

Bank Loan, Foreign Exchange Influence and Bank Performance

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Abstract

This paper investigated the impact of bank loans, foreign exchange earnings on performance of Nigerian deposit money banks. The study employed data from 14 deposit money banks spanning the period of 2010 to 2022. The method of data analysis employed is the panel least square estimation technique. The result of the study revealed that loans and advances to banks has significant but negative effect on the performance of deposit money banks in Nigeria and that loans and advances to customers have a positive and significant effect on performance of deposit money banks in Nigeria. It was also found out that foreign exchange earnings has a positive and significant impact on the performance of deposit money banks in Nigeria and that the effect of exchange rate fluctuations on cash held does not have significant impact on the performance of Nigerian deposit money banks. The study concludes that shareholders wealth is significantly affected more by factors outside the traditional banking functions of banks and therefore recommends for continuous financial reengineering to constantly profit from the dynamic financial environment.

Keywords: Bank Loans, Foreign Exchange Earnings, Bank performance, Influences of Foreign Exchange.

INTRODUCTION

In recent times, the performance of banks particularly in the 2023 financial years attracted attentions from all stakeholders ranging from researchers, the investing public, government agencies and shareholders. Though, while the shareholders were celebrating the huge profit made by the banks in the 2023 financial years, the Federal government of Nigeria announced a tax on the excess profit resulting from influences of foreign exchange. While it is expected that deposit money banks' performance is majorly a product of core banking function of loan granting and deposit taking, the dynamic nature of the financial system has change this narrative to position of financial engineering to survive in the financial landscape.

Financial performance of banks

Bank performance has always elicits critical debates from researcher and policy makers. Wealth creation for shareholders and the possibility of financial crisis indifferent decade has made research into banking performance a very important one. In recent time, while firms from other sector of the economy are declaring loss, the firms from the financial sector particularly the banking sector was declaring ballooning profit which has also call for attentions from far and wide.

Guerrieri and Harkrader (2021) used some major bank performance metric to examine what drives bank performance. Those metrics are revenue, and charge-off rates of loan. The study revealed that idiosyncratic and bank specific factors account for a substantial part of the changes in bank revenues. The result of this study emphasizes the implementation of business models by banks that is bank-specific business model as drivers of performance.

It is not out of place to expect a connection between macroeconomic fluctuations and performance of banks. The changes in the economic landscape has motivated the essence for a causal investigation of association between foreign exchange, bank loan and bank performance.

Hughes and Mester (2014) identified some aspects of banking which affects bank's choice of risk versus returns, which in turn, affects bank performance. The implication of this is that every funding activities of the banking institutions revolves around rebalancing of positions in the context of risks and returns.

Bank loan being a major assets of the banking financial institutions exert great influence on deposit money bank's performance. This impact can either be positive or negative. With increasing globalization and integration of financial markets and economies, fluctuation in the currency of one country will have significant effect on the economic activities of economic agents in other countries. Following that banks are going off-shore, this is particularly pertinent has there has been an increase in the exposure of banks and the entire financial market to changes in the foreign exchange rate.

Previous research have make concerted efforts at investigating the impact of bank loans on performance of financial intermediaries and the findings have been of mix results. The scope of those studies has also been slightly different from the scope of this study. To the best of the researcher's knowledge, none of the previous research works combined the variable of bank loans and foreign exchange to examine bank performance as it is in this study.

The main aim of the study is to find out the impact of influences of foreign exchange and bank loans on the performance of banks Nigeria. The specific objectives are to:

1. examine the effect of Loans and advances to banks on the performance of deposit money banks in Nigeria.
2. determine the impact of Loans and advances to customers on the performance of deposit money banks in Nigeria.

3. investigate the effect of foreign exchange earnings on the performance of deposit money banks in Nigeria.
4. find out the impact of the effect of exchange rate fluctuations on cash held on the performance of deposit money banks in Nigeria.

The hypotheses of the study are stated in the null form as follows:

1. that Loans and advances to banks does not have significant effect on the performance of deposit money banks in Nigeria.
2. that Loans and advances to customers does not have significant effect on the performance of deposit money banks in Nigeria.
3. that foreign exchange earnings does not have significant effect on the performance of deposit money banks in Nigeria.
4. that the effect of exchange rate fluctuations on cash held does not have significant effect on the performance of deposit money banks in Nigeria.

LITERATURE REVIEW

This section of the study considered definition of concepts relating to the core variables of the study. Theories that could provide explanation to the behavioural relationship between the variables are also explained. There is also a review of empirical literature and gaps in literature are drawn out.

Conceptual Review

Bank performance or profitability has been widely researched into and some researchers have identified its determinants as macroeconomic factors or banking specific factors. While bank loans are banking specific factors, foreign exchange influences is of the macroeconomic factor.

Bank loans ranges from loans by banks to its customers, and loans to other financial institution. Foreign exchange influences emanate from changes in the rate of foreign exchange which affect the bank earning from transactions in foreign exchange transactions.

Hughes and Mester (2014) asserts that “a bank’s risk-taking s also influenced by external and internal mechanisms that discipline bank managers. Internal discipline can be induced or reduced by organizational form, ownership and capital structure, governing boards, and managerial compensation. External discipline might be induced or reduced by government regulation and the safety net, capital market discipline (takeovers, cost of funds, stakeholders’ ability to sell stick), managerial labour market competition, outside blockholders of equity and debt and product market competition.”

Bank Loans and Bank Performance

The significance of bank loans in determining the bank performance cannot be overemphasized as it’s a major area of the bank’s core function, and constitute majority of the bank traditional assets. Risks associated with bank loans such as credit risk significantly impact bank performance. Lalon (2015) noted that credit risk occurs when there is failure by the debtor to fulfill their obligations in repayment of the loans. This is the reason the major concern of the banks is the level non – performing loans as this can either result in financial

distress or enable the banks to thrive in a competitive financial market. Doriana (2015) noted that non-performing loans remains the highest detrimental factor which affect the development of the financial sector. Also, Barth *et al* (2001) stressed the importance of loan to banking sector performance by stating that loan performance constitutes a huge proportion of the credit risk of a bank as it accounts for more than 10times of the bank equity. This make the loans much more exposes the banks to possible financial distress and also elicit great influence on the overall performance of the bank as majority of bank's earning also stream from interest repayment than fee income or dividend.

Of the products that the bank design and offered to bank customer emerge different loan products. These different loan products constitute bank loan portfolio. They are categorized as individual loans, loan for small and medium scale enterprises, salary loan, corporate loans, group loan guarantees, etc.

Bank loans are very critical to the development of the entire economy as it allows for a sound economic development (Gennaioliet *al*, 2012). It has also been emphasized that bank lending be designed with considerations of benefits to all the stakeholders of bank loans. These stakeholders are the depositors, borrowers, shareholders and the regulatory institutions (Parlour& Winton, 2008).

Foreign Exchange and Bank Performance

With increasing globalization, banks have become major players in foreign exchange market with foreign exchange being a major asset for trade as part of their investment portfolio in the categorization of their risk assets. Financial institutions are known to be a "go-between" their customers on foreign exchange transaction. They are major participants in foreign trade facilitation. They also trade in foreign exchange as a financial product through speculative trades. Speculative trades are transactions banks involve in to benefit from fluctuation in currency. Also, with increasing opening of branches by Nigerian bank in foreign countries, the level of foreign currency exposure will also increase which can either be beneficial or detrimental to the performance of the banks. As Madura (1989) noted that exchange rate risk is the effect of unexpected exchange rate changes on the value of the firm, banks can have their value eroded when changes in exchange rate go southward. This can also be a good news to the banks if the changes in exchange rate in relation to their investment are a positive one.

Wong *et al* (2008) maintained that movement in foreign exchange is a vital source of risk for banking institutions. They stated that minor fluctuation can result to erosion of bank profit and that significant changes can lead to total bank collapse and failure which is very detrimental to the financial system.

The study of Taiwo and Adesola (2013) revealed that foreign exchange fluctuation can make a bank to accumulate excessive bad loans and also that bank capital could be seriously undermined due to deteriorating condition of exchange rate. The study maintained that banks are likely to experience deterioration in profit when there is uncontrolled fluctuations in exchange rate.

Other Factors affecting Banking Performance

FDIC (2013) noted that while it is good to exercise some risk management mechanism for the banking sector through deposit insurance, mispriced deposit insurance and policies that are “too-big-to-fail”, this can generate a cost-of-funds subsidy which gives banks an encouragement to take additional risk. It is also particularly pertinent for banks to prevent risk in order to protect their valuable assets from instances of financial distress. A financially distressed financial institution is characterized with liquidity crisis which often emanate from runs by uninsured depositors, regulatory interventions in bank’s investment decisions.

Marcus (1984) revealed that financial institutions with high-valued investment opportunities maximize their expected market value by pursuing lower – risk investment strategies that protect the essence of their existence and thereby preserve their ability to exploit these opportunities.

Diversification is also seen as a major tool for enhancing banking performance. Diversification of bank assets decreases credit risks and with a well-advised diversification of deposit sources, the banks can reduce liquidity risks and a better mix of financial services can produce a more efficient source of returns for the financial institutions. Operating environment can also create significance impact on bank performance. A bank is either technically efficient or economically efficient.

Theoretical Review

The credit creation theory: this theory emphasis that banks through lending against deposits are creators of deposit money (McLeay *et al*, 2014). The theory criticizes the position of the two theory which discusses the lending function of deposit banks which are the theory of financial intermediations and the fractional reserve theory of banking. Tobin (1963) maintained that the ability of banks to create credit is not without limitation in the real world scenario. Botos (2016) identified the constraints to credit creation to include regulation, profit drive, competition and the demand for loans. This ability of banks through lending affects the performance of banks positively when the credit creation activity goes northward. This ability also has a multiplier effect on Nigerian economy. Though there have been some focus by banks on lending to certain sector of the economy which are seen to have the ability to pay interest and principal as **commercial loan theory** advance that lending should be considered for business activities in which the stock of trade can repay for the loan facilities.

The other theory considered is the International Fisher Effect theory. This theory draws a line through rate differences. The main focus of the theory is the differences between nominal and real interest rate and how all this differential filtered into what become inflation rate and the ongoing exchange rate. It explains the need for proper hedging strategies in the international financial markets for financial institutions to be able to reduce loss from fluctuation in rates. According to the International Fisher Effect (IFE) theory, foreign currencies with relatively high interest rates have a tendency to lose value since these high nominal rates represent the predicted pace of inflation (Madura, 2010).

The empirical analysis of this study combined the effect drawn from credit creation theory, commercial loan theory and international Fisher Effect theory.

Review of Empirical Studies

Ferreira (2023) examined non-performance loans determinants in 80 countries from 1999 to 2017 by using panel fixed effects and dynamic generalized methods of moments (GMM). The variables used in the study are bank level, industry level, and macroeconomic level. The study found out that bank market concentration promote non-performing loans and bank market competition and bank stability fail to affect non-performing loans.

Osemwengie-Eroet *al* (2023) examined impact of foreign currency exchange risk management on bank's performance in Nigeria. The study employed data from 2012 to 2021 employing panel least square, the result revealed that foreign exchange rate risk has a adverse effect on bank financial performance in Nigeria.

Le *et al* (2022) examined the moderating role of strategic interaction on the link between bank lending and macroeconomic factors. The study employed data from Vietnamese commercial banks for 2008 – 2018. Result of the study shows that in a less competitive aggressive environment, there is less impact of monetary and macroeconomic policy shocks on lending behaviour of banks.

Sinitin and Socol (2020) examined the determinants of banking profitability through ROA and ROE as indicators of the performance of banks. The study used variables such as GDP growth, loans/deposits ratio, inflation and bank capital/total assets ratio. The study employed panel data from 13 European Union nations for 2000 to 2017. The result of the study shows that there is a direct and significant link between ROA or ROE and GDP growth with reduced effect from the other variables.

Mburuet *al* (2020) examined credit management practices and loan performance with empirical evidences from banks in Kenya. The study used primary and secondary data covering the period of 2015 to 2018. The primary data was used to capture credit management practices while the secondary data was used to examine the existing bank loan records. Employing both inferential and descriptive statistics, the study shows that debt collection policy and lending policy has direct and significant impact on Kenyan banks' loan performance.

Offionget *al* (2016) examined the effect of currency fluctuation on commercial banks profitability in Nigeria. The study employed balanced panel approach with data from 12 largest banks to study relative impact of changes in currency on profits of commercial banks. Other variables considered in the study are bank size, bank divestment, non-performing loans and capital adequacy ratio. The result of the study without bank specific variable indicates that foreign currency exerted an adverse impact on profits of commercial banks. Of the bank specific variables, bank size and capital adequacy ratio exerted a direct influence on the banks profitability while no-performing loans and bank divestment exerted a negative effect on commercial bank profitability.

He *et al* (2014) examined the effect of foreign exchange changes on bank profitability. The study used data from 22 U.S. banks and found out that large U.S. banks had exposure to foreign exchange risk and bank performance is strongly associated with fluctuation in foreign exchange.

Wong *et al* (2008) examine the effect of foreign exchange fluctuation on the profitability of banks. The study used equity data from 14 quoted firms in China to find out impact of foreign exchange exposure of firms on their profitability. The study revealed that there is positive relationship between bank size and foreign exchange exposure. This is seen to be the effect of bigger foreign exchange operations and trading positions of bigger Chinese banks and their significant adverse foreign exchange exposure.

Gaps in Literature Review

While there is robust investigation on the performance of banks, the combination of the two variables of foreign exchange and bank loans have not been well researched into. In the instances where bank loans is a major focus of investigation, foreign exchange influences will be missing and vice versa. Hence the need for an in-depth look into the effect of the variables bank loans and foreign exchange effect on the performance of bank together in the same model.

METHODOLOGY

The research design employed in this study is combination of cross – section and longitudinal research design. The research design also follows the design of a cause-effect research approach for studying the causal link between the variables of the study. The entire Nigerian economy serves as the population of the study. The sample of the study focuses on 14 quoted banks of the Nigerian Exchange Group. The banks are listed in appendix of the study where the data for the study is presented. The choice of the banks is informed by data availability for period of consideration.

The data used for the study is a secondary data. The data for this study is sourced from secondary source which is the annual report and account of the various banks under investigation for the various years being considered which is 2010 to 2022.

In explaining the connection between the dependent variable and the independent variables, we developed a functional relationship between the variables of financial performance of banks and bank loan and foreign exchange related variables. The functional relationship used in this study is stated thus:

$$ROE = f(LFI, LCS, FXI, EEC) \dots \dots \dots (1)$$

The economic form of the model is specified as;

$$ROE_t = \alpha_0 + \beta_1 LFI_t + \beta_2 LCS_t + \beta_3 FXI_t + \beta_4 ECC_t + \mu_t \dots \dots \dots (2)$$

Where;

ROE = Bank Performance

LFI = Loans and advances to banks (In millions of Naira)

LCS = Loans and advances to customers (In millions of Naira)

FXI = Net foreign exchange Income/ (loss) (In millions of Naira)

EEC = Effect of exchange rate fluctuations on cash held (In millions of Naira)

α_0 = is the intercept or constant term

$\beta_1 - \beta_4$ = are the coefficients of the independent and control variables

μ_t = is the Stochastic variable

The *a priori* expectations are: $\alpha_0 > 0, \beta_1 - \beta_4 > 0$

The operational definition of the variables are presented in table 1

Table 1: Operationalization of the Variables

	Variables	Operational Definition	Type
ROE	Bank Performance	Bank performance refers to the ability of deposit money banks to generate earnings relative to the equity investment of investors. The performance is captured using a ratio of profit after tax to equity. Higher ROE values indicate greater performance.	Dependent
LFI	Loans and advances to banks (In millions of Naira)	Total Loans and advances to banking financial institutions.	Independent
LCS	Loans and advances to customers (In millions of Naira)	Total Loans and advances to customers who are not financial institutions but retail and some wholesale customers.	Independent
FXI	Net foreign exchange Income/ (loss) (In millions of Naira)	Returns from foreign exchange transactions.	Independent
EEC	Effect of exchange rate fluctuations on cash held (In millions of Naira)	Effect of exchange rate fluctuations on cash held is used to proxy for exchange rate fluctuation as it affects the assets of the banking institutions.	Independent

Source: Author’s Compilation, 2024.

The method of data analysis used is categorized into the main method of data analysis, the pre-estimation techniques used to investigate the suitability of the data and its conformability with the model estimated, the post estimation technique is also used to examine the validity of model estimated and reliability of model for possible forecast and recommendation.

The main method of data analysis is the Panel Least Square estimation technique. The pre-estimation techniques are the descriptive statistics, unit root test, and Hausman Test. The Hausman test determines which effect specification to analyse for the analysis. These analyses were conducted using EViews 10 statistical software.

RESULTS AND DISCUSSION

The result of the descriptive statistic is presented in Table 2. The result shows that ROA has a mean value of 10.30778. The minimum value of -9.53 shows that majority of the banks made considerable loss for the period under consideration. However in the same period being considered, some of the banks made excessive gains emanating partly from transactions in foreign exchange. This is the period the Nigerian Naira experienced much volatility which is particularly an upward move for the rate of the currency depreciating against major currency of the world and for the period for which demand for foreign currency was at its peak in the life of the Nigerian economy as production is at its lowest ebb hence the demand for foreign goods both finished goods, raw materials and products requiring value additions. There is significant disparity between the mean value of 10.30 and the standard deviation value of 112.49. The values of the Skewness of 12.76 which does lie between 0 and 1 and the value of the Kurtosis of 163.89 which is greater than 3 with a marginal figure show that series are not normally distributed. This is further established by value of the Jarque-Bera statistic which is less than 5% level of statistical significance.

The variable LFI is found to have a mean value of 640577.3 with a standard deviation value of 2806535. The variable is found to have a skewness value of 6.9873 which is far from the benchmark for a normally distributed series. The value of the Kurtosis of 53.23 shows that the variable LFI is not normally distributed as the value is greater than 3. This agrees with the probability value of Jarque-Bera statistic which is less than 0.05 which shows that the variable is not normally distributed.

For the variable LCS the mean value is 3,270,876 with a standard deviation value of 14,793,894 this shows significant variation from mean point in the distribution of the data. This implied that there is significant fluctuation or volatility in the advancing of loans to customers. This volatility could also be adduced to the prevailing conditions in the economy for the period investigated. The variable is also found not to have a normal distribution as the value of the probability for the Jarque-Bera statistics is found to be less than 5%. This is similar for the variable FXI and EEC which are found not to be normally distributed. With the non-normal distribution of the series, it implied that further analysis is required on the data to ensure suitability of data for analysis and inference, such analysis involves examining the stationarity properties of the series and possible multicollinearity or autocorrelation of the data.

Table 2: Descriptive Statistics

	ROA	LFI	LCS	FXI	EEC
Mean	10.30778	640577.3	3270876.	9309.269	17215.37
Median	1.302123	61723.58	761380.5	5681.880	1824.000
Maximum	1450.758	24098813	1.37E+08	190450.0	902168.0
Minimum	-9.531833	16.97600	44096.96	-273825.0	-273825.0
Std. Dev.	112.4971	2806535.	14793894	40582.39	109280.4
Skewness	12.76086	6.987302	7.634630	-2.483552	5.073841
Kurtosis	163.8957	53.23061	62.38917	24.89437	40.23752

	ROA	LFI	LCS	FXI	EEC
Jarque-Bera	183560.0	18802.29	26008.22	3486.247	10303.12
Probability	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	1711.092	1.06E+08	5.43E+08	1545339.	2857751.
Sum Sq. Dev.	2088174.	1.30E+15	3.61E+16	2.72E+11	1.97E+12
Observations	166	166	166	166	166

Source: Author’s Computation, 2024.

The result of correlation presented in table 3 revealed that there is there is significant association between ROA and LFI, ROA and LCS and ROA and FXI. But EEC was found not to have major link with ROA. The relationship between LFI and RO was found to be a negative relationship implying a rise in the unit of LFI results in a decrease of LFI. But a direct relationship was found out for LCS and ROA implying that a unit change in LCS will lead to a direct proportionate change in ROA and a unit change in FXI will lead to a direct proportionate change in ROA. On the relationship between the independent variables for the examination of multi-collinearity and serial correlation, the variables were fund to have a mix result while some were significantly related others are not significantly related. For example, EEC and LFI were not found to have significant relationship and LFI and FXI were not found to have significant relationship at the confidence level of 5%.

Table 3: Analysis of Correlation Results

tau-a Probability	ROA	LFI	LCS	FXI	EEC
ROA	1.000000 -----				
LFI	-0.109967 0.0356	0.999927 -----			
LCS	0.181818 0.0005	0.386564 0.0000	0.999927 -----		
FXI	0.126031 0.0160	0.061993 0.2363	0.321650 0.0000	0.999927 -----	
EEC	-0.002337 0.9655	-0.048412 0.3553	0.096897 0.0641	0.156627 0.0028	0.999781 -----

Source: Author’s Computation, 2024.

The result of the unit root test result is presented in table 4. The result revealed that ROE, LFI and LCS are integrated of order one implying the presence of a unit root but winorized after first differencing. FXI and EEC are found to be significant at order zero implying that it does not require any level of differencing for it to be stationary which implied constant mean and zero covariance. This is implied that we can use the data for further estimations upon which inferences will be drawn and hypotheses tested.

Table 4: Analysis of Correlation Results

S/No	Variable	Levin, Lin & Chu t*		Im, Pesaran and Shin W-stat		ADF - Fisher Chi-square		PP - Fisher Chi-square		Remark
		Statistic	Prob.**	Statistic	Prob.**	Statistic	Prob.*	Statistic	Prob.**	
1	ROE	830.933	1.0000	-6.58567	0.0000	98.4822	0.0000	93.7363	0.0000	
	D(ROE)	-24.6198	0.0000	NC	NC	195.070	0.0000	206.044	0.0000	I(1)
2	LFI	1.21419	0.8877	NC	NC	40.2842	0.0624	35.0723	0.1678	
	D(LFI)	-9.49207	0.0000	NC	NC	127.793	0.0000	196.074	0.0000	I(1)
3	LCS	14.0194	1.0000	NC	NC	3.51169	1.0000	2.81406	1.0000	
	D(LCS)	-2.80064	0.0026	NC	NC	64.8927	0.0001	69.8675	0.0000	I(1)
4	FXI	-4.30890	0.0000	NC	NC	66.1180	0.0001	76.7940	0.0000	I(0)
5	EEC	-6.43020	0.0000	NC	NC	92.9879	0.0000	102.957	0.0000	I(0)

NC means not calculated

Source: Author's Computation, 2024.

The result of baseline regression presented in table 5 revealed that LFI and EEC do not have significant effect on ROE but found LCS and FXI to have significant impact on ROE at 5% level of statistical significance. The regression parameters show that there is no serial correlation in the estimated model. But making decision for a panel least square will require regression result selected based on Hausman test, hence the need for conducting Hausman test presented in table 6.

Table 5: Analysis of Baseline Panel Regression Results

Dependent Variable: ROE

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10.26897	1.158874	8.861167	0.0000
LFI	-3.18E-06	1.65E-06	-1.924171	0.0561
LCS	8.25E-07	3.14E-07	2.630611	0.0094
FXI	9.63E-05	3.24E-05	2.976817	0.0034
EEC	-1.57E-07	9.52E-06	-0.016465	0.9869
R-squared	0.083623	F-statistic		3.672963
Adjusted R-squared	0.060856	Prob(F-statistic)		0.006843
Durbin-Watson stat	1.622347			

Source: Author’s Computation, 2024.

The result of Hausman test revealed that most appropriate regression effect for analysis and hypothesis testing is the random effect regression result. This is because the probability value of the Hausman test is 0.5399 which is greater than 5% level of statistical significance for examining Hausman test.

Table 6: Analysis of Correlated Hausman Test Results

Correlated Random Effects - Hausman Test

Equation: Untitled

Test period random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Period random	3.107962	4	0.5399

Source: Author’s Computation, 2024.

The result of random effect regression revealed that LFI has significant but negative effect on ROE. The probability value for LFI is 0.0337 which is less than 0.05 that is the confidence level for statistical significance. A unit change in LFI resulted in a reduction of ROA to the tune of -0.000352%. This shows the extent to which loans to financial institutions affect the performance of banks.

The result also shows that LCS has a significant and positive effect on ROE. The effect was found to be some margin less the effects observed from LFI on ROE. While LFI had a negative effect LCS had a positive effect on ROE implying that loans and advances to customers improve the performance of banks than loans and advances to other banks.

In the same vein, it was found out that FXI has significant and positive effect on ROE as the probability value of FX is less than 0.05 and its effect on ROE appears to be more than LFI and LCS. This implied that foreign exchange income improves the performance of banks more than loans and advances to banks and customers. This will shift the focus of banks from their traditional function of granting loans to economic agents in the economy to the one of transactions in foreign exchange and foreign exchange derivatives.

EEC was not found to have significant effect on ROA as the probability value is greater than 0.9597. This implied that the fluctuation in the exchange rate in the economy has not significantly affected the performance of bank performance in terms of returns to investors which ROE is a bass for measurement.

On the parameter of the regression estimate, the R-squared value of 8% shows that the independent variables account for the systematic variations in the dependent variable to the tune of 8%. The model fitness value of 6% is also quite low but the F – statistic value of 3.77 with a probability value of 0.005840 shows that the model on the overall is statistically significant in providing the behavioural relationship between the dependent variable and the independent variables. Also the value of the Durbin-Watson statistic of 1.6393 shows that there is no serial correlation in the estimated model hence the inferences from the model estimated is reliable and the regression output is valid.

Table 7: Analysis of Random Effect Regression Results

Dependent Variable: ROE

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10.21628	1.410691	7.242038	0.0000
LFI	-3.52E-06	1.64E-06	-2.141836	0.0337
LCS	8.83E-07	3.13E-07	2.823559	0.0053
FXI	9.33E-05	3.23E-05	2.890688	0.0044
EEC	-4.77E-07	9.43E-06	-0.050620	0.9597
R-squared	0.085664Prob(F-statistic)			0.005840
Adjusted R-squared	0.062947	Durbin-Watson stat		1.639353
F-statistic	3.771012			

Source: Author’s Computation, 2024.

The mathematical representation of the model is presented in the equation below:

$$roe = 10.2162788512 - 3.51812727027e-06*lfi + 8.83077391443e-07*lcs + 9.33258484263e-05*fxi - 4.77412661852e-07*eec + eqn_01_efct$$

Test of Hypothesis

The test of hypotheses for the study is based on the regression result presented in table 7 of the study. The decision rule is based on 5% level of statistical significance whether to accept or reject the stated hypotheses.

It was earlier stated that Loans and advances to banks does not have significant effect on the performance of deposit money banks in Nigeria. Following from the regression result of table 7, the result shows that we reject the null hypothesis and accept that Loans and advances to banks have significant effect on the performance of deposit money banks in Nigeria (LFI Prob. is $0.0337 < 0.05$).

It was also stated that Loans and advances to customers does not have significant effect on the performance of deposit money banks in Nigeria. Following from the regression result of table 7, the result shows that we reject the null hypothesis and accept that Loans and advances to customers has a positive and significant effect on the performance of deposit money banks in Nigeria (LCS Prob. is $0.0053 < 0.05$).

It is also stated that foreign exchange earnings does not have significant effect on the performance of deposit money banks in Nigeria. The regression result revealed that we reject the null hypothesis that foreign exchange earnings does not have significant effect on the performance of deposit money banks in Nigeria and accept that foreign exchange earnings has a positive and significant effect on the performance of deposit money banks in Nigeria (FXI Prob. is $0.0044 < 0.05$).

It is also stated that that the effect of exchange rate fluctuations on cash held does not have significant effect on the performance of deposit money banks in Nigeria. The result of the regression in table 7 shows that we accept the null hypothesis that the effect of exchange rate fluctuations on cash held does not have significant effect on the performance of deposit money banks in Nigeria (EEC Prob. is $0.9597 < 0.05$).

Discussion of Findings

The findings revealed that Loans and advances to banks have a negative and significant effect on performance of deposit money banks in Nigeria. This implied that loans to banks do not provide the banks returns that will increase the owners wealth compared to loans to customers. Financial institutions lending to financial institutions is also highly regulated and under a well guided investment principles which may inhibit risk taking which can generate enough returns from high risky assets when customers are involved in the lending process. Though this risky lending have propensity of increasing the number of non-performing loans in the financial system which can result in failure of banks and critical financial crisis for the economy.

It was also found out that Loans and advances to customers has a positive and significant effect on the performance of deposit money banks in Nigeria. With banks serving their primary function for existing, the economy is reflat and the customers re able to meet interest and principal repayment obligations which leads to more loans from the banks and the banks are

able to create more wealth for the owners of the banks hence a positive effect on the performance of the banks in Nigeria.

It was also found out that foreign exchange earnings have a positive and significant effect on the performance of deposit money banks in Nigeria. In recent times, in the Nigerian economy, banks have had most of their income emanating from transactions or selling and buying of foreign exchange which the federal government decided to tax retrospectively because of the ballooning effect foreign exchange transactions have on their profit. The banks take advantage of wide differential between the official and the private foreign exchange market to make excess returns/profit. This contradict the finding of Osemwinge-Ero *et al* (2023) who found foreign exchange rate risk has a negative effect on the financial performance of banks in Nigeria.

Since the excess profit from foreign exchange transaction naturally increases the performance of the banks, the banks are able to withstand risks that emanate from fluctuation in the foreign exchange. This is seen in the fourth finding of the study that the effect of exchange rate fluctuations on cash held does not have significant effect on the performance of deposit money banks in Nigeria. This finding contradict the result from the study of Offiong *et al* (2016) who found out that exchange rate fluctuation affect bank performance negatively. This will affect the ability of lenders to manage loans resulting into high level of bad loans while capital deposit ratio does not have significant relationship with exchange rate. This conformed to finding of this study in terms of non-significance of exchange rate on bank performance.

CONCLUSION AND RECOMMENDATIONS

In this study, we set out to examine bank loan and foreign exchange influences on bank performance in the Nigerian banking sector. Issues on bank loans and foreign exchange were reviewed. The study used data from deposit money banks in Nigeria, using panel least square, the findings from the empirical investigation revealed as follows:

- that Loans and advances to banks have significant but negative effect on the performance of deposit money banks in Nigeria.
- that Loans and advances to customers has a positive and significant effect on the performance of deposit money banks in Nigeria.
- that foreign exchange earnings has a positive and significant effect on the performance of deposit money banks in Nigeria.
- that the effect of exchange rate fluctuations on cash held does not have significant effect on the performance of deposit money banks in Nigeria.

Based on the results obtained from the study, the study concludes that in the Nigerian economy, bank performance with respect to ownership equity is significantly affected by foreign exchange earnings than it is of the function of the other factors that do not fall within the primary functions of deposit money banks which one of them is lending and deposit taking. Though lending is also found to have significant effect on the performance of deposit money banks, but this effect is not as high and significant as the effects from the foreign exchange earnings. We recommend as follows:

- that while it is important to also borrow to other financial institutions, it is vital that banks prioritize lending that will increase the wealth of the shareholders. This lending as revealed by the finding of the study is lending to the customers, we advised that banks should lend to customers more than lending majorly to other banks who are not in the real sector of the economy but the financial sector.
- with changes in Foreign exchange policy of the federal government by reducing the gap between the official window for foreign exchange and the private market window, it will be better for banks to increase their lending activities to increase their income and this lending should be to customers but priority areas that assure returns on investment and consider very essential to the sustainability of the economy.
- It is also recommended that banks in Nigeria should constantly hedge their funds and have a portion of their investment in foreign exchange transaction since earning from foreign exchange transaction has significant effect on the performance of the banks.
- The study recommend that financial institutions should increase their level of financial product divestment as an hedging strategy and increase financial transaction to sectors of the economy that are less prone to currency fluctuation or regions where currency fluctuation is very low.

Future studies can increase the scope of this study to include all classification of banks in the Nigerian economy whether listed or not listed in the Nigerian exchange limited. Future study can focus research efforts in finding out why lending to other banks does not increase performance for banks. The differential of the significant effect in lending to banks and lending to customers can be empirically investigated.

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