

Impact of Exchange Rate Fluctuations on Deposit Money Bank Performance in Nigeria (1980-2016)

Azike Lawrence Chike and Ngwu Jerome Chukwuemeka

Department of Economics, Faculty of Social Sciences, Enugu State University of Science and Technology.

ABSTRACT

The essence of this study is to carry out an empirical analysis of the impact of exchange rate fluctuations on deposit money banks performance in Nigeria covering the period 1981-2016. The data employed the expo-facto research design. Data for the study were collected from the Central Bank of Nigeria (CBN) statistical bulletin. The methodology employed in the research is the linear regression; Granger causality and the ARCH/GARCH -were used to test for volatility. The study found out that exchange rate fluctuations have a positive and significant impact on deposit money bank performance in Nigeria and there is GARCH effect on the model. It is therefore the recommendation of the study that the undue dependability on monetary tools to stabilize the exchange rate fluctuations should be technically suspended. Hence; the fiscal policy tools should be advanced to combat exchange rate fluctuations.

Keywords: impact, exchange rate, deposit, money and bank

INTRODUCTION

The variability of foreign exchange rates is a potentially interesting factor that drives the level of profitability of commercial banks as it affects their financial intermediation process [1,2,3]. There is no country that is self reliant but instead countries transact business with one another and hence foreign exchange rates becomes handy [5,6,7]. Exchange rate is a vital microeconomic variable and backbone of Trade [8]. A variation of exchange rate plays an important role in determination of balance of trade. Exchange rates, like any other commodity, are based on supply and demand for particular forms of currency. Domestic currency supply changes as a result of a country's fiscal and monetary policies [8,9]. The correlation between foreign exchange transaction and banking sector profitability is current issue in literature and has remained newsworthy among researchers, economists and policy makers alike [10]. Numerous countries of the world have witnessed foreign exchange reforms culminating to currency over-valuation and wider-valuation due to currency differentials among nations. [11], affirms that the supply of foreign exchange in Nigeria comes in various ways and the various circumstances tasks

the dexterity and financial ability of the nation's financial managers to achieve efficiency in foreign exchange management and thus further the frontiers of the nation's economy [12]. As such, foreign exchange market reforms have always impacted in the overall reform pattern of the financial sector in Nigeria [13]. The role of the Nigeria commercial banks in the buying and selling of foreign exchange is undeniably inevitable as they (Banks) remains the most active participants in the Foreign Exchange Market (FEM) [14]. Before the establishment of the Central Bank of Nigeria (CBN) in 1958 and the consequent enactment of the Exchange Control Act of 1962 access to foreign exchange by the private sector were made possible by commercial banks which maintain balances abroad and acted as agents for both importers and exporters. This was made possible because Nigerian pound sterling (the then National currency) can easily be converted into another country's currency being valued at par with that of the British pound sterling [15]. The non-existence of a viable regulatory institution as well as effective regulatory framework for foreign exchange transaction actually hindered the early development of an

active foreign exchange market in Nigeria but with the establishment of the Central Bank of Nigeria (CBN) in 1958 with the sole authority in foreign exchange management, the need to develop a domestic foreign exchange market came to beam [2]. The Nigerian economy has witnessed various foreign exchange reforms following the establishment of CBN in 1958 with various outcomes on the nation's economy and financial institutions. Meanwhile the trade liberalization policy of the Nigerian economy which took effect in the year 1986 created undue pressure on the domestic demand for foreign currencies causing Nigerian naira to lose its value against other nation's currencies. Reacting to this, various practical measures have being taken with the view of arresting persistence depreciation and fluctuation of exchange rate against naira [3].

Although a number of exchange rate reforms have been carried out by successive governments, the participation of the banking sector in foreign exchange market continued to increase. Undoubtedly, foreign exchange market is one of the largest financial markets globally with banks as key player. This however was made possible through the performance of their role as financial intermediaries between sellers and buyers of foreign exchange for international transactions [5]. Foreign exchange market activities massively affect banks due to their involvement in foreign exchange transaction. Based on this, this study is aimed at carrying out an empirical analysis of the impact of foreign exchange rate fluctuations on the performance of deposit money banks in Nigeria covering the period 1980-2015.

Research Questions

In this study, the following research questions will pilot the research.

1. To what extent has exchange rate fluctuations affected the performance of deposit money banks in Nigeria?

2. What is the causality relationship between exchange rate fluctuations and the performance of deposit money banks in Nigeria?

Objectives of the Study

The broad objective of this study is to evaluate the impact of exchange rate fluctuations on the performance of deposit money banks in Nigeria. To actualize this aim, the following specific objectives were articulated:

1. To ascertain the impact of exchange rate fluctuations on the performance of deposit money banks in Nigeria.
2. To identify the causality relationship between exchange rate fluctuations and deposit money banks performance in Nigeria.

Hypotheses of the Study

The following hypotheses will be tested in the course of the study.

1. Ho: Exchange rate fluctuations have no significant impact on the performance of deposit money banks in Nigeria.

2. Ho: There is no causality relationship between exchange rate fluctuations and deposit money banks in Nigeria

Significance of the Study

A research draws its relevance from the present and prospective beneficiaries and its contribution(s) to academia at large. The pertinence of this research is justified on the grounds that it will show the impact of exchange rate fluctuations on the performance of deposit money

banks in Nigeria for the years under review; and thus provides a framework for policy prescriptions and interventions. In furtherance to the above, this research will find its relevance as made evidence in the following:

METHODOLOGY Research Design

The investigation employed the ex-facto design. This is because the

researcher had no control over the data and variables used in the investigation.

Theoretical Framework

This research is anchored on the International Fisher Effect Theory. The International Fisher Effect states that exchange rates changes are balanced out by interest rate changes. The Fisher theory simply argues that real interest rates across countries are equal due to the possibility of arbitrage opportunities

between financial markets which generally occurs in the form of capital flows. Real interest rate equality implies that the country with the higher interest rate should also have a higher inflation rate which, in turn, makes the real value of the country's currency decrease over time.

Model Specification The ARCH/GARCH Model

In modeling fluctuations, the Autoregressive Conditional Heteroscedasticity (ARCH) and the Generalized Autoregressive Conditional Heteroscedasticity (GARCH) model is employed. In developing an ARCH model,

we consider two distinct specifications-one for the conditional mean and the other for conditional variance. Generalizing this, the standard GARCH (p, q) specification is expressed as:

$$y_t = \alpha + \sum_{i=1}^k \eta_i x_{t-i} + \varepsilon_t \dots \dots \dots (3.1)$$

$$\varepsilon_t \approx N(0, \sigma^2_t) \dots \dots \dots (3.2)$$

$$\sigma^2_t = \omega + \sum_{i=1}^p \alpha_i \varepsilon_{t-i}^2 + \sum_{i=1}^q \beta_i \sigma^2_{t-i} \dots \dots \dots (3.3)$$

For the purpose of this study, the presence of fluctuation clustering is determined by the significance of the lagged fluctuation series parameters $-y_{t*}$.

autoregressive root, which governs the persistence of fluctuation shocks, is the sum of $\alpha + \beta$ and the indications of fluctuation degree are expressed as follows:-

While, the extent or degree of exchange rate fluctuation is determined by the

If $\alpha + \beta \rightarrow 1$ i.e. is close to one, it indicates that fluctuation; and Persistent;

If $\alpha + \beta > 1$ i.e. is greater than 1, it indicates overshooting fluctuation; and

If $\alpha + \beta < 0.5$ i.e. is less than 0.5, it indicates no fluctuation.

The empirical model for the study is specified thus:

In an implicit form: $BTA = f(EXR, INT, FD, DC) \dots \dots \dots (3.4)$

In explicit form; $BTA_t = \beta_0 + \beta_1 EXR_t + \beta_2 INT_t + \beta_3 FD_t + \beta_4 DC_t + \mu_t \dots \dots \dots (3.5)$

Where;

f = Functional Relationship

BTA = Banks Total Assets

EXR = Exchange Rate

INT = Interest Rate

FD = Financial Deepening (M2/GDP)

DC = Domestic Credit (Credit in the form of loans extended from bank to the public)

μ = Stochastic Error Term

Method of Data Evaluation

Unit Root/Stationary Test

This was used to test whether a variable's mean value and variance varies over time. It is necessary in time series variables in order to avoid the problem of spurious regression. The Augmented Dickey Fuller (ADF) test was used for the analysis. Augmented Dickey-Fuller (ADF) test is used to test existence of unit root when

there is autocorrelation in the series and lagged terms of the dependent variable are included in the equation. The following three models represent pure random walk, random walk with drift and random walk with drift and trend used in Augmented Dickey-Fuller tests:

$$\Delta\psi_t = \Omega\psi_{t-1} + \sum_{i=1}^p \beta_i \Delta\psi_{t-1} + \varepsilon_t \dots\dots\dots 3.6$$

$$\Delta\psi_t = \alpha_0 + \Omega\psi_{t-1} + \sum_{i=1}^p \beta_i \Delta\psi_{t-1} + \varepsilon_t \dots\dots\dots 3.7$$

$$\Delta\psi_t = \alpha_0 + \Omega\psi + \beta_2 t + \sum_{i=1}^p \beta_i \Delta\psi_{t-1} + \varepsilon_t \dots\dots\dots 3.8$$

where: $\Omega = (\lambda - 1)$ The null hypothesis is $H_0 : \Omega = 0$ and the alternative hypothesis is

Decision Rule

If ADF test statistic (t-statistic of lagged dependent variable) is absolutely greater than the critical value, we reject the null hypothesis and conclude that the series is

stationary (there is no unit root) but if otherwise, we accept the null hypothesis and conclude that the series is not stationary (there is unit root)

Co-integration test

This will be used to test if there exists a long-run relationship between the variables under investigation. The Johansen or Engel-Granger methodology

will be used. The long-run equilibrium relationship is estimated with the following equation:

$$X_t = \alpha_0 + \alpha_1 Z_t + \varepsilon_t \dots\dots\dots 3.9$$

If there is cointegration, α_0 and α_1 estimates reveal "super-consistent" estimators in the OLS regression. In this estimation fitted values of ε_t series is tested for stationary. In this analysis DF or ADF may be used. However, in hypothesis testing, critical values

constructed by McKinnon (1991) is used. If this series is stationary, we can conclude that there is cointegration between X_t and Z_t . The fitted values of ε_t may be used as error correction term of the model.

Decision Rule

If the ADF statistics of residual series is absolutely greater than the critical values at 5% level of significance, then there exists a long-run relationship between the

variables and if otherwise, there exists no long-run relationship among the variables.

Error Correction Model (ECM)

The error correction analysis is an econometric analysis carried out if the variables under investigation are seen to

be cointegrated. The Error Correction Mechanism (ECM) will be used to estimate the speed of adjustment of the short-run

dynamics of the variables and timing to long run convergence. The ECM is given

by the equation:

$$\Delta BTA_t = \beta_0 + \Delta\beta_1 EXR_t + \Delta\beta_2 INT_t + \Delta\beta_3 FD_t + \Delta\beta_4 DC_t + ECM_{t-1} + \mu_t, \dots \dots \dots 3.10$$

Where Δ = First Difference Operator

Decision Rule

If the ECM coefficient is > 0.50, then we conclude that the speed of adjustment is high but if the ECM coefficient is less than

0.50, we conclude that the speed of adjustment is low.

Economic Criterion Test (A priori Test)

The a priori test of the analysis will be based on the regression coefficient based on the coefficient of the algebraic signs of the parameters. It is a test that will be based on evaluating the conformity of the

relationship between the variables on economic theory. The economic a priori expectations are given as: B1>0, B2>0 and B3>0

Test for Goodness of Fit

This test involves the test of the goodness of fit. To evaluate the working hypothesis of this study. R² the co-efficient of determination is used to test the explanatory power of the variable. R² lies between zero and one (0 ≤ R ≤ 1). The

closer R² is to 1 the greater the proportion of the variation in the dependent variables attributed to the independent variables.

T-Test of Significance

To test for the statistical significance of individual regression co-efficient, t-statistic is used. A two-tailed test will be conducted at 5% level of significance. The

null hypothesis Ho will be tested against the alternative hypothesis H1.

Decision Rule (t-Test)

If t_{α/2, n-2} < t* Ho will be rejected and the H1 accepted. Otherwise, the alternative

hypothesis H1 will be rejected and the null hypothesis Ho be accepted.

f-TEST of Significance

To Test the statistical significance of the entire regression, the f-ratio is used. The

test will be conducted at 5% level of significance.

PRESENTATION AND ANALYSIS OF RESULTS

The Empirical Results

Unit Root Test

The first and ideal step in analyzing a time series data is to carry out a unit-root test on them so as to avoid the estimation of a spurious regression. The stationary

test was carried out on the series used in this study with the application of Augmented Dickey Fuller (ADF) statistic. This is displayed in table 1 below:

Table 1: Unit-Root Test

VARIABLE	ADF-STAT	CRITICAL STAT.	ORDER
BTA	-6.146300	-1.951332	KD
EXR	-3.041324	-1.951000	KD
INT	-7.569089	-2.951125	KD
FINDEEP	-5.034848	-1.951000	KD
DC	-2.511702	-1.951000	KD

Source: *Researcher's Computation using E-views.*

Table 1 which is a summary of the unit-root test reveals that bank performance captured with bank total assets (BTA),

Exchange Rate (EXR), Interest Rate (INT) Financial deepening (FINDEEP) and Domestic Credit (DC) are stationary at

first difference. In conclusion, none of the variables is stationary at level form.
 Cointegration Analysis (Engel-Granger Methodology) Table 2

Null Hypothesis: RESID01 has a unit root
 Exogenous: None
 Lag Length: 0 (Automatic - based on SIC, maxlag=0)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.082023	0.0030
Test critical values:	1% level 5% level 10% level	-2.632688 -1.950687 - 1.611059	

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(RESID01)
 Method: Least Squares
 Date: 09/30/18 Time: 17:07
 Sample (adjusted): 1982 2016
 Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RESID01(-1)	-0.489611	0.158860	-3.082023	0.0041
R-squared	0.215611	Mean dependent var		-94.22321
Adjusted R-squared	0.215611	S.D. dependent var		1608.968
S.E. of regression	1424.994	Akaike info criterion		17.38988
Sum squared resid	69040670	Schwarz criterion		17.43432
Log likelihood	-303.3229	Hannan-Quinn criter.		17.40522
Durbin-Watson stat	1.727621			

Source: Researcher's Computation using E-views.

Employing the Engel-Granger, the residuals of the estimated regression were tested for unit-root presence at level form. It is clearly seen that at level form, the ADF statistic value (-3.082023) is absolutely greater than the tabulated value (-1.950687) at 5% level of Table 3

significance. Hence, this implies that there is the existence of a long-run relationship among the variables. Thus, the null hypothesis of no cointegration is rejected.

Autoregressive Conditional Heteroscedasticity Test (ARCH)

Heteroscedasticity Test: ARCH			
F-statistic	105.4690	Prob.F(1,33)	0.0000
Obs*R-squared	26.65878	Prob. Chi-Square(1)	0.0000

Test Equation:

Dependent Variable: RESID²

Method: Least Squares

Date: 09/30/18 Time: 16:01

Sample (adjusted): 1982 2016

Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3050.991	896.9859	-3.401381	0.0018
RESID ² (-1)	1.880037	0.183064	10.26981	0.0000
R-squared	0.761679	Mean dependent var		5024.605
Adjusted R-squared	0.754458	S.D. dependent var		5152.480
S.E. of regression	2553.169	Akaike info criterion		18.58350
Sum squared resid	2.15E+08	Schwarz criterion		18.67238
Log likelihood	-323.2113	Hannan-Quinn criter.		18.61418
F-statistic	105.4690	Durbin-Watson stat		0.802058
Prob(F-statistic)	0.000000			

Source: *Researcher's Computation using E-views.*

From table 3, the Obs*R-squared which follows the computed Chi-Square yielded 26.65878 while the corresponding probability value yielded 0.0000 < 0.05. This entails that we conclude that there is

ARCH effect in the model. In other words, there is volatility/fluctuations clustering in exchange rate series.

Generalized Autoregressive Conditional Heteroscedasticity Test (GARCH)

Table 4

Dependent Variable: EXR

Method: ML- ARCH (Marquardt) - Normal distribution

Date: 09/30/18 Time: 16:49

Sample: 1981 2016

Included observations: 36

Failure to improve Likelihood after 112 iterations

Presample variance: backcast (parameter = 0.7)

GARCH = C(2) + C(3)*RESID(-1)² + C(4)*GARCH(-1)

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	0.991163	0.686768	1.443228	0.1490
	Variance	Equation		
C	0.383660	0.891557	0.430326	0.6670
RESID(-1) ²	1.843459	1.159213	1.590267	0.1118
GARCH(-1)	-0.010078	0.537471	-0.018750	0.9850
R-squared	-1.132803	Mean dependent var		76.59172
Adjusted R-squared	-1.132803	S.D. dependent var		72.03856
S.E. of regression	105.2060	Akaike info criterion		9.861181
Sum squared resid	387390.4	Schwarz criterion		10.03713
Log likelihood	-173.5013	Hannan-Quinn criter.		9.922591
Durbin-Watson stat	0.029215			

Source: *Researcher's Computation using E-views.*

Table 4 is a display of the Generalized Autoregressive Conditional Heteroscedasticity (GARCH) estimates. The table clearly shows that the probability values of $RESID(-1)^2$ which technically represents the ARCH term yielded 0.1118 with a positive coefficient of 1.843459. This indicates that there are Regression Results (ECM Inclusive)

Table 5

Dependent Variable: LOG(BTA)

Method: Least Squares

Date: 09/30/18 Time: 17:17

Sample (adjusted): 1982 2016

Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6.163398	0.423407	14.55666	0.0000
D(EXR)	0.017860	0.024577	0.726708	0.4732
D(INT)	0.059194	0.080861	-0.732049	0.4700
D(FD)	5.070014	31.82167	-0.159326	0.8745
D(DC)	0.000873	0.000287	3.040255	0.0050
ECM(-1)	-0.000139	0.000337	-0.412617	0.6829
R-squared	0.387323	Mean dependent var		6.921783
Adjusted R-squared	0.281689	S.D. dependent var		2.482542
S.E. of regression	2.104035	Akaike info criterion		4.480396
Sum squared resid	128.3819	Schwarz criterion		4.747027
Log likelihood	-72.40693	Hannan-Quinn criter.		4.572437
F-statistic	3.666649	Durbin-Watson stat		0.671548
Prob(F-statistic)	0.010805			

Source: *Researcher's Computation using E-views.*

The regression table shows that exchange rate coefficient has a positive coefficient at the magnitude of 0.017860. This entails that exchange rate has a positive coefficient to bank performance. This further entails that exchange rate contributes positively to bank performance. This conforms to economic a priori expectation because banks utilize exchange rate in trading. The regression also reveals that interest rate yielded a positive coefficient at the magnitude of 0.059194. This entails that an increase in interest rate by 1% increases bank performance by 0.059194. This conforms to economic a priori expectation because an increase in interest rate increases the profitability of the commercial banks

spikes in exchange rate but not significant. The sum of the ARCH and GARCH coefficients yielded $(1.843459 + (-0.0100078)) - 1.8334512$. This positive value indicates that volatility/fluctuations is persistent though not significant given their individual probability values.

through the concept of interest rate spread. Financial deepening (FINDEEP) yielded a positive coefficient at the magnitude of 5.070014. This conforms to economic a priori expectation because the more commercial banks spread and deepen, the more they mop up deposits, extend their financial services and increase their level of performance.

Finally, domestic credit yielded a positive coefficient at the magnitude of 0.000873. This entails that there exists a positive relationship between domestic credit and the performance of deposit money banks in Nigeria for the years under analysis.

The F-ratio yielded 3.666649 and the F-probability value yielded 0.010805 which is less than 0.05. This implies that the

entire regression line is statistically significant. In other words, the joint influence of the explanatory variables on the dependent variable is significant. The coefficient of determination which measures the degree of the variations in the dependent variable accounted for by the changes in the independent variable yielded 0.387323. This implies that approximately 39% changes in bank performance is explained by the

variations in the independent variables specified in the model. This in conclusion entails that the explanatory power of the independent variables is low.

The error correction coefficient yielded -0.000139 and this simply entails that the speed of adjustment to correct for long-run equilibrium is 0.0139%. The implication of this result is that it will take time for the long-run equilibrium to be corrected.

Serial Correlation LM Test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.505636	Prob.F(2,26)	0.6089
Obs*R-squared	0.272921	Prob. Chi-Square(2)	0.5292

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 10/12/18 Time: 14:54

Sample: 19832016

Included observations: 34

Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	14.16361	178.7288	0.079246	0.9374
D(INT)	-5.483473	34.32698	-0.159742	0.8743
D(EXR)	2.104880	10.95441	0.192149	0.8491
D(FD)	-1996.714	11663.73	-0.171190	0.8654
D(DC)	-0.013747	0.119350	-0.115182	0.9092
ECM(-1)	-0.301852	0.623131	-0.484412	0.6321
RESID(-1)	0.300970	0.650819	0.462448	0.6476
RESID(-2)	0.310817	0.324865	0.956757	0.3475
R-squared	0.037439	Mean dependent var		-1.34E-14
Adjusted R-squared	-0.221712	S.D. dependent var		794.6801
S.E. of regression	878.3686	Akaike info criterion		16.59633
Sum squared resid	20059814	Schwarz criterion		16.95548
Log likelihood	-274.1377	Hannan-Quinn criter.		16.71881
F-statistic	0.144467	Durbin-Watson stat		1.716606
Prob(F-statistic)	0.993345			

The Breusch-Godfrey Serial Correlation LM Test was used to carry out the test of autocorrelation. It is clearly seen that the Obs*R-squared which follows the computed Chi-Square distribution yielded 0.272921 and it is clearly less than the

Chi-Square probability which yielded 0.5292. This compels us to accept the null hypothesis that there is no serial correlation of any order. Hence; there is no presence of autocorrelation problem in the model.

Granger Causality Table 6
 Pairwise Granger Causality Tests
 Date: 10/01/18 Time: 04:42
 Sample: 1981 2016
 Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
INT does not Granger Cause BTA BTA does not Granger Cause INT	34	0.27909 0.46779	0.7585 0.6310
EXR does not Granger Cause BTA BTA does not Granger Cause EXR	34	3.27846 1.91413	0.0520 0.1656
FD does not Granger Cause BTA BTA does not Granger Cause FD	34	0.97301 9.29869	0.3899 0.0008
DC does not Granger Cause BTA BTA does not Granger Cause DC	34	6.39227 7.99694	0.0050 0.0017
EXR does not Granger Cause INT INT does not Granger Cause EXR	34	0.09194 0.26036	0.9124 0.7726
FD does not Granger Cause INT INT does not Granger Cause FD	34	0.96876 2.14342	0.3915 0.1355
DC does not Granger Cause INT INT does not Granger Cause DC	34	0.56142 0.01795	0.5765 0.9822
FD does not Granger Cause EXR EXR does not Granger Cause FD	34	0.86358 2.51001	0.4322 0.0988
DC does not Granger Cause EXR EXR does not Granger Cause DC	34	2.93442 1.01785	0.0691 0.3739
DC does not Granger Cause FD FD does not Granger Cause DC	34	1.05265 4.69680	0.3620 0.0171

Source: *Researcher's Computation using E-views,*

The Granger causality test was carried out to identify the causality relationship between exchange rate fluctuations and deposit money banks performance in Nigeria. The Granger causality output in table 4 shows that there exists no causality relationship between exchange rate and commercial bank performance (BTA). The causality output shows that that the null hypothesis of EXR does not

Granger Cause BTA yielded a probability value of $0.0520 > 0.05$ and a null hypothesis that BTA does not Granger Cause BTA yielded a probability value of $0.1656 > 0.05$. This leads us to conclude that there exists no causality relationship between exchange rate fluctuations and deposit money banks' performance in Nigeria.

Test of Hypothesis One

Ho: Exchange rate fluctuations have no significant impact on the performance of money deposit banks in Nigeria. Analysis: Re gression in table 3 reveals that the t-statistics corresponding to exchange rate yielded 0.726708. Since, this value of the

t-statistics is absolutely less than two; we accept the null (Ho) and conclude that exchange rate fluctuations have no significant impact on the performance of money deposit banks in Nigeria.

Hypothesis Two

Ho: There is no causality relationship between exchange rate fluctuations and deposit money banks in Nigeria. Analysis: The causality output shows that that the null hypothesis of EXR does not Granger Cause BTA yielded a probability value of 0.0520 > 0.05 and a null hypothesis that

BTA does not Granger Cause BTA yielded a probability value of 0.1656 > 0.05. This leads us to accept the null (Ho) hypothesis and thus conclude that there is no causality relationship between exchange rate fluctuations and deposit money banks' performance in Nigeria.

Implications of the Results

The major finding of this research is that exchange rate fluctuations have a positive and insignificant impact on bank performance in Nigeria. The implication of this finding is that our deposit money

banks are not adversely affected by the harsh volatility and fluctuations of the exchange rate. It implies that the banks are insulated from the erratic changes in exchange rate.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary of Findings

This study has been focused on carrying out an empirical analysis of the impact of exchange rate fluctuations on deposit money bank performance in Nigeria covering the period 1981-2016. The Ordinary Least Squares (OLS) technique was employed to evaluate the relationship between the variables and the Granger causality was adopted to assess the causal relationship and direction. Summary of the major findings of the study are given thus:

2. Exchange rate fluctuations have a positive and significant impact on deposit money banks' performance in Nigeria.
3. There is no causality relationship between exchange rate fluctuations and deposit money banks' performance in Nigeria.
4. Interest rate has a positive and insignificant impact on deposit money banks' performance in Nigeria.
5. Financial deepening has a positive and insignificant impact on deposit money banks' performance in Nigeria.
6. Domestic credit has a positive and significant impact on deposit money banks' performance in Nigeria.

1. There is an ARCH/GARCH effect on the series of Exchange Rate for the period under analysis.

CONCLUSION

Anchored on the findings of the study, exchange rate fluctuations were seen not to have an adverse effect on the performance of deposit money banks in Nigeria. This clearly reveals why commercial banks don't dwindle during

has exchange rate volatility crisis. One can conclude that deposit money banks take due advantage of the fluctuations in foreign exchange (FOREX) and as such are not adversely affected.

RECOMMENDATIONS

The following recommendations were articulated in reflection of the findings of the study:

1. The undue dependability on monetary tools to stabilize the exchange rate fluctuations should be technically suspended. The fiscal policy tools should

be advanced to combat exchange rate fluctuations.

2. One of the basis solutions to stabilize exchange rate fluctuations is to boost domestic productivity. Hence; the federal government should create an enabling environment to encourage investors.

3. Irrespective of the state of the economy, increasing the foreign reserve should always be of utmost priority. This

also goes a long way to finance our imports and stabilize the exchange rate.

REFERENCES

1. Aladwan, M. S. (2015). The impact of bank size on profitability "an empirical study on listed Jordanian commercial banks" *European Scientific Journal* 11(34)
2. Alexiou, C. and V. Sofoklis (2009). Determinants of Bank Profitability: Evidence from the Greek Banking Sector. *Economic Annals*, Volume LIV No. 182 / July - September 2009 UDC: 3.33 ISSN: 0013-3264
3. Babazadehl, M. and F. Farrokhnejad (2012). Effects of Short-run and Long-run Changes in Foreign Exchange Rates on Banks' Profit, *International Journal of Business and Management*; 7(17)
4. Bakare, A. S (2011). The consequences of foreign exchange rate reforms on the performances of private domestic investment in Nigeria, *International journal of Economics and Management Sciences* 1 (1):25-31.
5. Becker, C. and M. Sinclair (2004). Profitability of reserve bank foreign exchange operations: Twenty years after the float, International Department Reserve Bank of Australia, Research Discussion Paper 2004-06
6. CBN, (2013). The Foreign Exchange Market in Nigeria" Retrieved from: <http://www.cenbank.org/IntOps/FXMarket.asp>
7. Chamberlain, S., J. S. Howe and H. Popper (1996). The Exchange Rate Exposure of U.S. and Japanese Banking Institutions, Wharton Financial Institutions Center, *Working Paper Series*, 96-55
8. Chi, et. al. (2010) Do exchange rates affect the stock performance of Australian banks, *International Journal of Banking and Finance*, 7(1)3
9. Frenkel J. A., (1976) "A Monetary Approach to the Exchange Rate: Doctrinal Aspects and Empirical Evidence", *Scandinavian Journal of Economics*, 78: 200-28.
10. Hsing, Y(2006). Determinants of Exchange Rate Fluctuations for Venezuela: Application of an Extended Mundell- Fleming Model, *Applied Econometrics and International Development*, AEID, 6-1.
11. Imoughelei, L. E and M. Ismaila (2015). The impact of exchange rate on Nigeria non-oil export, *International Journal of academic research in accounting, finance and management sciences*, 5(7,): 190-198
12. Kanamori, T. & Zhao, Z. (2006) The Renminbi Exchange Rate Revaluation: Theory, Practice, and Lessons from Japan, *ADB policy papers*; no. 9.
13. Karl, E., Ray, C., & Shannon, M. (2009). *Principles of Economics*, Pearson International Edition, Prentice Hall
14. Keynes, J.M (1923), *A Tract on Monetary Reform* London, Macmillan
15. Kiganda, E. O (2014). Effect of Macroeconomic Factors on Commercial Banks Profitability in Kenya: Case of Equity Bank Limited, *Journal of Economics and Sustainable Development* 5(2)