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Assessment of Critical Factors Shaping the Performance of Deposit Money Banks in Nigeria

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ABSTRACT

This study investigates the key determinants of the performance of Deposit Money Banks (DMBs) in Nigeria, employing the CAMELS framework (Capital Adequacy, Asset Quality, Management Efficiency, Earnings Management, Liquidity, and Sensitivity to Market Risk) to assess the performance of listed DMBs. Fourteen (14) DMBs listed on the Nigerian Exchange Group (NXG) as of the end of 2022 were analyzed, using their audited financial statements. Panel regression analysis was conducted to examine the relationships between dependent and independent variables. The findings indicate that CAMELS financial indicators significantly influence the performance of DMBs in Nigeria, though the direction and magnitude of the impact differ across the components. The study recommends that the Central Bank of Nigeria (CBN) should continue promoting firm growth and size strategies in the banking sector through policies that encourage deposit mobilization, cost reduction, and improved financial intermediation services to enhance profitability.

Keywords: *Capital Adequacy, Asset Quality, Management Efficiency, Earnings Management, Liquidity, Sensitivity to Market Risk.*

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Introduction

The need for banks to efficiently carry out their financial intermediation function to continue as a going concern and improve their overall financial performance cannot be overemphasized. Financial performance is the principal goal of banks and all other business organisations without which they will not survive in the long run (Ahmed, 2021). It is the degree to which the financial objectives of a firm are being or have been accomplished and the financial actions a business entity uses to manage its internal and external resources to maximize shareholders' wealth and profitability. Extant literature has shown that the stability of banks as a whole in the economy depends on their financial performance level. High level tends to absorb risks and shocks that banks could face from time to time and are a strong indicator of their efficiency (Verna, 2019). The financial institutions are banks, insurance, brokerage firms, insurance etc. (Adam, Somer & Ariel, 2021) which deal with monetary and financial transactions such as accepting deposits, processing loans, building investments and currency exchange.

According to Pekkaya and Demir (2018), banking in any economy serves as the fundamental source of financial strength. The banks have a direct and indirect impact on almost all industries. It plays a major role in the allocation of economic resources and a country's financial stability. The implication and role of banks operating in the modern economy are unavoidable and various products and services presented by the banks to the society are rising multifarious (Altan, Beduk & Yusufazari, 2014). According to Said and Tumin (2011), the banking sector is an integral part of the financial system and performs a strategic role in the economic development of nations. The banks as an industry assist through stimulating capital formation, innovation, monetization and facilitating the proper implementation of monetary policy. A healthy business environment builds consumer confidence and encourages investors to infuse more capital while controlled inflation helps in strengthening economic development. The banking sector in any economy enjoys a critical part in boosting economic growth by investing at large in infrastructure and other projects. Reforms in banks are crucial for regulating and controlling the money flow in society. In addition, the advancements in technology mobile banking, net banking services, E-wallets, Fintech and artificial intelligence, etc. are to be blamed for making banking more complex (Kulshrestha & Srivastava, 2022). During the

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financial crisis, governments adopted a majority of stakes in most of the beleaguered financial institutions through bailouts in developed countries. This started the debate about whether government-owned banks enhance financial soundness (Nsengiyumva 2016).

Evidence from the literature (Wibowo & Handika, 2017; Wapmuk, 2016; Singh & Milan, 2023) highlights the crucial role of the banking sector in the economy, emphasizing its position as the primary financial foundation. Banks facilitate economic development by channeling funds from surplus units to deficit units within the economy. Agbada and Osuji (2013) argue that in every system, there are essential components vital to its survival, with the financial system being one such critical element. Banking institutions significantly enhance the overall efficiency of the financial system by offering mechanisms for resource mobilization, redirecting funds from less productive to more productive investments. Through financial intermediation, banks mobilize funds from surplus sectors and provide loans and advances to deficit sectors. The banking sector is thus a fundamental pillar in the financial architecture of any economy, playing a key role in economic growth and development by facilitating capital formation, transmitting and managing monetary policy, enabling credit intermediation, and supporting payment and settlement systems (Srinivasan & Swaminathan, 2016; Chaudhuri, 2018). Bank intermediation function serves as the backbone and catalyst for the growth of an economy (Yusuf & Tijani 2019; Jain & Jaiswal, 2016). As the financial health of an economy is intertwined with that of its banking system, it is unimaginable to visualise a modern economy bereft of the services of a bank (Rahman& Islam, 2018). The degree of ROA in the banking industry is expected to exert some influence on the degree of competition amongst banks and play a complimentary role in the relationship between firm-specific factors such as Capital Adequacy, Asset Quality, Management Efficiency, Earning, Liquidity and Sensitivity to market risk (CAMELS) and financial performance (Khan, Ahmad & Gee, 2018).

Evaluating the performance of the banks is important for all parties, including suppliers, investors and others. Generally, the financial structure is the most important index in evaluating the performance of banks. One of the common financial indicators used by researchers for measuring banking performance is the CAMELS framework (Muhmad & Hashim, 2015). To ensure a strong and stable banking sector, banks must be assessed and evaluated in a way that

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allows for the removal of gaps where the CAMELS framework is considered the most used method for this. The researchers believe that the CAMELS framework is one of the integrated frameworks measuring the financial performance of banks and it shows the strength and weakness of the bank in one of the aspects of the framework; as a result of its importance. Furthermore, the stability of the financial system remains the overarching objective of the Financial System Stability Directorate. It is noteworthy that in 2018 the financial system remained strong, recording remarkable improvements in capital adequacy, quality of risk assets, earnings and liquidity, compared with the parameters in 2017. Consumer protection activities also witnessed an upswing. However, losses from fraud and forgery cases, in terms of number and value, increased during the period, necessitating additional measures to effectively curtail the undesirable development. Some significant developments that occurred during the period included industry-wide implementation of IFRS 9, effective January 1, 2018. This reduced the retained earnings of deposit money banks, despite the moderation occasioned by the application of the balances in banks' regulatory risk reserves. To cushion the effect of the impact on the capital of banks, a four-year transitional arrangement, in line with the guidelines provided by the Basel Committee on Banking Supervision, was adopted CBN 2021.

In addition, most of the studies on CAMELS indicators and financial performance relationship seemed to have been taken on its face value. Ahmed (2021) assesses the moderating effect of industry concentration on the effect of CAMEL financial indicators on the financial performance of deposit money banks in Nigeria, the study covers nine (9) years. Therefore this study intends to cover the period of fifteen (15) years to examine the relationship and the effect of determinants of performance x-efficiency on ROA and ROE of selected listed DMBs in Nigeria from 2008 to 2022.

Research Hypotheses

H01: There is no significant relationship between determinant factors (CAR, ASQ, ME, EAB, LIQ and SMR) and the performance of DMBs in Nigeria.

H02: There is no significant effect of determinant factors (CAR, ASQ, ME, EAB, LIQ and SMR) on the performance of DMBs in Nigeria.

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Literature Review

Bank Performance

Bank performance generally refers to how well a bank has achieved its objectives over a given trading period. This is typically reflected in the bank's published financial statements. While stock prices and their fluctuations are often considered indicators of a firm's performance, other factors such as bank size, deposit volume, and profitability are regarded as more reliable performance measures. In this study, profitability indicators, specifically Return on Equity (ROE) and Return on Assets (ROA are used to evaluate the performance of banks.

CAMEL component

Capital Adequacy

The term capital adequacy refers to the sufficiency of the bank funds (capital) that are accessible to sustain the bank's activity and serve as a buffer in the event of an unfavourable circumstance or any shock. It is evaluated using the capital adequacy ratio (CAR). CAR demonstrates the bank's internal resilience to endure losses throughout a crisis (Desta, 2016). Capital adequacy is necessary for maintaining depositor trust and averting bank failure. It influences a bank's overall performance (Reddy, 2012; Kulshrestha & Srivastava, 2022, Oke, & Onwere, 2023). In this analysis, the equity-to-total-asset ratio is used as a proxy for capital adequacy. Muhmad & Hashim (2015) posited that the equity-to-totalasset ratio measures a bank's overall financial health and long-term profitability, assuring investors that the bank's shares are a safe investment.

Asset Quality

Asset quality is another indicator of CAMEL analysis used in measuring banks' performance. It is a measure of a bank's strength in terms of its asset base. It shows the ratio of total investment to total assets. That is the proportion of a bank's assets that are used to create wealth and for investment. This implies that the higher the asset quality ratio, the greater the quality of assets of the bank and viceversa. (Ogbuji, Ologundudu, & Oluyomi, 2020). Asset quality for banks primarily refers to a review or assessment that determines the credit risk related to specific assets. Loans and investment portfolios are examples of assets that require interest payments. The level of monetary quality and associated risks in a bank's capital, primarily related to advances and investment-related matters, is referred to as asset

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quality. Asset quality support is very important for banks to sustain their profitability and perform to a high level of degree. (Gulia, et al., 2014).

Management Efficiency

Management efficiency as one of the CAMEL indicators refers to the ability of the management team of the bank to measure, identify and control the risks of business activities and ensure efficiency in business operations (Ogbuji, et al. 2020). Further, the interaction of CRM practices and firm attributes on non-financial performance was statistically significant. Another component of the CAMEL model to check the management's potential and capabilities is "Management Efficiency". Through these components, we can analyze the administration's productivity and effectiveness. It has been observed that often qualitative measures and subjective assessments of organizational discipline, staff quality, control management, and systems implemented by management are done and through this, the efficiency of the organizational management is being measured. Moreover, through management efficiency, the quality of administration in generating revenues and increasing net profit is being measured. (Aspal, & Dhawan, 2016) Effective management is one of the most important factors influencing a financial institution's success. Nonetheless, indicators of administration quality are primarily suitable for a single organization and cannot be successfully aggregated across the board. Furthermore, given the subjective nature of administration, judging its soundness solely by looking at bank books of accounts is difficult.

Earnings Ability

This is the fourth CAMEL component. It measures profitability in the form of return on equity. It entails the capability of the bank to expand its business. Shammi et al. (2021) showed that capital can be increased via retained earnings i.e., via the adoption of advanced technology to boost operational efficiency. Earning is also a measure of the bank's capacity in the aspects of loss absorption, financing expansion, and capital development (Abbas et al., 2021; Chen et al., 2021). Earnings quality denotes the quality of the profit made by a bank, measured by the degree of its reliability and relevancy (Alyaarubi et al., 2021; Benkraiem et al., 2021). The difference between revenue and expenditure denotes the profit obtained. Banks mainly attain their income from interest gained on loans as well as revenues from various banking activities. Meanwhile, expenditure entails the payments of salaries, wages, rents, administrative overheads, taxes, and so on. Profit is the surplus available after deducting all the expenditure. A prosperous bank can generate modest profits regularly and maintain a state of

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robustness for itself and its investors (Parrott et al., 2021). A bank's earnings quality and profitability are crucial in ensuring the health of its current and future operations.

Liquidity Management:

Liquidity management is an important measure to check the overall sustainability of the banks. In other words, it can be said that liquidity management relates to the capacity of a bank to convert resources into money with ease to meet the necessary budgetary requirements. Liquidity is one of the most important aims of working capital management and a central task of cash management. Many experts have defined the importance of liquidity by stating that a firm is considered to be liquid when it can clear its dues on time without incurring unnecessary costs (Qureshi, & Siddiqui, 2023). The term liquidity refers to a bank's ability to fulfil its cash-related obligations. It is important to maintain a suitable level of liquidity and this is also very critical for banks future revenues and long-term profits. Banks should practice more caution when making investments and should keep into consideration the fact that along with maximizing profits it should have another duty i.e. to provide liquidity to depositors.

The bank's proficiency is demonstrated by the High Liquidity proportion (Nag & Khatik, 2014).

Sensitivity to Market Risk

Sensitivity to market risk is defined as the degree to the earnings or capital of a financial institution will be adversely affected due to changes in interest rates, foreign exchange rates, commodity prices, or equity prices (FDIC, 2019). It mainly focuses on the ability of the bank to recognise, monitor, manage and control the market risk and give indication to management for the supervision in the problematic area. Market risk is related directly to unpredicted fluctuations in market prices (interest rates, exchange rates, equity prices and prices of final goods) and is closely associated with asset and liability management (Abdallah, 2013). Understanding the sensitivity of a bank to the market risks that face it is an important aspect of management's decision challenges. This is because market risk is an entire gamut of risks that directly affects a financial institution's earnings and the economic value of its assets, liabilities, and off-balance sheet items. Despite the divergence of finance scholars on the measure of market risk, there seems to be a relative consensus that market risk is synonymous to interest rate risk. Therefore, to effectively manage interest rate risk, This study measures sensitivity to market risk in line with Wapmuk's suggestion (2016). According to him, the ratio of net interest

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income to average total assets is a good proxy for sensitivity to market risk. The ratio shows the relationship between the total loan portfolio of a bank and its assets. It also provides the percentage change of the portfolio in changes related to interest rates or other issues related to financial intermediation activities of the bank.

Theoretical Review

This study is grounded in Stakeholders' Theory and Resource-Based View Theory. Stakeholders' Theory is particularly relevant to this research as it acknowledges the diverse stakeholders associated with Deposit Money Banks in Nigeria, including employees, depositors, borrowers, suppliers, the environment, and monetary authorities. Additionally, the Resource-Based View emphasizes the importance of unique, difficult-to-imitate attributes of banks as sources of superior performance and competitive advantage. Together, these theoretical frameworks provide a comprehensive understanding of the factors influencing the performance of Deposit Money Banks in Nigeria.

Empirical Review

Nguyen (2020) examined the impact of capital adequacy (using ratios) on banks' profitability. The examination was done on Vietnam's financial system. The study utilized a sample of 22 banks from 2010 to 2018. The collected sample was evaluated using panel data regression. According to the study's findings, bank profitability indicators are strongly and positively correlated with measures of capital adequacy, net interest margin, and non-interest revenue, but negatively correlated with measures of non-performing loans and state ownership. The COVID-19 epidemic has significantly impacted the profitability of the enterprises' assets. Due to low profitability caused by the COVID-19 epidemic, enterprises can no longer improve the quality of their assets. Similarly, Furthermore, Singh and Milan (2023). Examine the factors affecting the performance of public sector banks in India and the interrelationship between bank-specific determinants and the performance of public sector banks. Capital adequacy, Asset quality, Management Efficiency, Earning, and Liquidity (CAMEL) have been used as a performance determinant; a system generalised method of moments (GMM) analysis was used to find the effect of determinants on the performance measurement of public sector banks. It

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was found that the asset quality is negatively related to the performance of public sector banks. In addition, Daboh and Duramany-Lakkoh, (2023) examine the effect of financial stability of commercial banks and determine how they are affected by commodity and health shock and investigate the soundness of financial indicators on ROA based on CAMEL in Sierra-Leone. The study concluded that all the variables are positive and significant except asset quality and liquidity which are negative and insignificant to the performance of the bank in Sierra Leone.

Furthermore, Oke & Onwere (2023) investigated the effect of CAMEL variables on the deposit money banks' share price in Sub-Saharan Africa. The study findings show that Earnings have an insignificant effect on the share price of listed banks combined, in Kenya, Nigeria and South Africa. Also, the effect of CAMEL factors on the share prices of twelve commercial banks listed on the Nigerian Exchange Group (NGX) from 2011 to 2020 was examined by Onwere and Owualah (2022). The study showed that capital adequacy, earnings, and asset quality have no significant impact on share prices. In contrast, management effectiveness and liquidity significantly impact share prices negatively. Likewise, Soni and Devarakonda (2023) examine the factors that affect the efficiency of Indian banks, Management Efficiency and Earnings Performance have a significant relationship with Bank Efficiency across all categories of banks.

More so, Lim and Rokhim (2021) examined whether EPS affects profitability in Malaysia. The findings indicated a positive correlation between earnings per share (EPS) and profitability. The ability of a financial system to survive, expand, maintain itself, and function effectively is primarily based on liquidity and bank performance. In the same vein, Wuave, Yua, and Yua, (2020) studied whether a firm's profitability, as measured by its performance, is impacted by liquidity in Nigeria. The study's results demonstrated that liquidity positively affects profitability by enhancing its performance. More so, Hewaidy, Elshamy and Kayed (2020) concluded in their report that conventional banks performed better than Islamic banks and research findings are assumed to be significant for policymakers and other shareholders to make better decisions. Ping and Kusairi (2020) concluded that the banking sector should focus more on CAMEL components for better supervision of bank performance. In addition, Bashatweh and Ahmed (2020) evaluated the financial performance of commercial banks using the CAMEL rating. The study concluded that the CAMEL rating on Jordanian commercial banks is acceptable. Yadav and Jang (2021). Examine the impact of financial performance on

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the Housing Development Finance Corporation (HDFC) bank before and after the merger using the CAMEL framework in India. The study concluded that all the CAMEL variables are positively significant to the performance of the HDFC bank after the merger.

Methodology

This study is basically on determinants of the performance of deposit money banks in Nigeria. The study employed CAMELS (Capital Adequacy, Asset Quality, Management Efficiency, Earnings Management, Liquidity and Sensitivity to Market Risk) to measure the performance of listed money deposit banks in Nigeria. The study considered the effect of return on assets on the CAMELS criterion. Furthermore, Deposit Money Bank listed on the floor of the Nigerian Exchange Group (NXG) as of

April 2023 is considered for the study. An Exploratory research design was employed for this research. The population of the study comprised all the DMBs operating in Nigeria. According to the Central Bank of Nigeria, 33 DMBs and 5 Financial Holding Companies are operating as of 31 December 2022. Fourteen (14) listed deposit money banks by the Nigerian Exchange Group (NXG) as of the end of the year 2022 were examined based on the availability of their audited financial statement for the year 2022. This study utilized secondary data derived from the audited financial statements of the selected deposit money bank on the NXG while Panel regression analysis was used to show variation among dependent and independent variables.

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Model Specification

Earlier studies have set many methodological procedures, this study adopted a multiple regression technique using a panel dataset from all the listed deposit money in Nigeria to estimate the parameter of the following mathematical model adopted from the studies conducted by (Oke & Onwere 2023; Daboh & Duramany-Lakkoh 2023; Ahmed Maude, F.

(2021) with little modification.

ROA: ∫ (CA, ASQ, MEF, EAB, LIQ, SMR, FS, FG.)…….. eqn.1

The study econometric form of the model will captured as:

$$ROAit = \beta0 + \beta1\ CAit + \beta2ASQit + \beta3MEFit + \beta4EABit + \beta5LIQit + \beta6SMR + \beta7FSit + \beta8FGit + \varepsilon it \ldots.eqn.2$$

Where:

ROA = Return on Asset
CA = Capital Adequacy Ratio
ASQ = Asset Quality
MEF = Management Efficiency
EA = Earnings Ability
LIQ = Liquidity Ability
FS = Firm Size
FG = Firm Growth

Where: $\beta0 + \beta1$ represent the parameters of the model to be estimated, ε is the disturbance error term while subscripts i and t represent firm and year respectively.

Table 1: Measurement of Study Variables

Variable	**Acronym**	**Measurement**	**Sources**
Dependent			
Return on Asset	ROA	Profit before interest and tax divided by total assets	Agu (2008), Ahmed Maude, F. (2021).
Independent			

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Capital Adequacy	CA	Shareholders equity to total assets	Oke and Onwere (2023)
Asset Quality	ASQ	Net Profit/Total Equity	Shittu and Abdulkadir (2023), Ledhem and Mekidiche (2020)
Management Efficiency	MEF	Asset Turnover	Kulshrestha and Srivastava (2022), Oke and Onwere (2023)
Earning Ability	EA	Net interest income / Total interest income.	Aliyu and Hassan (2020),
Liquidity Ability	LIQ	Loan to Deposit Ratio	Ghazavi and Bayraktar (2018), Oke and Onwere (2023)
Sensitivity to Market Risk	SMR	Net interest income to average total assets	Wapmuk (2016).

Source: Researcher's Compilation, 2024.

Results and Discussion

Analysis of Relationship between CAMELS and Return on Assets of DBMs in Nigeria

Analysis in table 2 revealed the positive correlation between ROA and each of CAR, ME LQT, SMR, FG and FS. CAR has a coefficient value of 0.0754. This implies that CAR is positively correlated with the ROA of DMBs in Nigeria within the period of this study and that an increase in CAR will potentially lead to an increase in ROA. Similarly, CAR, MEF, LQT

SMR, FG and FS have a coefficient of 0.0754, 0.0119, 0.0263 0.1124, 0.0884 and 0.0211

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indicating that CAR, ME, LQT, SMR, FG and FS increases, ROA is likely going to increase. Though the relationship between ROA and each of these explanatory variables is positive, the level of relationship in all the cases is not strong. For each case, the table shows a weak uphill (positive) linear relationship between the independent variables and the ROA of DMBs. Nevertheless, the table also shows that ASQ and EAB have a weak negative linear relationship with ROA. This means that the relationship between ROA and each of the two explanatory variables is inverse whereby an increase in any of them will potentially lead to a decrease in ROA. In addition, ASQ has a correlation value of -0.1690 and EAB has -0.1308. This indicates that an increase in the value of ASQ and EAB will likely lead to a decrease in the ROA of DMBs in Nigeria during the study period. This shows that ASQ and EAB as negatively significant to ROA there the null hypothesis is accepted because it has no significant relation to the performance of DMBs in Nigeria during the period of the study.

Table 2: Analysis of Relationship between CAMELS and Return on Assets of DBMs in Nigeria

Variables	ROA	FG	FS	CAR	ASQ	MEF	EAB	LQT	SMR
ROA	1.0000								
FG	0.0884	1.0000							
FS	0.0211	-0.7705	1.0000						
CAR	0.0754	-0.1468	0.1478	1.0000					
ASQ	-0.1690	-0.0042	0.0263	-0.1184	1.0000				
MEF	0.0119	-0.1606	0.1455	0.0736	-0.1992	1.0000			
EAB	-0.1308	-0.1450	0.1417	0.4338	0.0505	0.4317	1.0000		
LQT	0.0263	-0.2992	0.4205	0.1707	0.1311	0.2474	0.2407	1.0000	
SMR	0.1124	0.1072	-0.0925	-0.0345	-0.0323	-0.0581	-0.0797	-0.1277	1.0000

Source: Researcher's Computation (2024)

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Panel Regression Analysis

The study employed a panel regression analysis, as shown in Table 3, for the model Ordinary least square regression shows the R-square of 0.06. This suggests that the dependent variable (DV) among the Deposit Money Banks in Nigeria cannot explain 100 per cent by all the study variables, it is just 10% of the systematic variation in the bank's value in the pooled banks, which was jointly explained by the CAMELS and ROA. The OLS pooled regression model is valid for statistical inference, as indicated by the F-statistics value of 2.87 and its corresponding p-value of 0.049 also the VIF of 1.65 which is lower than the benchmark value of 10, suggests that multicollinearity is absent, and as a result, no independent variable (IV) has to remove from the model. More so, The Housman test was also used to distinguish between random and fixed effects. The study adopted a random effect model to describe the impact of CAMELS on the ROA on the selected DMBs in Nigeria based on the Housman statistics (p – 0.43 > 0.05). The CAMELS as an IV appears to be positively and significant influenced by CA

(β=0.1576; p>|t|=0.230>0.05) has positive and insignificant value on ROA, ASQ (β=0.6103; p =0.000; <0.05), MEF (β=0.6043; p =0.000; <0.05), LIQ (β=0.3715; p =0.000; <0.05), all have positive and significant effect on ROA, contrarily EAB (β=-0.1534; p =0.039; <0.05) has negative and significant effect on ROA. CA (β=0.1573; p =0.230; >0.05), and SMR with

(β=1.6304; p =0.220; <0.05), have a positive and insignificant effect on ROA. In the case of control variables Firm Growth and firm Size (β= 0.1181; p>|t|=0.049<0.05 and β= 0.1249 p>|t|=0.016<0.05), revealed positive and significant influence on the return on asset of DMBs in Nigeria.

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Table 3: Panel Regression Analysis

	Pooled OLS	**Random Effect**	**Fixed Effect**
C	29.2299 (16.2356)**	31.942 (0.000)**	33.4620 (0.000)**
CAR	0.3973 (0.005)**	0.1573 (0.230)	0.5916 (0.000)
ASQ	0.3003 (0.002)**	0.6103 (0.000)**	0.7694 (0.000)**
MEF	0.0529 (0.378)	0.6043 (0.000)**	0.0179 (0.809)
EAB	-0.1569 (0.012)**	-0.1534 (0.039)**	0.6965 (0.000)**
LIQ	0.4226 (0.000)**	0.3715 (0.000)**	0.4677 (0.000)**
SMR	2.0002 (0.145)	1.6304 (0.220)	1.1689 (0.0279)
FG	0.1479 (0.018)	0.1181 (0.049)**	01070 (0.082)
FS	0.3048 (0.000)**	0.1248 (0.016)**	0.1390 (0.008)**
R-square	0.1024	R- square within 0.0609 R- square between 0.1784	R- square within 0.0646 R- square between 0.1784
Adj. R-square	0.0667	R- square Overall 0.0862	R- square Overall 0.0652
F-Statistics	2.87	Wald chi2 (8) = 14.79	F (8, 188) = 1.62
Prob.(F-statistics)	0.049	0.0633	0.1206
VIF	1.65		

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Housman		0.43	0.62

Source: Researcher's Computation (2024) **Discussion of Findings**

The findings of this study demonstrate a significant positive influence of the CAMELS framework on the return on assets (ROA) of selected listed Deposit Money Banks (DMBs) in Nigeria. Specifically, the Capital Adequacy (CA) results align with the findings of Badrul and Bustamam (2017) and Yüksel et al. (2018), indicating a direct impact on ROA, although they contrast with Omar and Mugabe (2016) and Zagherd and Barghi (2017), who found different results. Asset Quality (ASQ) also showed a positive and significant influence on ROA, consistent with earlier studies by Zagherd and Barghi (2017) and Badrul and Bustamam (2017), yet contradicts findings by Boateng (2019) and Al-Abedallat (2019) that reported a negative relationship. Management Efficiency (MEF) was found to significantly and positively affect financial performance, corroborating the work of Saha and Bishwas (2021) and Soni and Devarakonda (2023), despite contrasting findings from Ebrahimi et al. (2017) and Alemu and Aweke (2017). Additionally, the Liquidity (LIQ) indicator showed a positive and significant correlation with financial performance, consistent with findings from Badrul and Bustamam (2017) and Yüksel et al. (2018). Overall, these results underscore the importance of CAMELS indicators in assessing the financial performance of DMBs, indicating that effective management of these factors is crucial for enhancing bank profitability in Nigeria.

Conclusion

The study concluded that CAMELS indicators are crucial determinants of bank performance, and significantly influence the financial outcomes of selected Deposit Money Banks (DMBs) in Nigeria. However, the impact of individual variables differs, with some showing positive effects and others negative. While some explanatory variables have statistically significant effects on financial performance, others do not. The analysis also reveals that firm growth and size play a significant role in moderating the relationship between most CAMELS indicators and bank performance, either through statistical significance or changes in relationship direction. Overall, CAMELS indicators affect DMBs' operations and performance, but the magnitude and direction of these effects vary by component. Additionally, the study finds that

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larger, more established banks with market power tend to operate more efficiently, offer services at lower costs, and achieve greater profitability.

Recommendations

Based on the study's findings, it is recommended that the CBN promote firm growth and size strategies within the banking sector, encouraging policies that enhance deposit mobilization, cost reduction, and efficient financial intermediation to boost profitability. Additionally, the CBN should conduct risk-based on-site examinations of banks at least three times a year to enhance oversight and address issues related to asset quality and capital adequacy more effectively. Lastly, DMBs' management should adopt strategies to improve asset quality by increasing performing loans and reducing non-performing ones.

References

Abbas, F., Yousaf, I., Ali, S., & Wong, W.-K. (2021). Bank capital buffer and economic growth: New insights from the US banking sector. Journal of Risk and Financial Management, 14(4), 142. doi: https://doi.org/10.3390/jrfm14040142.

Adam H., Somer A., & Ariel C. (2021), Financial Institution (FI), in: https://www.investopedia.com/terms/f/financialinstitution.asp.

Agbada, A., & Osuji, C. C. (2013). An empirical analysis of trends in financial intermediation and output in Nigeria. *Global Journal of Management and Business Research Finance*, *13*(9), 19-30.

Agu, C. C. (2008). Efficiency of Commercial Banking in the Gambia. African Review of Money Finance and Banking, at http://repository.unn.edu.ng/.../2849-EfficiencyofCommercial-Banking-in-the-Gambia.html

Ahmed Maude, F. (2021). Moderating Effect of Industry Concentration on the Effect of Camels Financial Indicators on Financial Performance of Deposit Money Banks in Nigeria, 1165. doi: https://dx.doi.org/10.2139/ssrn.3859894.

Al-abedallat, A. Z. (2019). The Factors Affecting the Performance of the Jordanian Banks using Camels Model. European Journal of Scientific Research, 152(2): 116-127

Aliyu, A., & Hassan, S. U. (2020). Bank Attributes and Financial Performance of Listed Deposit Money Banks in Nigeria the Moderating Role of Information Technology. *International Journal of Auditing and Accounting Studies*, *2*(1), 67-94.

Altan, M., Beduk, A., & Yusufazari, H. (2014). Performance Analysis of Banks in Turkey Using Camel Approach. 14th International Academic Conference, Malta, 2014.

Alyaarubi, H. J., Alkindi, D. S., & Ahmed, E. R. (2021). Internal Auditing Quality and Earnings Management: Evidence from Sultanate of Oman. Journal of Governance and Integrity, 4(2), 115-124. doi: https://doi.org/10.15282/jgi.4.2.2021.6054.

Amodu, L., Agedah, D., Oyero, O., & Okorie, N. (2018). From services to engagement: an assessment of online public relations in Nigerian banks. In *Proceedings of the 32nd International Business Information Management Association Conference IBIMA* (p. 7570e7577).

Aspal, P. K., & Dhawan, S. (2016). Camels rating model for evaluating financial performance of banking sector: A theoretical perspective. International Journal of System Modeling and Simulation, 1(3), 10–15.

Badrul Munir, M. B. & Bustamam, U. S. A. (2017). CAMEL Ratio on Profitability of Banking Performance: Malaysia versus Indonesia. International Journal of Management, Innovation & Entrepreneurial Research, 3(1): 30-39.

Bashatweh, A. D., & Ahmed, E. Y. (2020). Financial Performance Evaluation of the commercial banks in Jordan: Based on the CAMELS Framework. *International Journal of Advanced Science and Technology*, *29*(5), 985-994.

Benkraiem, R., Ben Saad, I., & Lakhal, F. (2021). New insights into IFRS and earnings quality: what conclusions to draw from the French experience? Journal of Applied Accounting Research, 22(2), 307- 333. doi: https://doi.org/10.1108/JAAR-05-2020-0094.

Bhattacharya, M., Inekwe, J., & Paramati, S. R. (2018). Remittances and financial development: empirical evidence from heterogeneous panel of countries. *Applied Economics*, *50*(38), 4099-4112.

Boateng, K. (2019). Credit Risk Management and Performance of Banks in Ghana: the Camels Rating Model Approach. International Journal of Business and Management Invention, 8(2): 41-48.

Central Bank of Nigeria Annual Economic Report 2021. cbn.gov.ng/Out/2023/RSD/2021 CBN ANNUAL ECONOMIC REPORT.a.pdf

Chaudhuri, B. (2018), "A Comparative Analysis of SBI and ICICI: Camel Approach", International Journal of Research in Management, Economics and Commerce, 8(1), pp. 151-156

Chen, S., Cai, W., & Jebran, K. (2021). Does social trust mitigate earnings management? Evidence from China. *Emerging Markets Finance and Trade*, *57*(10), 2995-3016.

Chidozie, U. E. & Ayadi, F. S. (2017). Macroeconomy and Banks' Profitability in Nigeria. African Research Review, 11 (2): 121-137.

Daboh, F., & Duramany-Lakkoh, E. K. (2023). Performance Evaluation of The Sierra Leone Banking Sector Using Camel Rating Framework. *Journal of Applied Finance & Banking*, *13*(3), 1-18.

Desta, T. S., (2016). Financial Performance of "The Best African Banks": A Comparative Through CAMEL Rating. Journal of Accounting and Management, 6(1), pp. 1-20.

Federal Deposit Insurance Corporation - FDIC (2019): Risk Management Manual of Examination Policies. http://www.fdic.gov/regulations/safety/manual/section2 1.html

Ghazavi, M. & Bayraktar, S. (2018). Performance Analysis of Banks in Turkey Using Camels Approach: Case Study of Six Turkish Banks during 2005 to 2016. Journal of Business Research-Türk. 10(2): 847-874. DOI: 10.20491/isarder.2018.458

Gulia, Y. (2014). Financial Performance of Private Banks in India. Global Journal for Research Analysis, 3(1) 1-14.

Hewaidy, A.M., Elshamy, M.A., & Kayed, M.A. (2020). Bank Performance and the Association Between Accounting Income and the CAMEL Framework: Evidence from Kuwait. Journal of Accounting and Finance, 20(3), 73–85. http://dx.doi.org/10.33423/jaf.v20i3.3010.

Hitt, M. A., Ireland, D. R. & Robert, E. H. (2012). Strategic Management: Competitiveness and Globalization: Concepts and Cases, 10th edition, South Western Cencage Learning, Canada.

Iheanyi, I. H. & Sotonye, I. (2017). Assessing the Performance of Nigeria's Bank through Camel Model. Journal of Accounting and Financial Management, 3(1): 14-22.

Jain, C. and Jaiswal, A. (2016), "A Comparative Study of Financial Performance of SBI and ICICI Banks in India", International Journal of Scientific Research in Computer Science and Engineering, 4(3), pp.2320-7639.

Kenton, W. (2019). Financial Performance: Concept, Measurements and Analysis. https://shodhganga.inflibnet.ac.in/bitstream/10603/705/11/12_chapter3.pdf

Khan, H. H., Ahmad, R. B. & Gee, C. S. (2018). Market Structure, Bank Conduct and Bank Performance: Evidence from ASEAN nations. Journal of Policy Modeling, 1-31. https://doi.org/10.1016/j.jpolmod.2018.02.001

Citation: Asimiyu M.O, Oladejo Z.A & Oladejo M.O (2024). Assessment of Critical Factors Shaping the performance of Deposit Money Banks in Nigeria. LAUTECH Journal of Accounting, Finance and Contemporary Management Research 1(1), 86-108

Kor, Y. & Mesko, A. (2013). Dynamic managerial capabilities: Configuration and orchestration of top executives' capabilities and the firm's dominant logic. Strategic Management Journal, 34(2): 233-244.

Kulshrestha, P., & Srivastava, A. (2022). Use Of Camel Rating Framework: A Comparative Performance Analysis Of Selected Commercial Banks In India. *Copernican Journal of Finance & Accounting*, *11*(1), 67-87.

Ledhem, M. A., & Mekidiche, M. (2020). Economic growth and financial performance of Islamic banks: a CAMELS approach. Islamic Economic Studies, 28(1), 47-62. doi: https://doi.org/10.1108/IES-05-2020-0016

Lim, H., & Rokhim, R. (2021). Factors affecting profitability of pharmaceutical company: an Indonesian evidence. *Journal of Economic Studies*, *48*(5), 981-995.

List of Deposit Money Banks in Nigeria (2023). https://ngxgroup.com/exchange/trade/equities/listed-companies.

Liu, L., Timothy, V. & Gao, Y. (2010). A Review of Approaches of Resource-based Empirical Research in Banking. The International Journal of Applied Economics and Finance, 4: 230-241.

Marco D. A. and Luciano M. (2015), "Stakeholder management and performance measurement systems in banks", Retrieved on 25 February, 2019, from https://www.researchgate.net/publication/280227347_Stakeholder_Management_and _ Performance_Measurement_in_B anks.

Mintzberg, H. (1998). Patterns in strategy formation. Journal of Management Science, 24(9): 934-948.

Muhmad, S. N. & Hashim, H. A. (2015). Using the CAMEL Framework in Assessing Bank Performance in Malaysia. International Journal of Economics, Management and Accounting, 23(1): 109-127. Retrieved from https://journals.iium.edu.my/enmjournal/index.php/enmj/article/view/292

Nag, A. K., & Khatik, S. K. (2014). Analyzing soundness of nationalized Banks in India A camel Approach. Applied Studies in Agribusiness and Commerce, 8 (1).

Naz, F., Ijaz, F & Naqvi, F. (2016). Financial Performance of Firms: Evidence from Pakistan Cement Industry. Journal of Teaching and Education, 5(01): 81-94.

Nguyen, T. H. (2020). IMPACT OF BANK CAPITAL ADEQUACY ON BANK PROFITABILITY UNDER BASEL II ACCORD: EVIDENCE FROM VIETNAM. *Journal of Economic Development*, *45*(1).

Nsengiyumva, J. (2016). Does Government Ownership Negatively Affect Soundness of

Banks? New Evidence. International Review of Management and Business Research, 5(3), 743–765

Ogbuji, I. A., Ologundudu, M. M., & Oluyomi, O. O. (2020). Comparative Analysis of Financial Technology and Traditional Bank Performance in Nigeria: The CAMELS Approach. *UNILAG Journal of Business*, *6*(1), 145-168.

Oke, B. O., & Onwere, H. I. (2023). Evaluating the impact of CAMEL variables on the share price of banks in Sub-Sahara Africa.

Omar, H. & Mugabe, A. N. (2016). Camels Model Analysis and Financial Performance in Rwanda. The International Journal of Business & Management, 4(12): 298-317.

Onwere, H.I, & Owualah, S. (2022). Evaluating the impact of camel variables on the share price of banks in Nigeria. International Journal of Academic Research in Accounting Finance and Management Sciences, 12(3), 295–308.

Pekkaya M., & Demir F.E. (2018). Determining the Priorities of CAMELS Dimensions Based on Bank Performance. In H. Dincer, Ü. Hacioglu, S. Yüksel (Eds.), Global Approaches in Financial Economics, Banking, and Finance. Cham: Springer, Cham. http://dx.doi.org/10.1007/978-3-319-78494-6_21.

Ping, K. G., & Kusairi, S. (2020). Analysis of CAMEL components and commercial bank performance: panel data analysis. *Jurnal Organisasi Dan Manajemen*, *16*(1), 1-10.

Qureshi, A. S., & Siddiqui, D. A. (2023). The Impact of the CAMEL Model on Banks' Profitability. *Available at SSRN*.

Rahman, M. Z. & Islam, M. S. (2018). Use of CAMEL Rating Framework: A Comparative Performance Evaluation of Selected Bangladeshi Private Commercial Banks. International Journal of Economics and Finance, 10(1): 120-128.

Reddy, S. K. (2012). Relative performance of commercial banks in India using CAMEL approach. International Journal of Multidisciplinary Research, 2(3), 38–58.

Ryan, J. (2012). The Negative Impact of Rating Agencies and Proposal for better Regulation. SWP Working Paper Series, FG 1/2012/Nr. 01. Berlin. https://www.swpberlin.org/fileadmin/contents/products/arbeitspapiere/The_Negative_Impact_of_Cre dit_Rating_Agencies_KS.pdf.

Saha, N.K., & Bishwas, P.C. (2021), "Determinants of financial performance of commercial banks in Bangladesh: an empirical study on private commercial banks", Global Journal of Management and Business Research, 2 (21): 23-32.

Said, R.M., & Tumin, M.H. (2011). Peformance and financial ratios of commercial banks in Malaysia and China. International Review of Business Research Papers, 7(2), 157– –169.

Saidu, A., & Lawal, A. (2020). Firm attributes and executive compensation of conglomerates in Nigeria. GUJAF: Gusau Journal of Accounting and Finance, I(1), 23–23. https://journals.gujaf.com.ng/index.php/gujaf/article/view/17.

Shammi, M., Bodrud-Doza, M., Islam, A. R. M., & Rahman, M. (2021). Strategic assessment of COVID-19 pandemic in Bangladesh: comparative lockdown scenario analysis, public perception, and management for sustainability. Environment, Development and Sustainability, 23(4), 6148 -6191. doi: https://doi.org/10.1007/s10668 -020 - 00867 - y

Shittu, I., & Abdulkadir, H. (2023). The Moderating Effect of Cost Per Loan Asset Ratio On the Relationship Between Credit Risk and Financial Performance of Listed Deposit Money Banks in Nigeria. *International Journal of Banking and Finance (IJBF), 18*(1), 95-115.

Shittu, S. A. and Amao, B. W. (2022). Firm Attributes and Real Earnings Management in Nigeria. Fuoye Journal of Accounting and Management 5(1), 165-179. www.fjam.fuoye.edu.ng; ISSN: 2805-3672 (Print), 2814-1717 (Online).

Singh, Y., & Milan, R. (2023). Analysis of financial performance of public sector banks in India: CAMEL. *Arthaniti: Journal of Economic Theory and Practice*, *22*(1), 86-112.

Sirmon, D. G., Hitt, M. A., Ireland, R. D. & Gilbert, B. A. (2011). Resource orchestration to create competitive advantage: Breadth, depth, and life cycle effects. Journal of Management, 37(5): 1390-1412.

Soni, R., & Devarakonda, S. (2023). Factors Affecting the Efficiency of Indian Banks using Camels Model Via Panel Data Analysis. *Academy of Marketing Studies Journal*, *27*(3).

Srinivasan, and Saminathan, Y.P. (2016), "A Camel Model Analysis of Public, Private and Foreign Sector Banks in India", Pacific Business Review International, 8(9), pp.45-57.

Verna, E. (2019). Financial Performance - Understanding its Concepts and Importance. https://www.simplilearn.com/financial-performance-rar21-article

Wapmuk, S. E. (2016). Banking Regulation and Supervision in Nigeria: An Analysis of the Effects of Banking Reforms on Bank Performance and Financial Stability. A Thesis Submitted to the University of Salford, Salford, UK in Partial Fulfilment of the Requirements of the Degree of Doctor of Philosophy.

Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic management journal*, *5*(2), 171-180.

Wibowo, A. & Handika, R. F. (2017). The strategy of the banking industry in Indonesia: following institutional theory or resource-based view? Jurnal Siasat Bisnis, 21(2): 131140.

Wuave, 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.

Yadav, S., & Jang, J. (2021). Impact of merger on HDFC bank financial performance: A CAMEL analysis approach. *International Journal of Economics and Finance*, *13*(8).

Yusuf, B. R., & Tijani, J. O. (2019). An Evaluation of Financial Health of Nigerian Deposit Money Banks using CAMELS Rating Model. *Annals of the University Dunarea de Jos of Galati: Fascicle: I, Economics & Applied Informatic*