Foreign Exchange Income and Financial Performance of Deposit Money Banks in Nigeria

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ABSTRACT: *The study examined the effect of foreign exchange income on financial performance of deposit money banks in Nigeria. The specific objectives of the study were to ascertain the effect of nominal exchange rate, real exchange rate, and exchange rate on return on asset of deposit money banks in Nigeria. nominal exchange rate, real exchange rate, and exchange rate were the independent variables, while return on asset was the dependent variable. The study adopted an ex-post-facto research design, covering the period between 2011 and 2020. Secondary data were extracted from the annual reports and accounts of sampled deposit money banks in Nigeria. Multiple regression techniques were used for test of hypotheses. From the data analysis, it was revealed that nominal exchange rate has a significant negative effect on return on asset of deposit money banks in Nigeria. real exchange rates have a significant positive effect on return on asset of deposit money banks in Nigeria. However, exchange rate has a nonsignificant negative effect on return on asset of deposit money banks in Nigeria. This implies that among the foreign exchange income variables, nominal exchange rate and real exchange rate can be used to predict return on asset of deposit money banks in Nigeria. The study, therefore, recommends that federal money the sources of deficit financing. They should reduce their public debt so as to allow foreigners invest in securities with naira denomination. They should reduce the extent the deplete our foreign exchange reserve because such moves increase the exchange rate, which affects banks performance negatively. The central bank of Nigeria and the ministry of finance should reduce the rate they give out dollars to politicians because it affects our exchange rate and banks' performance negatively.*
KEYWORDS: Nominal exchange rate, real exchange rate, exchange rate, return on asset, deposit money banks.

INTRODUCTION

Background of the Study
In an international trade involving different currencies; 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 (Chiira, 2009). Since there is no country that is self-reliant but instead they all transact business with one another, foreign exchange rates become very important. Adetayo, Dionco and Oladejo (2004) explain that exchange rate variation is significant in determining a country's balance of trade. Berger and Bouwman (2010) establish that exchange rates like any other commodity have demand side and supply side. Supply of currencies is explained by changes in fiscal policies whereas currency demand in influenced by a wide range of factors such as inflation rates and interest rates (Brunnermeier & Lasse, 2009).

The positions that banks play in the financial system pose crucial questions when it comes to understanding finance issues. Creation is crucial in the reason for the chain of activities where surplus funds are converted into productive projects. This chain of events is supported by financial institutions (Franklin & Elena, 2017). Commercial banks have a vital role to play in the foreign exchange scene with many clients engaged in importing and exporting which must be paid for in foreign currency. Jurion (2015) has argued that the variance in the exchange rates could result in both strategic and managerial loss and benefits issues. The role of banks in developed economies is especially important because these financial markets are struggling and as such banks are the main source of finance (Ambunya, 2018).

The mechanism of exchanging price by translating one currency in one country into another currency is known as the exchange rate. The exchange rate is an integral part of the international trade, balance of payments, and the overall national economic performance of a country (Puge, 2007). Fixed or floating can occur as a result of the foreign exchange rate variability. Foreign floating exchange rates are dictated by market demand and supply powers. Set exchange rates are fixed rates that remain constant until the central bank of each state wants to change them and change them from time to time. Fixed exchange rates were used by different countries for many years till when the Bretton Woods crashed in 1973. Bretton Woods was founded by the International Monetary Fund and World Bank (Masson, et al, 1996).

Changes in currency exchange rates may produce substantial gains or losses, which can result in a skewed perception of what is happening to the financial institution involved in the income statement (Watkins, 2014). There are three ways in which changes in exchange rates influence domestic prices: first, import prices that directly impact local prices; second, intermediate import prices that impact local production costs. Finally, local goods are sold in a foreign currency (Gatobu, 2013). The significant role that exchange rates play in a country's economy cannot be underestimated because it affects price level, business profitability, resource allocation, and investment decision (Taiwo, et al, 2018). Charles (2019) argued that exchange rates are a fundamental instrument of economic transition and a dynamic and controversial econometric instrument. Obadan (2012) argued that exchange rates bind pricing systems across countries and thus encourage direct comparison of prices between traders. For developing countries such as Nigeria, where financial markets are still underdeveloped, volatility in exchange rates creates a volatile business climate linked to benefit uncertainties. The interest rates can be affected by exchange rates and cause a positive or negative impact on the profitability of banks through the side of loanable funds. An increase in bank profit will occur

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when banks raise revenue and reduce expenses. For revenue to arise it happens when banks sold foreign currency at a high exchange rate (Hellen, 2018).

The activities of a bank can lead to gains in the foreign exchange markets. These gains are called financial performance. According to Murthy and Sree (2017) financial performance refers to the capacity to take advantage of organizational and expenditure decisions and policies to achieve financial stability for a company. It is used as a bar to calculate the accomplishments of the financial targets of a bank based on its financial goals and benchmarks. Makkar (2016) said that financial performance is calculated by a simple combination of the ratios in the financial statements. According to Reid and Joshua (2004) the financial performance of an organization can be measured using a broad choice of measurements such as liquidity measurement, debt measurement, and profitability measurement. Exchange rate has a great impact on performance of banks in Nigeria.

Exchange rate is most important because Exchange rate fluctuations influence a country's prices through import prices of consumption and intermediate goods (Wekesa, 2012). According to Mwirigi (2014), the main function of commercial banks is to mediate between supply side and the demand side of the foreign currency, any restrictions on how commercial banks go about their business would affect their financial performance. Exchange rate fluctuation impacts on a country's prices directly and significantly influences production cost of domestically produced goods. Wekesa (2012) establishes that exchange rates fluctuations typically generate significant gains/ losses. Serdaneh and Nimer (2011) documented that the more a company is involved in international trade, the more its accounting exposure and unless a company hedges this risk then it faces financial gains and/or losses from transaction and translation of foreign activities. Another unique dimension of exchange rate exposure is that of projects funded by foreign donors as Kinyuma (2013) investigated. According to Mwirigi (2014), multinational companies' net income is greatly affected by unrealized foreign exchange gains/losses.

Statement of the Problem
Deposit money banks play a critical role in economic development of countries. They channel funds from depositors to investors through their financial intermediation role. Beyond the intermediation function, the financial performance of banks has critical implications for economic growth of countries. Good financial performance rewards the shareholders for their investment. This, in turn, encourages additional investment and brings about economic growth. In order to provide sustainable intermediation services in the economy and reasonable reward for the shareholders, banks need to be profitable. They can do so, if they generate necessary income to cover their operational cost. On the other hand, poor banking performance can lead to banking failure and crisis which have negative repercussions on economic growth.

The profitability of bank can be influenced by different factors. The performance of commercial banks can be affected by internal and external factors which can be classified into bank specific (internal) and macroeconomic variables. The internal factors are the individual bank characteristics that affect the profitability of banks and these factors are basically

influenced by the decision of management and board. The external factors are sector wide or country wide factors, which are beyond the control of the company. Generally, the bank specific factors may relate to a bank's overall managerial practices on different operational aspects of the bank while the external factors are related to the industry and macroeconomic variables; within which the bank operates.

Exchange rate is one of the macroeconomic variables that could influence banks profitability; It may affect individual banks directly and/or indirectly. It directly affects the banks through the structure of assets and liabilities denominated in foreign currency, off balance sheet exposure, and non-asset based services. When assets and liabilities are invoiced in foreign currency, exchange rate variations directly affect the values of the assets and the liabilities in terms of domestic currency, through recognition of gain or loss. If the amount of foreign currency assets and liabilities are the same, there is no direct effect of the exchange rate variation on the bank's balance sheet and income statement. The direct effect occurs when the banks do not hold the same amount of foreign currency assets and foreign currency liabilities. The indirect effects of the exchange rate on banks performance can be channeled through its effect on the demand for loans, the extent of competition, and other aspects of banking conditions.

Exchange rate variation might affect the price of domestic products, import, export, and FDI etc. This in turn might influence banks portfolio and operation in different ways. Some studies have examined the effect of these internal and external factors on banks profitability. However, very few of these studies have assessed the impact of foreign exchange income (one of the macroeconomic factors) on banks financial performance expressed by ROA.

Objectives of the Study

The broad objective of this study is to examine the effect of foreign exchange income on financial performance of deposit money banks in Nigeria, while the specific objectives are to:

i. Determine the effect of nominal exchange rate on return on asset of deposit money banks in Nigeria.
ii. Ascertain the effect of real exchange rate on return on asset of deposit money banks in Nigeria.
iii. Evaluate the effect of exchange rate on return on asset of deposit money banks in Nigeria.

REVIEW OF RELATED LITERATURE

Conceptual Review

Exchange Rate (EXRATE)

Exchange rate is the rate at which one currency will be exchanged for another. It is also regarded as the value of one country's currency in terms of another currency. Exchange rates are determined in the foreign exchange market. Clement (2014) opine that the erratic fluctuations in exchange rates also referred to as exchange rate volatility could be described as periods of domestic currency appreciation or depreciation. The exchange rate is therefore an important price determinant as it has huge influences on the external competitiveness of

domestic goods and on the material for manufacturing. Ezeh and Okpala (2014) submit Exchange rate policies aim at evolving real exchange rate (RER) that maintains internal and external balance in any economy. Due to the effect of exchange rate on price of goods produced in a country, it indirectly has an effect on corporate performance of manufacturing firms in Nigeria (Ayunku and Dickson, 2021).

Nominal Exchange Rate and Real Exchange Rate
Conceptually exchange rate is the price of the currency of one country expressed in terms of the currency of another. For example, the Nigeria Naira has exchange rate against the U.S. dollar and many other currencies. It may be expressed as nominal exchange rate or real exchange rate. The nominal exchange rate is a monetary concept which measures the relative price of two moneys e.g. Naira in relation to dollar (N/S), while the real exchange rate is a real concept that measures the relative price or value of different countries products. An exchange rate system can also be fixed or allowed to fluctuate (Asher, 2012). A fixed exchange rate is a system in which a country's exchange rate remains constant or stays within some small margin of fluctuation around a constant par value. On the other hand, the floating exchange rate (which is our concern in this study) is an exchange rate system with no government or central bank action to keep it stable (Gikombo & Mbugua, 2018). With floating rates external shocks especially foreign trade shocks are less disruptive and monetary policy is more effective in influencing aggregate demand (Hatmanu, Cautisanu, & Ifrim (2020), hence economic growth is achieved.

Exchange Rate
Exchange rate fluctuations are caused by changes in the demand and supply of the currency in the FOREX market. When demand exceeds supply, the exchange rate will appreciate and rise in value. If, however the supply exceeds demand, the exchange rate falls in value and depreciates. In the long-run, changes in the demand and supply of a currency depend on changes in the value of imports and exports as well as long-term capital flows such as foreign direct investments (FDI). The determinants of this change over time on different economies include: rates of inflation, interest rates, and rates of economic growth, labor productivity and measures of international competitiveness (Ani, Ugwunta & Okanya, 2013).

There are situations in which flexible exchange rates may be described as too volatile. That is, exchange rates can be fully consistent with fundamental economic variables, such as relative prices, and macroeconomic policies, while still responding excessively to shocks to those variables before adjusting gradually to new long-term equilibrium levels. Such exchange rate 'overshooting' may occur because international capital markets adjust almost instantaneously to shocks, while goods and services markets adjust slowly (Hatmanu, Cautisanu, & Ifrim (2020).

According to Williams (2018) currency crises have the following pattern. First, the country runs a growing current account deficit. Thus, the currency is regarded as overvalued by purchasing power parity (PPP) standards. In instances where foreigners were investing in a booming economy and lending to local firms at attractive interest rates this capital account

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surplus is covered up by the current account deficit. However, once prospects for economic growth weaken and uncertainty builds, these foreign investors begin to exit the market. As investors exit, the current account deficit is revealed, and governments are forced to raise interest rates to attract capital. These high interest rates slow the economy and hurt economic prospects furthering the need for capital control measures.

Financial Performance

Financial performance is the use of much different accounting and mathematical techniques to evaluate how well an organization is using its resources to make a profit. Companies and analysts focus on financial performance as it plays a critical role not only in evaluating the current financial health and stability of a firm but also in achieving the high-performance standard and sustained growth in the future. Investors measure the company's performance to be able to make the right investment decisions (Osho & Efuntade, 2019).

Return on Asset

Return on assets is a measure of performance widely used in the corporate governance literature for accounting-based measures. Rouf, and Abdur. (2015) defined return on assets as a function of how profitable a firm is in totality of its entire assets. It shows the efficacy of the board and executives in terms of deploying all the assets of the firm to its maximum use and proper utilization. It is a measure which assesses the effectiveness of assets deployed and shows investors the earnings the company has realized from its investment in capital assets. Efficient use of a company's assets is best reflected by its rate of return on its assets by total assets. The return on assets shows the shareholders how much the managers are committing the fund of the firm into net income. It is a profitability ratio for net income of a company. Return on asset measures the profit earned per dollar of assets and reflect how well bank management uses the bank's real investments resources to generate profits (Alkassim, 2005). For banks with similar business risk profiles, return on asset is a useful statistic for comparing the profitability of banks because it avoids distortions that are introduced by differences in financial leverage. Return on assets (ROA) is a comprehensive measure of overall bank performance from an accounting perspective (Sinkey and Joseph, 1992). It seems more suitable for comparing the banks in the same industry than other measures of performance. Thus, return on assets (ROA) is chosen as the performance measure for this study. It shows the effectiveness of management in the utilization of the assets of a commercial bank. It is hypothesized that bank performance is influenced by the credit risk indicators like: capital adequacy ratio, nonperforming loan and cost per loan assets with controlling the effect of cash reserve ratio and bank size.

Theoretical Framework

The study is anchored upon the Purchasing Power Parity (PPP) Theory originated from the writings of the Swedish economist Gustav (Menon & Viswanathan, 2005). The theory states that homogeneous goods in different countries cost the same in the very same countries when measured in terms of the same currency. This implies that exchange rates between currencies are in equilibrium when their purchasing power is the same in each of the two countries. The willingness to pay a certain amount for foreign money must ultimately and essentially be due to the fact that this money possesses a purchasing power against goods and services in that

country (Reid & Joshua, 2004). Any variance from this statement implies that a country's currency is incorrectly valued. According to Yin-Wong and Kon (1994) "PPP theory suggest that currencies are valued for the goods they can purchase and, in arbitrage equilibrium, the exchange rate between two countries" currencies should equal the ratio of their price levels, of which a testable implication is that real exchange rate should display mean reversion, at least in the long-run.

The theory is linked to the arbitrage hypothesis that states that if two homogeneous goods are traded at different prices in different countries, this arbitrage opportunity would be utilized, which leads to convergence of the deviations from Purchasing Power Parity towards equilibrium in the absence of arbitrage costs. There are two forms of purchasing power parity (PPP), absolute and relative. The absolute purchasing power parity (PPP), also known as the Law of One Price, states that a commodity costs the same regardless of what currency is used to purchase it or where it is selling (Reid & Joshua, 2004). This theory is based on the assumptions that there are no transactional costs, no barriers to trade and the commodities being traded are homogeneous. If the trading currency is exchanged at the spot exchange rate, the price of a homogenous commodity should be identical across borders. The theory suggested use of price indexes to determine the exact price of a homogenous commodity between countries. The main challenge of this belief is in measuring Purchasing Power Parity constructed from price indexes given that different countries use different goods to determine their price level (Reid, 2005).

Due to these limitations in the absolute purchasing power parity (PPP), another form of purchasing power parity (PPP) has evolved the relative purchasing power parity (PPP) which acknowledges market imperfections such as transport costs, tariffs and quotas. Relative purchasing power parity (PPP) defines what determines change in exchange rate over time, rather than what determines absolute level of the exchange rate. It states that the exchange rate change is determined by the difference in the inflation rates of the two countries (Ross, 2008). According to relative purchasing power parity (PPP), any differential exchange rate to the one propounded by the theory is the real appreciation or real depreciation of one currency over the other (Reid & Joshua, 2004). This theory is relevant for this study as it explains the value of one currency in terms of another country's currency in terms of the basket of goods and services it can purchase with reference to the demand and supply. This theory argues that in the equilibrium exchange rate is one that ensures that the value exchanged can purchase the same basket of goods and services from either of the countries involved.

Empirical Review

Nominal Exchange Rate and Financial Performance
Fatbardha, Eglantina, Ugur, Mirela, and Marian (2020) examined the effect of real effective exchange rate volatility on economic growth in the Central and Eastern European countries. The study uses annual data for fourteen CEE countries for the period 2002–2018 to examine the nature and extends the impact of such movements on growth. The empirical findings using the fixed effects estimation for panel data reveal that the volatility of the exchange rate has a

significant negative effect on real economic growth. The results appear robust with alternative measures of exchange rate volatility such as standard deviation and z-score.

Delani and Turgut (2020) examined the impact of inflation and exchange rate on the financial performance of commercial banks in South Africa. The study covers the four largest commercial banks in South Africa, namely; Standard Bank, Nedbank, Capitec bank, and Firstrand bank for the period 2003-2019. To measure the financial performance return on equity was used as the dependent variable and inflation and exchange rate as the independent variables. Using Autoregressive Distributed Lag (ARDL), Fully Modified Ordinary Least Squares (FMOLS) Regression, and Stock-Watson dynamic OLS (DOLS) model the findings illustrated that there is a significant inverse relationship between inflation and the return on equity and there is a weak relationship between exchange rate and the return on equity.

Efanga, Umuoh, Essien, and Banle (2020) investigated the effect of exchange rate volatility on the performance of multinational firms in Nigeria. The study employed secondary data collated from the Central bank statistical bulletin and Security and exchange commission. These were analyzed using the Autoregressive distributed lag ARDL model. Results indicated a strong negative relationship between exchange rate and profitability of corporate firms operating in Nigeria, and a negative relationship between inflation rate and gross profit of corporate firms in Nigeria.

Khan (2021) investigated the impact of inflation, nominal exchange rate, foreign direct investment, and unexpected event shock on the economic growth of Bangladesh by using the time series data from 1990 through 2020. Augmented Dickey-Fuller and Phillips-Perron Unit Root Test used to identify unit-roots existence and check the stationary of variables. The Ordinary Least Squares method is applied to determine the relationship between the dependent variable and independent variables. The results revealed that the exchange rate and foreign direct investment have significantly affected the country's economic growth. Inflation, FDI, and exchange rate have positive impacts, whereas unexpected events like Covid-19, natural disasters, etc., negatively affect the economic development of Bangladesh.

Uddin (2021) examined the relationship between (GDP) Gross Domestic Product Growth and inflation in Pakistan by using time series data from 1990 to 2015. This study applies (ADF) Augmented dickey fuller test for stationary, and then, Engel Granger Co-integration test, for the short-run and long-run association. There is a strong positive and significant relationship between GDP growth and inflation in Pakistan. Which indicate that if a 1unit increase the inflation rate will be caused by GDP increased by 0.27 unit.

Abdelkreem and Sisay (2021) assessed the dynamics of inflation and its impacts on economic growth in Ethiopia, Kenya, and Sudan using time-series macroeconomic data collected from the African Development Bank. The research used the Autoregressive Distributed Lag (ARDL) econometrics model and investigated the presence of cointegration and long-term relationships between macroeconomic factors. The result indicates that the exchange rate and the supply of

the long-run economic growth rate influence Ethiopia's money supply. Inflation rates and foreign direct investments have impacted economic growth rates in Kenya and Sudan.

Akinwolere (2021) examined the impact of exchange rate volatility on economic growth in Nigeria. The study covers the period of 1986 to 2019. Using time-series data, the methodology adopted is the Vector Error Correction Mechanism to explore the impact of exchange rate volatility on the selected macroeconomic variables. The result indicated that exchange rate volatility has a significant impact on economic growth, specifically it has a positive impact on inflation, unemployment, and balance of trade. On the other hand, it has a negative impact on economic growth and investment.

Aminu, Anfofum, and Saheed (2021) examined the long run relationship between oil price shock, exchange rate volatility and economic growth in Nigeria over the period 1980-2019. The study employed the Johansen Vector Autoregression (VAR)-based cointegration technique model to examine the sensitivity of real economic growth to changes in oil prices and real exchange rate volatility in the long-run while the short run dynamics was checked using a vector error correction model. The result from the Granger causality test suggests that there is causality between oil price, exchange rate and GDP. The results from Johansen cointegration test indicate there exist a long-run equilibrium relationship among the variables. Findings further show that oil price shock and appreciation in the level of exchange rate exert positive impact on real economic growth in Nigeria.

Ayunku and Dickson (2021) investigated the impact of inflation rate, exchange rate and remittances inflows on the economic performance of Nigeria using time series data from 1960 to 2018. The study employed econometric techniques such as the Augmented Dickey Fuller (ADF) unit root test, correlation statistics, granger causality testand the ordinary least squares multivariate regression methods to analyze the data. The study finding showed that remittances inflows are a major driver of economic activities and growth in the Nigeria clime. Exchange rate exerted a positive impact on gross domestic product per capita growth in Nigeria. Both remittances inflows and exchange rate maintained a bi-directional causality with the performance of economy of Nigeria.

Nnamaka, Adaku, and Kingsley (2021) examined the relationship between non-oil exports and economic growth in Nigeria for the period 1981 to 2019 using ARDL/Bounds testing approach to analyse data sourced from the CBN statistical bulletin.The ADF stationary test showed that all the variables attained stationarity after first difference except gross domestic product which was stationary at levels.The bounds test confirmed the existence of a long run association amongst the variables in the model.Non-oil export and economic growth were positively related in both the long run and short run. While the long run revealed an insignificant relationship, a significant relationship was observed in the short run. Trade openness showed evidence of positive and insignificant relationship with economic growth both in the long run and in the short run period while exchange rate revealed a positive and significant relationship with economic growth both in the long run and in the short run period. The R2 value indicates

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that 58 percent of the systematic variation in economic growth is explained by non-oil export, trade openness and exchange rate in Nigeria over the period under study.

Gap in Empirical Review

The foregoing empirical review indicates that numerous works had been done on foreign exchange income and performance. However, most of these studies were done in an environment outside that of Nigeria. Again, the time frames considered in these studies were short; these studies could not use the core variable that capture foreign exchange income and the results from these studies are conflicting. These shortcomings have somehow contributed to the knowledge gap in the literature, thus warranting a more systematic and comprehensive study on the effect of foreign exchange income on the financial performance of deposit money banks in Nigeria. This study seeks to improve on the past studies which made use of 1984 to 2013 data; by making use of a broad data set spanning from 1987 to 2020 such data set is far more than those used in the previous studies. This work attempts to distinguish between long and short run effects of the variables in the model and determine the causalities among the variables used in the study.

METHODOLOGY

Research Design

The research design employed in this study is ex-post facto, focusing on historical data gathered from annual reports and accounts of selected deposit money banks in Nigeria and the Central Bank of Nigeria Statistical Bulletin. The study, conducted within the Nigerian banking sector, encompasses twenty-four publicly quoted firms as of December 31, 2020. Utilizing secondary data, the research extracted time series data from 2011 to 2020, with a particular emphasis on factors such as nominal exchange rate, real exchange rate, and exchange rate fluctuations from the CBN statistical bulletins. The population of the study comprises the twenty-four deposit money banks listed on the Nigeria Stock Exchange at the end of 2020. The sample size was purposefully selected, including five deposit money banks—First Bank Nigeria Plc, Access Bank Nigeria Plc, Zenith Bank Plc, United Bank for Africa Plc, and Guarantee Trust Bank Plc—that provided data for a period of up to seventeen years, aligning with the considerations of data availability and sufficiency of observations.

Model Specification

In tandem with Inyiama (2016), the models are specified as follows:

$ROA_t = \beta_o + \beta_1 NEXRATE_t + \beta_2 NEXRATE_t + \beta_3 EXRATEFt + \mathcal{E}_t$ -   [Equation (1)]

Where;

ROA:	Return on Asset
NEXRATE:	Nominal Exchange Rate
REXRATE:	Real Exchange Rate
EXRATEF:	Exchange Rate Fluctuation

c_{it} is the non-observable individual effect while $\mathcal{E}_{it}$ is the disturbance or error term for firm i in the year t

β_o	Coefficient (constant) to be estimated
$\beta_i - \beta_3$	Parameters of the independent variables to be estimated
t	Current period

DATA ANALYSIS AND DISCUSSION

Table 4.2.1 Descriptive Statistics

	ROA	NEXRATE	REXRATE	EXRATE	LNTA
Mean	0.020917	134.7116	80.96819	224.0560	6.556468
Median	0.017924	115.1888	78.87659	175.4950	6.559631
Maximum	0.056189	185.4658	97.11917	405.2400	6.938507
Minimum	-0.008434	96.01835	70.58081	150.3000	6.207333
Std. Dev.	0.016119	39.24097	8.778750	85.50280	0.199116
Skewness	0.556068	0.294299	0.586551	0.893629	0.063222
Kurtosis	2.517573	1.201398	1.987590	2.495706	2.134814
Jarque-Bera	3.061627	7.461287	5.002375	7.184590	1.592781
Probability	0.216360	0.053977	0.081988	0.057535	0.450954
Sum	1.045827	6735.579	4048.409	11202.80	327.8234
Sum Sq. Dev.	0.012731	75452.82	3776.256	358225.7	1.942720
Observations	50	50	50	50	50

Source: E-views 10 software

The normality of the distribution of the data series is judged by the outcome of the coefficients of Skewness, Kurtosis, and Jarque-Bera Probability. From Table 4.2.1, the probability of the Jarque-Bera Statistics for all the variables: Return on asset (0.216360), Nominal Exchange Rate (0.053977), Real Exchange Rate (0.081988), and Exchange Rate (0.057535) are insignificant which implies a normal distribution of the variables. The outcome was further confirmed by the skewness coefficients which are less than one for all the variables: Return on asset (0.556068), Nominal Exchange Rate (0.294299), Real Exchange Rate (0.586551), and Exchange Rate (0.893629). The coefficients which is less than one depicts a normal distribution for all the variables. The kurtosis coefficient provides a second level of confirmation that all the variables: Return on asset (2.517573), Nominal Exchange Rate (1.201398), Real Exchange Rate (1.987590), and Exchange Rate (2.495706) are normally distributed with coefficients less than three.

Table 4.2.2 Ordinary Least Square Estimation Result
Dependent Variable: ROA
Method: Panel Least Squares
Date: 06/15/22   Time: 15:20
Sample: 2011 2020
Periods included: 10
Cross-sections included: 5
Total panel (balanced) observations: 50

Variable	Coefficient	Std. Error	t-Statistic	Prob.
NEXRATE	0.000543	0.000237	2.288246	0.0269
REXRATE	-0.001041	0.000450	-2.313842	0.0253
EXRATE	-4.432505	8.40E-05	-0.526933	0.6008
LNTA	-0.088802	0.020397	-4.353556	0.0001
C	0.624287	0.139137	4.486839	0.0000
R-squared	0.298983	Mean dependent var		0.020917
Adjusted R-squared	0.236670	S.D. dependent var		0.016119
S.E. of regression	0.014083	Akaike info criterion		-5.593064
Sum squared resid	0.008925	Schwarz criterion		-5.401862
Log likelihood	144.8266	Hannan-Quinn criter.		-5.520253
F-statistic	4.798113	Durbin-Watson stat		0.363050
Prob(F-statistic)	0.002612			

Source: E-views 10 software

Nominal Exchange Rate: Nominal Exchange Rate has a coefficient of 0.000543 which shows that a unit increase in Nominal Exchange Rate results to an increase of 0.0054 in the Return on Asset of deposit money banks in Nigeria. The value of the t-statistics (2.288246 > 2) and the probability of t-Statistic (0.0269 < 0.05) shows that Nominal Exchange Rate has a significant effect on the Return on asset of deposit money banks in Nigeria.

Real Exchange Rate: Real Exchange Rate has a coefficient of -0.001041 which shows that a unit increase in Real Exchange Rate results to a decrease of 0.00104 in the Return on asset of deposit money banks in Nigeria. The value of the t-statistics (-2.313842 > 2) and the probability of t-Statistic (0.0253 < 0.05) shows that Real Exchange Rate has a significant effect on the Return on asset of deposit money banks in Nigeria.

Exchange Rate: Exchange Rate has a coefficient of -4.432505 which shows that a unit increase in Exchange Rate results to a decrease of 0.072 in the Return on asset of deposit money banks in Nigeria. The value of the t-statistics (-0.526933 < 2) and the probability of t-Statistic (0.6008 > 0.05) shows that Exchange Rate has a nonsignificant effect on the Return on asset of deposit money banks in Nigeria.

Statistical Criteria (First Order Tests): The value of the Adjusted R^2 is 0.236670, which tells us that 23% of the changes in the Return on asset are explained by the independent variables, while the remaining 22% are explained by other factors capable of influencing Return on asset other than Nominal Exchange Rate, Real Exchange Rate, Exchange Rate, and the control variable. These other factors are contained in the error term. The f-test is used to check for the overall significance of the model and if the value of the probability of the f-stat (p-value: 0.002612) is less than 0.05 at a 5% critical value, the model is said to be significant and

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statistically fit. The Durbin Watson Statistic (0.363050) shows the absence of serial autocorrelation in the time series data.

Table 4.2.3: Correlation Analysis Result

	ROA	**NEXRATE**	**REXRATE**	**EXRATE**	**LNTA**
ROA	1.000000	-0.040990	-0.016251	-0.051650	-0.302458
NEXRATE	-0.040990	1.000000	0.516758	0.911158	0.779354
REXRATE	-0.016251	0.516758	1.000000	0.212192	0.074637
EXRATE	-0.051650	0.911158	0.212192	1.000000	0.820539
LNTA	-0.302458	0.779354	0.074637	0.820539	1.000000

Source: Eviews 10.0 Software

Table 4.2.3 above shows the correlation results of the variables of the study. The table shows how the various independent variables of the study relate with each other and with the dependent variable. The table depicts that there is a nonsignificant (4% approx.) and negative relationship between Nominal Exchange Rate and Return on asset (NEXRATE/ROA). Real Exchange Rate and Return on asset (REXRATE/ROA) share a negative and nonsignificant (1% approx.) relationship. Exchange Rate and Return on asset (EXRATE/ROA) share a negative and nonsignificant (5% approx.) relationship. Furthermore, the control variable measured by natural logarithm of Total Asset share a negative and weak (30% approx.) relationship with Return on asset of deposit money banks in Nigeria.

TEST OF HYPOTHESES
The three hypotheses formulated in section one of this study was tested using the following decision rule:
The decision rule involves rejecting the null hypothesis (H_0) if the sign of the coefficient for Nominal Exchange Rate is either positive or negative, the modulus of the t-Statistic > 2.0 and the P-value of the t-Statistic < 0.05. Otherwise, accept H_0 and reject H_1.
Table 4.2.3 Ordinary Least Square Estimation is used to test the above-stated hypothesis.

Hypothesis One
H_0: Nominal Exchange Rate does not significantly affect return on asset of deposit money banks in Nigeria.
 H_1: Nominal Exchange Rate have a significant effect on return on asset of deposit money banks in Nigeria.

Decision: The regression coefficient in Table 4.2.3 shows that Nominal Exchange Rate has a statistically positive effect on the Return on asset of deposit money banks in Nigeria. The values for t-statistic (2.288246) and probability of the t-statistic (0.0269) shows that Nominal Exchange Rate has a statistically significant effect on Return on asset in the industry.

Hypothesis Two
H_0: Real Exchange Rate does not significantly affect return on asset deposit money banks in Nigeria.

H_1: Real Exchange Rate have a significant effect on return on asset deposit money banks in Nigeria.

Decision: The regression coefficient in Table 4.2.3 shows that Real Exchange Rate has a statistically positive effect on the Return on asset of deposit money banks in Nigeria. The values for t-statistic (2.313842) and probability of the t-statistic (0.0253) shows that Real Exchange Rate has a statistically significant effect on Return on asset in the industry.

Hypothesis Three

H_0: Exchange Rate do not significantly affect return on asset of deposit money banks in Nigeria.

H_1: Exchange Rate have a significant effect on return on asset of deposit money banks in Nigeria.

Decision: The regression coefficient in Table 4.2.3 shows that Exchange Rate has a statistically negative effect on the Return on asset of deposit money banks in Nigeria. The values for t-statistic (0.526933) and probability of the t-statistic (0.6008) shows that Exchange Rate has a statistically nonsignificant effect on Return on asset in the industry.

DISCUSSION OF RESULTS

Effect of Nominal Exchange Rate on Return on Asset
In the test of hypothesis one, the regression analysis result revealed that Nominal Exchange Rate has a significant positive effect on return on asset of deposit money banks in Nigeria. This implies that as the Nominal Exchange Rate increases, return on asset of these deposit money banks increases. The result is line with findings of Ayunku and Dickson (2021), David (2021), Magaji and Singla (2021), Aminu, Anfofum, and Saheed (2021), Akinwolere (2021), Abdelkreem and Sisay (2021), Khan (2021). The researchers found that Nominal Exchange Rate have a significant effect on profitability. However, Efanga, Umuoh, Essien, and Banle (2020), Babalola (2013), and Hamidzadeh and Zeinali (2015) found that Nominal Exchange Rate do not have a nonsignificant effect on financial performance of firms.

Effect of Real Exchange Rate on Return on Asset
In the test of hypothesis one, the regression analysis result revealed that Real Exchange Rate has a significant negative effect on return on asset of deposit money banks in Nigeria. This implies that as Real Exchange Rate increases return on asset of these deposit money banks decreases significantly. This result is in tandem with the a priori expectation of the researcher. The result is line with findings of Moye (2020), Fatbardha, Eglantina, Ugur, Mirela, and Marian (2020) and Hatmanu, Cautisanu, and Ifrim (2020). The researchers found that Real Exchange Rate have a negative effect on profitability. However, Ayunku and Dickson (2021), David (2021), Magaji and Singla (2021), Aminu, Anfofum, and Saheed (2021), Akinwolere (2021), Abdelkreem and Sisay (2021), and Khan (2021) found that Real Exchange Rate do not have a positive effect on financial performance of firms.

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Effect of Exchange Rate on Return on Asset
In the test of hypothesis three, the regression analysis result revealed that the Exchange Rate have a nonsignificant negative effect on return on asset of deposit money banks in Nigeria. The finding is in tandem with the finding of Delani and Turgut (2020), Segun (2018), and Williams (2018). They find Exchange Rate to positively and significantly affect financial performance of firms. Howver, Ayunku and Dickson (2021), David (2021), Magaji and Singla (2021), Aminu, Anfofum, and Saheed (2021), Akinwolere (2021), Abdelkreem and Sisay (2021), Khan (2021) found a positive relationship between Exchange Rate and financial performance of firms.

CONCLUSION AND RECOMMENDATION

The study ascertained effect of foreign exchange income on financial performance of deposit money banks in Nigeria. From the data analysis, it was revealed that Nominal Exchange Rate has a significant negative effect on return on asset of deposit money banks in Nigeria. Real Exchange Rates have a significant positive effect on return on asset of deposit money banks in Nigeria. However, Exchange Rate has a nonsignificant negative effect on return on asset of deposit money banks in Nigeria.

The Adjusted R-Squared shows that 23% of changes in return on asset in the industry can be explained by Nominal Exchange Rate, Real Exchange Rate, and Exchange Rate, the remaining 77% could be explained by other factors capable of influencing return on asset in the industry. Consequently, the study concludes among the foreign exchange income variables, Nominal Exchange Rate and Real Exchange Rate can be used to predict return on asset of deposit money banks in Nigeria. The study made the following recommendations:

1.   Federal money the sources of deficit financing. They should reduce their public debt so as to allow foreigners invest in securities with naira denomination.
2.   They should reduce the extent the deplete our foreign exchange reserve because such moves increase the exchange rate, which affects banks performance negatively.
3.   The central bank of Nigeria and the ministry of finance should reduce the rate they give out dollars to politicians because it affects our exchange rate and banks' performance negatively.

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