International Journal of Development Strategies in Humanities, Management and Social Sciences
p-ISSN: 2360-9036 | e-ISSN: 2360-9044
IJDSHMSS
July, 2025
Vol. 15, No. 1

Impact Assessment of Bank Deposits on Bank Performance: Emphasis on Nigeria

[1]Nwaguru, Wisdom Ezemndi, [2]Okafor, Chukwunyeaka Linus & [3]Anukam, Chidozirim Stephen

[1&3]University of Agriculture and Environmental Sciences, Umuagwo, Imo State, Nigeria
[2]Ministry of Finance, Owerri, Imo State

Article DOI:
10.48028/iiprds/ijdshmss.v15.i1.08

Keywords:
Bank Deposits, Federal Government Deposits, Bank Performance, Net Interest Margin

Corresponding Author:
Nwaguru, Wisdom Ezemndi

Abstract

This study investigated the impact of bank deposits on bank performance in Nigeria for a period of twenty-four years (2000-2023). Bank deposits were considered from the dimension of demand, time, savings, foreign currency and Federal Government deposits; while the performance of deposit money banks was measured using net interest margin (NIM). Data on these deposits were sourced from Central Bank of Nigeria (CBN) statistical bulletin while data on NIM was collected from The World Bank. The data so generated were subjected to descriptive analysis, unit root test, Johansen cointegration test, ECM estimation, and granger causality test. Basically, results revealed that demand, savings and foreign currency deposits have positive insignificant effects on the net interest margin of deposit money banks; while time and Federal Government deposits have negative effect on the NIN of banks. However, the effect of time deposits was statistically significant. It was also revealed that there is a long run relationship between bank deposits and banks performance. It was concluded that bank deposits have no significant impact on bank performance in Nigeria. Hence the suggestion that deposit money banks in Nigeria should improve on deposits mobilization by making alternative banking channels more effective in order to enhance the effects of deposits on the net interest margin of banks. Also, there is need for Nigerian banks to review existing deposit rates upwards by offering competitive rates that can encourage more deposits from individuals, businesses and the government. Finally, as a way to encourage more deposits in Nigerian banks, the government should make the business environment very conducive for businesses to thrive.

Background to the Study

Deposit Money Banks (DMBs) by design are unique financial institutions that enhance the functioning of every economy. They are distinguished from other financial institutions because "they hold the money supply of a country; they are the only financial intermediaries whose demand deposit circulate as money; their lending can create additional bank deposits through redeposit of money by borrowers; and they have the sole power to create money through the monetization of debt or through a promise to pay IOU, and also the power to destroy money" (Zandoll, Walkin & Ahjazi, 2021). Given these distinct features, Deposit Money Banks lubricate economic activities by intermediating between the surplus and deficit units of every economy. According to Mohammadu and Ismaili (2019), "financial intermediation entails the activities of Deposit Money Banks, which hold money balances of, or which borrow money from individuals and other institutions, in order to make loans or other investments". Thus, the main purpose is to channel funds from lenders to borrowers at a profit. Deposit Money Banks borrow from lenders by way of accepting deposits from them and they lend to borrowers by way of extending overdrafts, loans and advances.

In Nigeria, aggregate bank deposits consist majorly of demand deposits from the private sector, State and Local governments; time deposits from the private sector, State and Local governments; savings deposits from the private sector, State and Local governments; foreign currency deposits from the private sector, Federal, State and Local governments; and Federal Government deposits which covers Federal Government time, demand and savings deposits (CBN, 2022). In 2022, these classes of deposits closed at ₦6388.65 billion, ₦4467.67 billion, ₦3945.35 billion, ₦4345.13 billion and ₦60.34 billion respectively (CBN, 2022). These deposits are also classified based on their duration, which is the time they will stay in the bank. On this note we have 3 Months deposits, 6 Months deposits, 12 Months deposits, and Over 12 Months deposits (CBN, 2022). The duration-based deposits have different rates. Ideally, the higher the duration, the higher the rate but this is not always the case. For instance, in 2022, these respective rates were 6.19%, 6.42%, 6.62% and 4.80%. Giving that Deposit Money Banks do not print money, they rely on the deposits they get from customers for onward lending for a profit. They profit they make comes from the spread between lending and deposit rates. Thus, the more deposits stay with banks, the higher the propensity for them to make profit from such deposits. Simply put, the profit banks make stems from charging borrowers far and above what they offer lenders of funds (Ajibola, 2017).

In essence, the ability of a bank to properly intermediate between the surplus and deficit units of an economy will go a long way in determining its overall profit level. Nevertheless, the profit of a bank, which translates to her financial performance, can be measured using countless indicators like "return on assets (ROA), return on equity (ROE), net interest margin (NIM), non-operating interest income, and return on capital employed" (Andrew & Osuji, 2018). They added that "net interest margin is the difference between interest income and interest expenses, usually expressed as a percentage of average earning assets. The interest income refers to inflows from all advances like

overdrafts, term loans, medium term loans and long-term loans; while interest expenses refer to outflows from all deposits received from customers". Ajibola (2017) in like manner stated that "the former entails all interest earned from loans and advances (credit) advanced by banks to customers in the course of their daily operations while the latter relates to all interest paid to customers for the singular reason of parting away with their liquidity (money)".

However, one of the key goals of Deposit Money Banks is to maximize profit. Profit maximization is goal that implies channeling all the operational and non-operational activities of a bank towards making profit. For banks, one way to make profit is to ensure that deposits are adequately mobilized in order to have a large pool of fund that can be extended to customers as credit (loans and advances) at a margin. This may account for why bank deposits and credit advancement in Nigeria have been on the increase. For instance, the CBN (2022) reported that bank deposits grew from a meager ₦10.68 billion in 1981 to ₦19,207.15 billion in 2017; which represents about 179,742 percent increment. In the same vein, aggregate bank credits rose from ₦8.58 billion in 1981 to ₦1812.47 billion in 2022, which is a growth rate of about 21,024.36%. The above picture shows that growth in credits exceeds growth in deposits, which ordinarily should translate to enhanced profit for Nigerian banks. However, it is puzzling to observe that since 1981, over 30 deposit money banks have liquidated in Nigeria (Kanu, 2022). This queries the extent to which deposit mobilization enhances the financial performance of banks?

Researchers on their part are concerned too as there are countless related studies today on the nexus between bank deposits and bank performance (Banke & Yitayaw, 2022; Upadhaya, 2021; Akinola, 2018; Akuma, Doku & Awer, 2017; Tuyishime, Memba & Mbera, 2015; Okun, 2012). These studies have produced conflicting results owing to so many factors like the choice of variables and the methodology adopted. For instance, the above studies adopted a bandwagon approach whereby ROA and ROE were the performance indicators mainly used. These studies also adopted advanced statistical tools like VAR (Vector Auto-Regression model), ARDL (Auto-Regressive Distributed Lag model), ECM (Error Correction Model), co-integration (different variations) and Granger Causality. Nevertheless, given that data on some of these banks performance indicators in Nigeria are scarce to the extent that their scopes are not up to 30 years; one wonders the validity and reliability of these studies. Again, since studies that adopted net interest margin (NIM) as performance indicators of banks with respect to bank deposits are scarce (to the best of the researcher's knowledge), the question that readily calls to mind is: what is the effect of bank deposits on the NIM of Deposit Money Banks in Nigeria?

Literature Review

Bank Deposits

The term bank deposit refers to the money or assets a bank holds for a customer. When a customer makes a deposit, they place money in the bank. The bank holds the money for the customer for a set amount of time under certain conditions. If the funds are removed earlier than the agreed time, a fee must be paid to the bank (Houston, 2012). Bank deposits

work through a system of agreements and regulations. When a customer makes a bank deposit, the bank agrees to hold the money for the customer. The bank sets guidelines for deposit amounts and time limits. While holding the deposit, the funds become the bank's asset. This means the bank can use the funds while they have the asset. For example, they use funds to pay for other customer withdrawals; though the customer's deposit account is part of a bank's liability. This means "the bank is responsible for the funds in the customer's account. At a set date, they need to return the funds and pay any interest agreed by both parties" (Ajibola, 2017).

Demand Deposits

This refers to "funds held in chequing accounts that can be withdrawn at any time without prior notice" (Andrew & Osuji, 2018). Basically, demand deposits are considered liquid assets because they can be easily converted to cash or used for transactions. Thus, account holders of demand deposits can withdraw funds without giving advance notice to the bank. According to Ajibola (2017), "one major feature of this class of deposit is that they typically earn little or no interest, as they are designed for frequent transactions" (Ajibola, 2017). However, on a macroeconomic level, demand deposits are part of a country's narrowly defined money supply, along with currency. This is the reason why it is generally believed that the common types of demand deposits are chequing accounts, savings accounts, and money market accounts. However, in Nigeria, the aggregate of demand deposits in deposit money banks come from individuals, businesses, local and state governments (CBN, 2022).

Time Deposits

According to Houston (2012), "a time deposit is an interest-bearing bank account that has a pre-set date of maturity. This implies that the money in a time deposit account must remain in the account for the fixed term in order to earn the stated interest rate". A certificate of deposit is the best-known example of a time deposit. Basically, time deposits generally pay a slightly higher rate of interest than a regular savings account; thus, the longer the time to maturity, the higher the interest payment will be. Nevertheless, "the owner of a time deposit can withdraw the money out if necessary but will lose some or all of the promised interest and may pay penalty fees in extreme cases" (Upadhaya, 2021). Just like demand deposits, owners of time deposit accounts in Nigeria are individuals, businesses, local and state governments (CBN, 2022).

Savings Deposits

Savings deposits according to Tuyishime, Memba and Mbera (2015) refers to "funds held in a savings account, which is a type of bank account designed to help individuals save money". Savings deposits are designed for savings purposes; they typically earn low rate of interest; liquidity here is high, which means savings account holders can access their money at will, though they are subjected to some restrictions on withdrawal; and they may require a minimum balance to avoid fees or to earn interest (Ajibola, 2017). Savings deposit account is the most popular account in Nigeria and it is owned by individuals, businesses, local and state governments (CBN, 2022).

Foreign Currency Deposits

Unlike demand, time and savings deposits, foreign currency deposits refer to special class of deposit that is dominated by currencies outside the local currency of a country (Upadhaya, 2021). Put differently, foreign currency accounts are accounts maintained in foreign currencies like the United States dollar ($), British Pound Sterling and the rest. Thus, it is the practice of depositing foreign currencies in a bank account. The essence is that investors use foreign currency deposits to diversity or hedge against foreign currency fluctuations. These investors as such can earn higher interest rates and as well diversify their portfolios (Upadhaya (2021). The downside nonetheless, is that this class of deposits comes with currency exchange risks. According to Akinola (2018), "there are two major types of foreign currency deposits and they are foreign currency fixed deposits and foreign currency demand deposits; but in Nigeria, foreign currency deposits consist of private sector foreign currency deposit (domiciliary accounts), Federal Government foreign currency deposit, State Government foreign currency deposit, and Local Government foreign currency deposit (CBN, 2022).

Federal Government Deposits

Federal government deposit also known as central government deposits are funds held in a central bank by the government (Tuyishime, Memba & Mbera, 2015). These deposits can be used for various purposes, such as "financing government activities, managing public debt, and implementing monetary policy" (Akinola, 2018). Thus, federal government deposits serve as a crucial tool for the government to manage its financial resources and implement its economic policies. In Nigeria, there are different types of federal government deposits and they include demand deposits, time deposits, and savings deposits (CBN, 2022). These deposits are typically considered to be very secure, as they are backed by the creditworthiness of the government. Again, these deposits are generally considered liquid assets, as they can be easily withdrawn or used for transactions. Finally, federal government deposits may earn interest, depending on the type of deposit and polices of the apex bank, which in Nigeria is the Central Bank of Nigeria.

Bank Performance

Performance is a relative term that depends on so many factors/variables. It entails how well a bank is doing at a given time. There are so many ways to measure the performance of a bank and one of them is profitability. Performance measures are quantitative or qualitative ways to characterize and define performance (Upadhaya, 2021). They provide a tool for organizations to manage progress towards achieving predetermined goals, identifying key indicators of organizational performance and customer's satisfaction. Performance measurement can be said to be the process of assessing the progress made towards achieving the predetermined performance goals. Guest, Michie, Conway and Sheeman (2018) define performance as "outcomes, results, and achievements (negative or positive) arising out of organizational activities. They argued that it is essential to measure strategic practices regarding outcomes". "These outcomes vary along a continuum of categories such as financial measures like return on asset, return on equity, turnover, profitability, return on capital employed, net interest margin and non-operating interest income" (Akinola, 2018).

Net Interest Margin (NIM)

According to Ibikunle and James (2021), "financial intermediaries in every economy deal extensively with borrowing and lending, and the net interest margin is the net benefit of lending. They stated that net interest margin is the difference between the interest income generated and the amount of interest paid out to lenders over a period of time". Net interest margin in essence is an industry-specific profitability ratio for banks and other financial institutions that lend out interest-earning assets (cash). Put differently, net interest margin is a measure of profitability for banks and financial institutions; and profitability is a measure of bank performance (Upadhaya, 2021). Net interest margin can also be seen as the difference between interest received (interest revenue) and interest paid (interest expense) over a given period of time. Interest revenue is generated through interest payments a deposit money bank receives on outstanding loans. It is made up of credit lines and loans on the bank's balance sheet; while interest expense is the price the bank charges the borrower in a financial transaction (Tuyishime, Memba & Mbera, 2015). It is the cost of borrowing money. It also refers to the interest that accumulates on outstanding liabilities like customer deposits and wholesale financing (Firdous & Farooqi, 2017). According to Banke and Yitayaw (2022), "net interest margin (NIM) can be determined by subtracting interest expenses from interest revenue and then dividing the amount by the assets earned". That is:

NIM = Interest Revenue – Interest Expenses / Total Assets Earned …….. (1)

Bank-Led Theory

According to Akinola (2018), the bank-led model offers an offbeat alternative to traditional branch-based banking whereby customer's financial transactions are done by a whole range of retail agents instead of at bank branches or via bank employees. Retail agents have one-on-one interaction with customers and perform cash-in/cash-out functions much as a branch-based teller would take deposits and process withdrawals. Virtually any outlet that handles cash and is located near customers could potentially serve as a retail agent. Thus, Kazi (2012) submitted that in the banking sector, deposit mobilization is a scheme designed to spur customers to deposit more cash with the bank which, in turn, will be used by the bank to give out more loans and generate additional revenue for them. The primary business that banks do is accepting deposits and granting credits. The more the credits the banks give out, the more the revenue they generate. Banks do not have a lot of their own money to give as loans and quite clearly depend on customers' deposits to create funds for granting loans to other customers.

Liquid Assets Theory

The liquid asset theory is a 17th century bank liquidity management theory that dates back to the times of the goldsmiths banking and precious metal coinage (Tukur, 2019). The theory, which is the first liquidity management theory, is unpopular today because of other theories like the real bill's doctrine, the shiftability theory, anticipated income theory, and liability management theory (Tukur, 2019). Basically, the theory holds that banks must hold large amounts of liquid assets as reserves against possible demand for

payment. The original intent of this is to keep sufficient gold (which today translates to having enough deposits) in the safe to redeem any notes presented for payment. The problem of determining accurately the quantity of notes that might be presented at any one time is a major defect of this theory (Kanjiri, Hanyati & Amphedoziyi, 2016).

Liability Management Theory

According to Anthony (2017), the liability management theory argues that a bank can use its liabilities for liquidity purposes. The theory further stated that banks can manage their liabilities so that they actually become a source of liquidity by going out to buy money when it needs it (for paying its demand deposits and meeting loan requests). Put differently, this theory argues that increasing the interest rates offered by a bank for funds will plunk increased supply and provide for liquidity needs. The liability management theory in essence, rules out unavailability of funds at any price; and assumes stable normal situations and unshaken confidence of the market on the credit-worthiness, viability and integrity of the borrowing bank (Nwankwo, 2004). In essence, the liability management theory suggests that a bank borrows the funds it needs by means of various bank-related money market instruments.

Theoretical Underpinning

Given the thrust of this study which is to establish the relationship between banks deposits and bank performance within the context of Nigeria, the most suitable theoretical underpinning is the liability management theory which stipulates that there is no need for banks to lend self-liquidating loans in order to maintain liquid assets as they can easily borrow reserve money in the money market whenever necessary. Thus, for banks to remain liquid at all times, they can hold reserves by building additional liabilities against itself via different sources like demand, time, savings, foreign currency and federal government deposits. As such, by being liquid banks can have a large pool of loanable funds that they can extend to customers as loans and advances at a profit.

Empirical Review

Related studies on bank deposits and bank performance are not scarce in the literature. Upadhaya (2021), for instance, examined the extent to which deposit mobilization of commercial banks in Nepal affect their financial performance by using two samples, which are Sanima and NABIL Banks Limited, out of a total of 27 commercial banks in Nepal. The purposive sampling technique was adopted and the total number of observations was ten having five years' annual financial data. Descriptive and causal comparative research designs were employed and the statistical tools used consisted of mean, standard deviation and correlation. Results revealed that loans and advance have positive and significant relationship with both net profit and total deposit mobilization.

Gunasekar and Kumari (2018) examined the factors affecting deposit mobilization in Sri Lanka. The main objective of this study was to examine the most effective factors affecting deposit mobilization, followed by a random sampling method, in which 120 deposit account holders were selected as a sample from three different convenient sample areas.

Questionnaires were the research instrument used and data generated were analyzed using descriptive and regression analyses and it was revealed that there is a significant and positive relationship between deposit mobilization and deposit interest rate, security, branch expansion, services, technology and awareness.

Orok, Okoi and Essien (2018) estimated the impact of inflation on deposit mobilization in deposit money banks in Nigeria. The population of the study included selected numbers of deposit money banks in Nigeria from 1994-2014. The study revealed that inflation has a negative impact on deposit mobilization ability of Nigerian banks.

Akuma, Doku and Awer (2017) investigated the relationship between deposit mobilization, credit risk and profitability of Ghanaian banks from 2002 to 2011 using financial statements of 17 Ghanaian banks that operated consistently within the study period. Panel regression analysis was used for data and results revealed a significant and positive relationship between credit risk, deposit mobilization, growth in interest income, capital adequacy ratio and profitability of Ghanaian banks.

Ambe (2017) investigated the determinants of deposit mobilization in commercial banks in Ethiopia using data for 20 years. Both descriptive and econometric analyses were applied for data analysis and results indicated that loan provision, branch expansion and number of customers have significant impact on the growth of deposit mobilization. However, the emergence of new competitors and interest rate were not found to have positive impact to induce deposit mobilization in the banks.

Tuyishime, Memba and Mbera (2015) examined the effects of deposit mobilization on the financial performance of commercial banks in Rwanda with emphasis on Equity Bank Limited. The target population of the study included bank managers involved in deposit mobilization. Adopting descriptive, Pearson and Spearman's correlation analyses, findings indicated that 85% of the respondents confirmed that the brand name of the Equity Bank is recognized in the public which has made it able to overcome challenges like high competition from other banks and there is a positive relationship between deposits mobilization and financial performance of commercial banks in Rwanda.

Gyamfi (2015) examined deposit mobilization as the role of commercial banks in Ghana. The population of the study was commercial banks in Ghana. Out of the twenty-seven commercial banks, nine were selected as the sample size and it was found that the amount of domestic funds that commercial banks receive was far below the level sustainable for self-sufficiency. Also, deposit mobilization of commercial banks in Ghana has an upward trend; it increases at a decreasing rate.

Obamuyi (2013) studied the degree to which banks in Nigeria have performed their intermediation role of deposit mobilization and granting of loans and advances, and the impacts on their performance. The study utilized auxiliary information acquired from the yearly reports and records from 2006 to 2011 of seven purposively chosen banks out of 24

current banks. The study utilized descriptive statistics of trend analysis, percentage growth and averages, and revealed that the banks perform stunningly in descriptive statistics of trend analysis, percentage growth and averages, and additionally, in allowing credits and advances, regardless of different socio-cultural and institutional issues restraining financial sector improvement in Nigeria.

Okun (2012) examined the effect of level of deposits on financial performance of commercial banks in Kenya between 2004 and 2011. The study adopted a causal research design and the population of the study was all 44 commercial banks in Kenya. The study used secondary data from the Banking Supervision Department of the Central Bank. A cross-sectional regression model was adapted and regression results indicated that there is a positive and significant relationship between deposit ratio and return on equity (ROE). The results also indicated that there is a positive and significant relationship between deposits ratio and return on assets (ROA).

Gap in Literature

The novelty of this study lies in its ability to adopt net interest margin as a measure of bank performance with respect to bank deposits. Secondly, it introduces a model that regressed net interest margin on demand, time, savings, foreign currency, and federal government deposits. Finally, the study, to the best of the researcher's knowledge, is an upgrade on existing studies in the area investigated.

Research Methods

Research Design

Having considered so many research designs, the researcher settled for the quasi-experimental research design. This is because the nature of the topic did not allow for real experiments, and there was the need to properly estimate the cause-effect relationship between bank deposits and bank performance.

Sources of Data

This study relied on secondary data, which were sourced from Central Bank of Nigeria (CBN) statistical bulletin and the Word Bank. Thus, data on bank deposits came from the former while that on net interest margin were source from World Bank data base (online version).

Methods of Data Analysis

The data generated for this study was first subjected to descriptive analysis which was centered on determining the descriptive characteristics of the variables used in the study. These characteristics were mainly the mean, median, maximum and minimum values of the variables. Next, the data for each variable was exposed to unit root test via the ADF (Augmented Dickey Fuller) approach. This test was executed with the mindset to ensure that all the variables were stationary in order to avoid coming up with spurious misleading results.

Given the results of unit root test, the data was subsequently subjected to co-integration analysis and the Johansen approach was followed for this analysis. The Johansen system cointegration test utilizes two test statistics to determine the number of co-integrating vectors. These are trace and maximum eigenvalue test statistics. The essence of this test is to find out if there is co-integration among variables, to determine the number of co-integrating equation and finally to define normalization of equation (Granger & Newbold, 2012).

In addition, there was ECM estimation, granger causality test and diagnostic tests. Diagnostic tests covered multicollinearity, serial correlation, heteroscedasticity, normality, and Ramsey RESET tests. The whole analytical procedure was aided by E-Views 10 software.

Model Specification

$NIM = F(DED, TMD, SAD, FCD, FGD)$ ..... (2)

$NIM = \beta_0 + \beta_1 DED + \beta_2 TMD + \beta_3 SAD + \beta_4 FCD + \beta_5 FGD + \mu_t$ ..... (3)

Where:

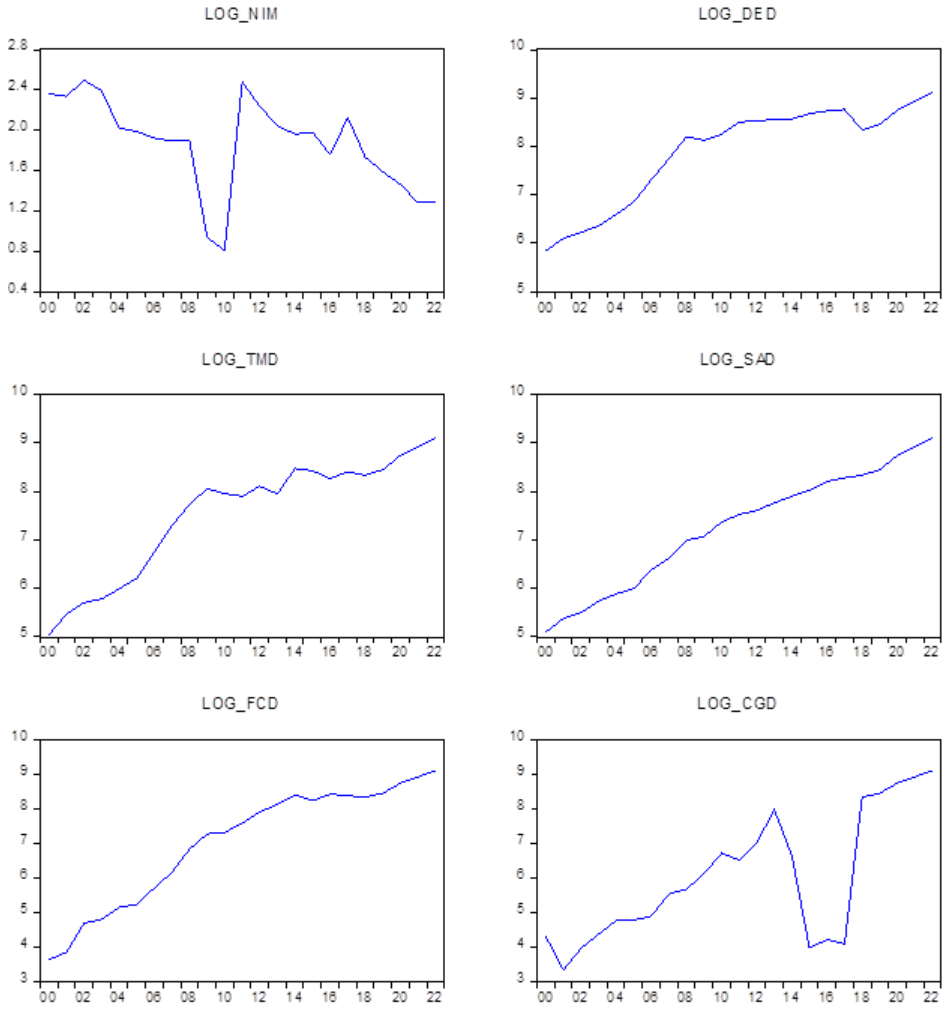
NIM	=	Net Interest Margin
DED	=	Demand Deposits
TMD	=	Time Deposits
SAD	=	Savings Deposits
FCD	=	Foreign Currency Deposits
FGD	=	Federal Government Deposits
β_0	=	Intercept
β_i	=	Slopes
μ_t	=	Error stochastic term

A priori Expectations

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5 > 0$ i.e. the study expected these classes of deposits (demand, time, savings, foreign currency and federal government) to have positive effects on the net interest margin of Nigerian deposit money banks.

Data Analysis and Interpretation of Results

Figure 1: Graphical Presentation of Data



Source: E-Views Output (2024)

Table 1: Descriptive Analysis

	NIM	DED	TMD	SAD	FCD	FGD
Mean	7.101739	3861.390	3080.938	2532.860	2709.864	1732.421
Median	7.120000	4169.650	2858.790	1861.410	1965.520	292.7200
Maximum	12.12000	9062.540	9062.540	9062.540	9062.540	9062.540
Minimum	2.240000	345.0000	154.4100	164.6200	38.07000	28.34000
Std. Dev.	2.850312	2538.976	2446.488	2482.030	2622.695	2702.985
Skewness	0.106051	0.057454	0.662963	1.174536	0.778721	1.573064
Kurtosis	2.194410	2.036031	2.899336	3.581464	2.739191	4.137439
Jarque-Bera	0.665047	0.903172	1.694536	5.612226	2.389747	10.72556
Probability	0.717112	0.636618	0.428584	0.060439	0.302742	0.004688
Sum	163.3400	88811.96	70861.57	58255.77	62326.87	39845.69
Sum Sq. Dev.	178.7341	1.42E+08	1.32E+08	1.36E+08	1.51E+08	1.61E+08
Observations	24	24	24	24	24	24

Source: E-Views Output

The above table 1 contains the descriptive elements of the original data generated for this study. Thus, for the period covered, net interest margin (NIM) averaged 7.10% and varied from 2.24% to 12.12% with a standard deviation of 2.85%. The mean of demand, time, savings, foreign currency and federal government deposits are: ₦3861.390 billion, ₦3080.938 billion, ₦2532.860 billion, ₦2709.864 billion and ₦1732.421 billion respectively. This implies that the highest deposits of banks come from current account holders, followed by fixed deposit accounts, foreign currency accounts, savings accounts and federal government accounts. The table equally shows that all the variables considered are positively skewed.

Table 2: Unit Root Test

Variables	ADF Test Statistic	5% Critical Value	P-Value	Order of Integration	Remarks
LOG_NIM	-5.003314	-3.020686	0.0008	I(1)	Stationary
LOG_DED	-3.064325	-3.012363	0.0451	I(1)	Stationary
LOG_TMD	-3.633060	-3.012363	0.0139	I(1)	Stationary
LOG_SAD	-4.830348	-3.012363	0.0010	I(1)	Stationary
LOG_FCD	-3.773163	-3.012363	0.0103	I(1)	Stationary
LOG_FGD	-4.311292	-3.012363	0.0032	1(1)	Stationary

Sources: Extract from E-Views Output

Unit root test result revealed that at 5% critical value, all the variables were stationary at first difference. This informed the decision to adopt Johansen co-integration technique.

Table 3: Cointegration Test

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.980976	165.6250	95.75366	0.0000
At most 1 *	0.852917	82.42151	69.81889	0.0035
At most 2	0.529664	42.16965	47.85613	0.1540
At most 3	0.492850	26.32920	29.79707	0.1191
At most 4	0.437047	12.07129	15.49471	0.1535
At most 5	0.000265	0.005563	3.841466	0.9398

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level
*denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Table 4: Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.980976	83.20350	40.07757	0.0000
At most 1 *	0.852917	40.25186	33.87687	0.0076
At most 2	0.529664	15.84045	27.58434	0.6793
At most 3	0.492850	14.25791	21.13162	0.3442
At most 4	0.437047	12.06573	14.26460	0.1082
At most 5	0.000265	0.005563	3.841466	0.9398

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level
*denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Source: E-Views Output

The cointegration test result above showed that there are two co-integrating equations in both cases (Trace and Maximum Eigen value criteria) at 5% level of significance. This implies that there is a long run equilibrium relationship between bank deposits and bank performance in Nigeria.

Table 5: ECM Estimation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.734492	2.074449	1.800233	0.0920
LOG_DED	0.875963	0.587792	1.490261	0.1569
LOG_TMD	-1.683017	0.561184	-2.999048	0.0090
LOG_SAD	0.110066	0.406481	0.270777	0.7903
LOG_FCD	0.483536	0.424824	1.138203	0.2729
LOG_FGD	-0.049457	0.063656	-0.776940	0.4493
ECM(-1)	-0.609024	0.283191	0.031865	0.0050

R-squared	0.583795	Mean dependent var	1.846148
Adjusted R-squared	0.417313	S.D. dependent var	0.462382
S.E. of regression	0.352955	Akaike info criterion	1.008416
Sum squared resid	1.868653	Schwarz criterion	1.355566
Log likelihood	-4.092580	Hannan-Quinn criter.	1.090194
F-statistic	3.506656	Durbin-Watson stat	1.982127
Prob(F-statistic)	0.022670		

Source: E-Views Output

ECM estimates showed that the intercept of the model is 3.734492, which implies that in an event where demand, time, savings, foreign currency and federal government deposits are held constant (or equated to zero), the rate of NIM will be about 3.73 percent, which falls below its average value of 7.10 percent. Table 5 also shows that demand, savings and foreign currency deposits have positive effects on banks' net interest margin; while time and federal government deposits have negative effects on NIM Nigerian banks. In essence, an increase in demand, savings and foreign currency deposits generates about 0.88%, 0.11% and 0.48% growth in NIM of banks respectively; whereas a unit increase in time and federal government deposits leads to about 1.68% and 0.05% decreases in banks' NIM respectively and vice versa. From the table, the value of adjusted coefficient of determination is 0.417313, which implies that demand, time, savings, foreign currency and federal government deposits have a combined effect of about 41.73% on the net interest margin of Nigerian banks. The value of Durbin Watson statistic is 1.982127, which implies absence of autocorrelation in the model.

Nevertheless, the coefficient of ECM is -0.609024, with a probability value of 0.0050; which are the desired signs. The implication of these is that in an event where there is any distortion to the established equilibrium relationship between bank deposits and bank performance, the tendency that equilibrium can be restored by bank deposits is about 60.9 percent per annum.

Table 6: Pair-wise Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
LOG_DED does not Granger Cause LOG_NIM	21	2.14554	0.1495
LOG_NIM does not Granger Cause LOG_DED		2.70586	0.0972
LOG_TMD does not Granger Cause LOG_NIM	21	3.60288	0.0511
LOG_NIM does not Granger Cause LOG_TMD		0.18941	0.8293
LOG_SAD does not Granger Cause LOG_NIM	21	1.20669	0.3250
LOG_NIM does not Granger Cause LOG_SAD		2.10888	0.1538
LOG_FCD does not Granger Cause LOG_NIM	21	2.27930	0.1346
LOG_NIM does not Granger Cause LOG_FCD		0.73520	0.4949
LOG_FGD does not Granger Cause LOG_NIM	21	0.92769	0.4157
LOG_NIM does not Granger Cause LOG_FGD		0.76618	0.4811
LOG_TMD does not Granger Cause LOG_DED	21	1.92123	0.1787
LOG_DED does not Granger Cause LOG_TMD		2.08253	0.1571
LOG_SAD does not Granger Cause LOG_DED	21	0.35444	0.7069
LOG_DED does not Granger Cause LOG_SAD		1.21787	0.3219
LOG_FCD does not Granger Cause LOG_DED	21	0.60380	0.5587
LOG_DED does not Granger Cause LOG_FCD		4.98893	0.0207
LOG_FGD does not Granger Cause LOG_DED	21	3.26571	0.0647
LOG_DED does not Granger Cause LOG_FGD		1.33426	0.2911
LOG_SAD does not Granger Cause LOG_TMD	21	2.32742	0.1297
LOG_TMD does not Granger Cause LOG_SAD		1.23651	0.3167
LOG_FCD does not Granger Cause LOG_TMD	21	0.15912	0.8542
LOG_TMD does not Granger Cause LOG_FCD		2.76792	0.0928
LOG_FGD does not Granger Cause LOG_TMD	21	1.67603	0.2183
LOG_TMD does not Granger Cause LOG_FGD		1.13506	0.3460
LOG_FCD does not Granger Cause LOG_SAD	21	0.25133	0.7808
LOG_SAD does not Granger Cause LOG_FCD		3.46387	0.0562
LOG_FGD does not Granger Cause LOG_SAD	21	1.34481	0.2885
LOG_SAD does not Granger Cause LOG_FGD		1.50824	0.2511

Source: E-Views Output

From table 6, it was revealed that time deposits (TMD) have a unidirectional effect on net interest margin (NIM) (P-value = 0.0511); while demand deposits have same effect on foreign currency deposits (P-value = 0.0207). However, the other variables have no directional effect on the other.

Table 7: Diagnostics Tests

Test	Test Criterion	Test Statistic Value	P-value
Multicollinearity	VIF	All > 5	-
Serial Correlation	Breusch-Godfrey	1.089559	0.3616
Heteroscedasticity	Breusch-Pagan-Godfrey	1.425984	0.2651
Normality	Jacque-Bera	2.917712	0.232502
Reset	Ramsey RESET	6.88E-07	0.9993

Source: Extract from E-views Output

Given the results above, since values of VIF (Variance Inflation Factor) are greater than 5, and the probability values of the other tests are greater than 0.05 (5% level of significance), it follows that there are no presences of multicollinearity, serial correlation and heteroscedasticity in the results above. It also shows that the model used was well specified and the errors of the said model are normally distributed as expected. In other words, the estimates reported earlier are not only valid but reliable as well.

Discussion of Findings

Given the foregoing, descriptive analysis revealed that current account attracts the highest deposits for banks in Nigeria; and this comes via demand deposits. This may be as a result of the peculiarities of this type of deposits. According to Alemu (2021), they are special deposits that may be withdrawn at any given time without prior written notice to the depository institution. ECM (Error Correction Model) analysis showed that demand deposits, savings deposits and foreign currency deposits expectedly, exert positive effects on the net interest margin of Nigerian banks. The implication is that the more banks can mobilize deposits via current accounts, savings accounts, domiciliary and government accounts, the higher the propensity to give out credits (loans and advances) at a profit (higher net interest margin); which enhances the financial performance of banks. This corroborates the report by Tuyishime, Memba & Mbera (2015); Akuma, Doku & Awer (2017) and Okun (2012) that the introduction of innovative banking technology has led to increase in deposits at a lower cost as opposed to the traditional ways of getting deposits and made financial services accessible to the unbanked public; and this enhance profitability level of deposit money banks.

ECM estimates also revealed that time deposits and federal government deposits generate negative effects on NIM of Nigerian banks. This falls outside the a priori expectation because the general belief is that a significant part of all mobilized deposit ends up as bank credit which other things being equal should increase the profit of banks. However, given that Federal Government accounts attract the least average amount of

deposits, it is no surprising that the effect is negative and insignificant. Nevertheless, the effects of demand, savings deposits, foreign currency deposits and Federal Government deposits on net interest margin are insignificant; while time deposits have a significant effect on NIM of Nigerian deposit money banks. The reason for this is not far-fetched because time deposits are special deposits that give banks the freedom to use such deposits for a stipulated period of time (Banke & Yitayaw, 2022). Granger causality test showed that only time deposits and demand deposits have unidirectional effects on net interest margin and foreign currency deposits respectively. This implies that time deposits dictate the pace of its relationship with NIM. Also, demands deposits attract foreign currency deposits either through domiciliary accounts or local, state of federal government accounts.

Conclusion and Recommendations

The study basically revealed that the highest deposits of Nigerian deposit money banks come from current account holders, followed by fixed deposit accounts, foreign currency accounts, savings accounts and federal government accounts; demand deposits have positive insignificant effect on the net interest margin of deposit money banks; time deposits have negative but significant effect on the net interest margin of deposit money banks; savings deposits have positive and insignificant influence on the net interest margin of deposit money banks; foreign currency deposits have direct insignificant effect on the net interest margin of deposit money banks; federal Government deposits have indirect and insignificant effect on the net interest margin of deposit money banks; these deposits have a joint significant influence of about 48.74% on the NIM of Nigerian banks; time deposits have a unidirectional effect on the net interest margin of deposit money banks; and demand deposits have a one-way effect on foreign currency deposits of banks in Nigeria. Hence, the study inferred that bank deposits have no significant impact on bank performance in Nigeria. Accordingly, the study suggested the following:

1. Deposit money banks in Nigeria should improve on deposits mobilization by making alternative banking channels more effective in order to enhance the effects of deposits on the net interest margin of these banks.
2. There is need for Nigerian banks to review existing deposit rates upwards by offering competitive rates that can encourage more deposits from individuals, businesses and the government.
3. As a way to encourage more deposits in Nigerian banks, the government should make the business environment very conducive for businesses to thrive as such will increase the country's money supply.

Limitations of the Study

The major limitations of this study were paucity of data as available records shows that the World Bank only started compiling data on net interest margin in 2000. This limitation limited the study to a time scope of only twenty-four years (i.e. 2000 – 2023). Similarly, the Central Bank of Nigeria (CBN) in 2007 migrated Deposit Money Banks' statistics to IMF's Standardized Report Form (SRF) for Other Depository Corporations (ODCs). This made it more difficult sourcing data on the various classes of deposits considered; which

eventually delayed the completion time of the work. Nonetheless, it is imperative to point out that the work was eventually done.

References

Ajibola, S. (2017). *Bank management: Basic issues in money, bank lending and credit administration*, Lagos: Precision Publishers

Akinola, A. (2018). Savings and commercial banks' performance in Nigeria: A statistical analysis. *M.Sc. Project, University of Northern British Columbia, United States of America.*

Akuma, J., Doku, I., & Awer, N. (2017). Credit risk, deposit mobilization and profitability of Ghanaian banks, *International Journal of Economics and Financial Issues*, *7*(5), 394-399.

Alemu, F. M. (2021). Drivers of deposit mobilization in private commercial banks of Ethiopia. *J Invest Manag, 10*(4), 56–61.

Ambe, J. (2017). The effects of deposits mobilization on financial performance in commercial banks in Rwanda. A case of Equity Bank in Rwanda Limited, *International Journal of Small Business and Entrepreneurship Research,* 3(6), 44-71.

Andrew, O. A., & Osuji, C. C. (2018). The efficacy of liquidity management and banking performance in Nigeria, *International Review of Management and Business Research,* 2(1), 223–233.

Anthony, O. (2017). Bank savings and bank credits in Nigeria: Determinants and impact on economic growth, *Int J Econ Financ Issues*, *2*(3), 357–372.

Banke, N. K., & Yitayaw, M. K. (2022). Deposit mobilization and its determinants: Evidence from commercial banks in Ethiopia, *Banke and Yitayaw Future Business Journal, 8*(1), 1-10. https://doi.org/10.1186/s43093-022-00144-6

Brooks, C. (2010*). Introductory econometrics for finance,* Cambridge University Press.

CBN (2022). *Central Bank of Nigeria Statistical Bulletin*, 33.

Ejinkonye, B. A., & Okoye, K. C. (2020). *Elements of statistics for business and social sciences (3rd Ed.)*. Owerri: Peacock Publishers Limited.

Firdous, S., & Farooqi, R. (2017). Impact of internet banking service quality on customer satisfaction, *The Journal of Internet Banking and Commerce*, *22*(1), 1–17.

Granger, G., & Newbold, P. (2012). Time series regression with a unit root, *Econometrica, 55*(15), 15 – 25.

Guest, D. E., Michie, J., Conway, N., & Sheeman, M. (2018). Human resource management and corporate performance in UK, *British Journal of Industrial Relations*, *41*, 458–472.

Gunasekara, H. U., & Kumari, P. (2018). Factors affecting deposit mobilization in Sri Lanka, *Int Rev Manag Mark, 8*(5), 30-47.

Gyamfi, Y. (2015). Some issues relating to productivity of Indian scheduled commercial banks, *The Journal of the Indian Institute of Bankers (JIIB), 58*(4), 19-87.

Houston, D. M. (2012*). Managing bank liquidity, profitability and solvency in modern times,* New York*:* Dickford Publishers.

Ibikunle, D., & James, W. A. (2021). A review of factors affecting bank performance in Nigeria (1990 - 2020). *Int J Bus Manag Invent (IJBMI), 8*(10), 26–33.

Kanjiri, R. E., Hanyati, K. I., & Amphedoziyi, E. A. (2016). Liquidity management and bank performance in Malaysia, *Journal of Empirical Studies*, *3*(2), 172-191.

Kanu, N. O. N. (2022). *Fundamentals of Nigerian financial system (With contemporary issues), (4th Ed.).* Owerri: Bon Publishers.

Kazi, A. M. (2012). Promoting deposit mobilization and financial inclusion, *Journal of Marketing, 5*(1), 971-87.

Mohammadu, W. E., & Ismaili, P. L. (2019). Macroeconomic dynamics, bank-specific factors, and deposit mobilization of the Nigerian banking sector. *Asian J Econ, Busin Account, 12*(2), 1–16.

Nwankwo, G. O. (2004). *Bank management: Principles and practice*, Lagos: Malthhouse Press Limited.

Obamuyi, T. M. (2013). An Analysis of the deposits and lending behaviours of banks in Nigeria. *International Journal of Engineering and Management Sciences*, *1*(1), 46-54.

Okun, D. M. (2012). The effect of level of deposits on financial performance of commercial Banks in Kenya, *Master of Business Administration Project, University of Nairobi, Kenya.*

Orok, A. B., Okoi, I. O., & Essien, A. (2018). Inflation and deposit mobilization in deposit money banks: The Nigerian perspective. *Int J Publ Administr Manag Resear*, *4*(4), 109–121.

Tuyishime, R., Memba, F., & Mbera, Z. (2015). The effects of deposits mobilization on financial performance in commercial banks in Rwanda. A case of equity bank Rwanda Limited, *International Journal of Small Business and Entrepreneurship Research*, *3*(6), 44-71.

Tukur, Y. (2019). Effect of liquidity ratio on money deposit banks in Nigeria, *Journal of Management Science & Entrepreneurship, 19*(7), 352-380.

Upadhaya, B. R. (2021). Deposit mobilization of commercial banks in Nepal. *A Master's Dissertation, Faculty of Management, Tribhuwan University, Nepal.*

Zandoll, A. D., Walkin, K. C., & Ahjazi, J. I. (2021). *Elements of banking and finance (2nd Ed.) Kano:* Jalingo Publishers.