial Condition on the Determinants of Bank Performance: Evidence from Nigeria. *An Accounting and Finance Research Journal*,1 (2) 2012.

Al-Tamimi, H.,(2019). Factors Influencing Performance of the United Arab Emirate Islamic and *Conventional National Banks*. Department of Accounting, Finance and Economics, College of Business Administration, University of Sharjah, United Arab Emirate.

Ani, W., Ugwunta, D., Ezeudu, I. and Ugwayi, G., (2016). *An Empirical Assessment of the* Determinants of Bank Profitability in Nigeria: Bank Characteristics Panel Evidence. A *Journal of Accounting and Taxation*, 4(3), 38-43.

Athanasoglou, P.P., Staikouras, B.,and Delis, M.D., (2006). *Bank-Specific, Industry- Specific* and Macroeconomic Determinants of Bank Profitability. *Journal of International Financial Markets, Institutions and Money.* [Online] 121-136. Available from: http://ssrn.com/abstract=1106875. (Accessed: 03/06/2010).

Bashir, A. H.M., (2016). Assessing the Performance of Islamic Banks: Some Evidence from the Middle East. American Economic Association Annual Meeting. *Journal of Banking and Finance Research (JBFR), 1(1) 2025*

Bashir, H. and Hassan, M., (2003). Determinants of Islamic Banking Profitability. Paper presented at the Proceedings of the Economic research forum 10th Annual conference: Marrakech, Morocco, December 16-18.*Journal of Banking and Finance Research (JBFR), 1(1) 2025*

Berger, A.N. and Bouwman, C.H.S., (2009). Bank Liquidity Creation. *The review of financial studies,* 22 (9).

Chen, C., (2009). Bank efficiency in Sub-Saharan African middle-income countries. A Working Paper, International Monetary Fund.

Choi, J.J., Elyasiani, E. and Kopecky, K.J., (2016). *The sensitivity of bank stock returns to* market, interest and exchange rate risks. *A Journal of Banking and Finance*, 16, (982–1004).

Dermiguc-Kunt,A. and Huizinga, H., (2016). *Determinants of Commercial Bank Interest* Margins and Profitability: Some International Evidence. A World Bank Economic Review,13(2): 379-408.

Dietrich, A.and Wanzennried, G., (2009). 'Determinants of Bank Profitability before and during *Sahel Analyst:* Journal of Management Sciences 13 (2) 2015University

Maiduguri13 the Crises: Evidence from Switzerland. *A Journal of International Financial Markets Institutions and Money*, 21 (3) 307-327.

Eke, M. S., (2017): "Banking Soundness and Monetary Policy: Issues and Experiences in the Nigerian Economy". *A Nigerian Journal of Banking and Finance, B & F Publication*, Enugu, 1-14.

Fuentes, R. and Vergara, M. (2003). Explaining bank efficiency: Bank size or ownership *structure*? Paper presented at the Proceedings of the VIII Meeting of the Research Network of Central Banks of the Americas, Venezuela.

Guisse, M. L., (2012). Financial performance of the Malaysian banking industry: Domestic vs Foreign banks. (Unpublished master's thesis).

Haron, S., (2004). *Determinants of Islamic Bank Profitability*. KLBS Working Paper Series 002.

Hassan, M.K., (2005). The Cost, Profit and X-efficiency of Islamic Banks. A Paper Presented at The 12th ERF Annual Conference, December, Egypt.

Jannatu, F., (2012). Determinants of Financial Performance of Bank Asia Limited; A thesis submitted in partial fulfilment of the requirement of Independent University of Bangladesh for the Bachelor Degree in Business Administration, Bangladesh.

Jha, S. & Hui, X., (2012). A Comparison of Financial Performance of Commercial Banks: A Case study of Nepal. *An African Journal of Business Management*, 6(25), 7601-7611,27 June, 2012.

Katesh,J.V. and Suresh, C.,(2013).Comparative Performance Evaluation of Selected Commercial Banks in Kingdom of Bahrain using CAMELS. Available at http://ssrn.om/abstract=2418144.

Kharwish, H.A., (2011). Determinants of Commercial Banks Performance: Evidence from *Jordan. International Research Journal of Finance and Economics.* Zarqa University, 5(5),19-45.

Lelissa, T. B., (2013). Determinants of European Commercial Banks Performance. An European *Journal of Business and Management*, ISSN 2222-2839, 6(14)

Maina,G.f. and Muturi,W.,(2013). Determinants of Financial Performance of Commercial *Banks In Kenya*. A proceeding of 1st Jomo Kenyatta University of Agriculture and Technology Research Conference, Kenya, 12th& 13th September, 2013.

Mhiri,S.M. and Ben Ameur.I.G., (2013).Explanatory factors of bank performance; evidence from *Tunisia International Journal of Economics, Finance and Management,* 2(1) March, 2013.

Molyneux, P. and Thornton, J. (2016). Determinants of European Bank Profitability: A Journal Financial Performance Analysis of Listed Deposit Money Banks in Nigeria: The Camels Approach 14 Of Banking & Finance, 16(6), 1173-1178.

Naceur, B., (2003). The Determinants of the Tunisian Banking Industry Profitability: Panel evidence. A Paper presented at the Economic Research Forum (ERF) 10th Annual Conference. Marrakesh-Morocco. 16-18 December pp.1-17.

Nurazi, R. and Evans, M., (2005) "An Indonesian Study of the Use of CAMEL(S) Ratios as *Predictors of Bank Failure". A Journal of Economic and Social Policy*":10:(1), Article 6. Available: http://epubs.scu.edu.au/jesp/vol10/iss1/6.

Olweny, T. and Shipho, T. M., (2011). Effects of Banking Sectoral Factors on the *Profitability of Commercial Banks in Kenya*. *An Economics and Finance Review,* 1(5) 1 – 30.

Ommeren, S. V., (2011). An Examination of the Determinants of Banks' Profitability in the *European Banking Sector,* An Unpublished M. Sc. Thesis, Department of Accounting and Finance, Erasmus School of Economics, Erasmus University, Roterdam.

Ongore, V.O. and Kusa, G.B., (2012). Determinants of financial performance of commercia *banks in Kenya. An International Journal of Economics and Financial issues,* 3(1), 237-252.

Osuka, B.O. and Richard, O.C., (2013). The determinants of financial performance of Quoted *Banks in Nigeria*; A study of selected deposit money banks (2001-2010). An *International Journal of Education and research* 1,(10)October, 2013.

Rose, P.S. and Hudgins, S.C., (2006). *Bank Management & Financial Services*, 6th ed McGraw-Hill, New York.

Sanusi, L.S., (2010). "Evolving Financial Landscape: Strategies for Economic Resilience: Keynote Address Presented at the 4th Annual Banking and Finance Conference of the Chartered Institute of Bankers of Nigeria, Abuja, September 23-24.

Saxegaard, M., (2016). "Excess Liquidity and Effectiveness of Monetary Policy: Evidence from Sub-Saharan Africa".An IMF Working Paper 06/115 (Washington, DC: International Monetary Fund).

Somoye, R.O.C., (2018). The Performance of Commercial Banks in Post-Consolidation *Period in Nigeria:* An Empirical Review. *An European Journal of Economics, Finance andAdministrative Sciences*, issue ISBN 1450-2275. 14(62-73).

Srairi, S.A., (2010). Cost and profit efficiency of conventional and Islamic banks in GCC *countries. A Journal of Productivity Analysis*, 34(1): 45-62.

Swarnapali, R.M.N.C.,(2013). Firm Specific Determinants and Financial Performance of Licensed Commercial Banks in Sri Lanka. A Faculty of Management Studies, Rajarata University of Sri Lanka. Sahel Analyst: *Journal of Management Sciences 13(2), University of Maidugur*i15

Tai, C.S., (2000). Time-varying market, interest rate, and exchange rate risk premium in the *US commercial bank stock returns.* A Journal of Multinational Financial Management, 10, (397–420).

Tom, K.A, (2012). Effects of CAMEL Variables on Bank Efficiency: A Panel Analysis of *Kenyan Commercial Banks;* A Thesis submitted in Partial Fulfillment of Nairobi University for the Degree of Masters of Business Administration, Nairobi; University of Nairobi.

Wetmore, J.L. and Brick, J.R., (2019). Commercial bank risk: Market, interest rate, and *foreign exchange. A Journal of Financial Research*, 17(585–596)

Zantioti, L.E., (2009). Does Islamic bank performance differ by region? Unpublished Master's Thesis, Stockholm School of Economics, Sweden.