
Remittance Inflows and Deposit Money Banks' Performance in Nigeria

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Abstract

This paper examined the relationship between remittances inflows and deposit money banks performance in Nigeria over the period 1998 to 2023. The specific objectives were to find out whether remittances inflows (RI), official development assistance (ODA) and financial openness (FO) and exchange rate (EXR) significantly affect deposit money banks' performance. The Autoregressive Distributed Lag (ARDL) technique was employed to analyze the sourced data. The results obtained revealed that foreign remittances inflows (RI) has significant negative effect on deposit money banks' performance in the short run and in the long run. The results further indicate that the official development assistance inflows (ODA) has significant positive impact on DMBP both in the short run and in the long run; financial openness (FOPS) and exchange rate (EXR) has a strong negative relationship with deposit money banks performance (DMBP) in the long run. The conclusion is that, in the determination of deposit money banks performance in Nigeria, all the hypothesized variables in the model (FORM, ODEVA, FOPS and EXR) are potent factors that should not be ignored by the government and regulatory body. The study recommends among others that, there is need for the regulatory authority (CBN) and bank management in Nigeria to develop alternative channel for attracting migrants' remittances back home through the banking system. This can be done by channeling/converting most of these remittances to private investment back home, issuance of migrants/diaspora bonds and private debentures. This way, migrants will be attracted and very willing to invest in them and by so doing the banking system will have enough funds to support private sector investment and sustain steady liquidity in the banking sector.

Keywords: Foreign Remittances, Official Development Assistance, Financial Openness, Banks Performance and Econometric and Statistical Methods.

JEL Classification: F22, F35, F41, G21, C1.

1. Introduction

The role of foreign remittances inflows in enhancing the overall performance and wellbeing of deposit money banks (DMBs) especially in developing economies in this contemporary era has been well document in the extant literature. The deposit money banks through their financial intermediation role are regarded as the brain head behind private sector development which in turn is seeing to be the main driver of social economic development of a nation (Igbinedion, 2023). However, one of the main constraints facing DMBs in carrying out their financial intermediation role in accelerating private sector growth is paucity and unaffordable funds (bank loans) for profitable investments. In this regard, and very recently, the World Bank (2018) confirmed that migrants' remittances have emerged as the second steadiest sources of funds for complementing

shortfalls in domestic credits to the private sector, promoting domestic savings, improving banks deposits and asset base, as well as promoting economic development in developing countries (Donaubauer, Meyer & Nunnenkamp, 2016; Adamu, Zasha & Umar, 2022). Therefore, with the advent of constant inflow of migrants' remittances to the Nigerian economy (Nairametrics, 2024; Migrant Data Portal, 2024), which often came through the deposit money banks. It is expected that sufficient funds would be available to the banking sector thereby given the needed capacity to offer sufficient credits to the real sector of the economy and this in turn, will impact positively on the overall financial performance. However, despite the increase in inflows of these remittances to the Nigerian economy, the impact on the banking sector has not been felt (reconsider this statement). Until recently, one cannot tell with any minimal conclusion the extent to which migrants' remittance inflows have impacted the deposit money banks performance and the financial system at large. This is one of the main reason for this current study.

Moreover, a lot of studies have been conducted on the effect on remittances inflows either on economic growth, economic development, financial sector development, credit to private sector, or stock market development/performance among others. But to the best of the researcher's knowledge, apart from the works of Femi and Olusola (2016), Ikechi, Emmanuel, Onyinyechi and Oluchi (2017) and Igbiniedion (2023); no prior studies on the impact of remittances inflows on deposit money banks' performance have been conducted in Nigeria. This created a gap in the empirical literature that this study intends to fill.

Furthermore, in terms of method of data analysis, it was observed that those few previous studies above employed panel data analysis, ordinary least square (OLS), and auto regressive distributed lags (ARDL) in their analysis of data. Apart from Igbiniedion (2023), no other prior studies in this area utilized the auto regressive distributed lags (ARDL) that this study employed. It is noted that the ARDL is advantageous and more effective in a study of this nature because it can be used regardless of the stationary qualities of the variables in the sample and permits inferences about long run estimates that are not achievable with other methods as well as alternative cointegration procedures.

The rest of this paper is structured as follows: section two is on literature review, section three addresses the methodology, section four focuses on data analysis and interpretation of results and while section five deals with conclusion and recommendations.

2. Literature Review

2.1 Banks Performance

Bank performance can be defined as the way and manner management carries on the daily operations of the bank such that its available scarce resources are efficiently utilized to achieve its set objectives and goals. It has also been defined as the main driver of profitability generated from the main operations of the bank, hence, it remains the pillar, purpose and sustenance of banking activity (Ferrouhi, 2018). However, the measure of performance of a bank may not depend on its efficiency alone but also on the market and environment in which it carries out its activities. For instance, in the banking sector, it either focuses on its financial stability or financial health. Hence, there exist various financial measures for ascertaining the overall performance of a bank, and these include but not limited to revenue, return on equity, return on assets, profit margin, sales growth, capital adequacy, liquidity ratio, and stock prices, among others (Maverick, 2023). Depending on the industry in which the company operates, some financial ratios will be more

meaningful than others. However, in this study, we utilized return on asset as a measure of bank performance due to the fact that it shows how efficient a firm/bank utilizes its assets to generate profits overtime, coupled with the fact that, an increase in ROA suggests that the bank is doing well as profits improve with every unit of money spend. Bank regulators screen banks by evaluating bank's liquidity, solvency and overall performance to enable them to intervene when there is need to measure the potential problems.

2.2 Foreign Remittances Inflows (FORM) and Deposit Money Banks Performance

Foreign remittance inflow (FRMI) is a transfer of funds from other countries to the home country and families of the individual residing over there. In many countries, remittance constitutes a significant portion of a nation's economic growth as measured by gross domestic product (Chen, 2021). It has also been defined as money transferred/repatriated to home country by citizens and business organizations located outside the international border as well as government to either assist family members, payment for trade or for investment purposes like equity shares, bonds and debentures among others (Obayagbona & Edo-Osagie, 2024). The World Bank (2018) defined foreign remittances as "funds transferred from migrants working abroad to their families in their country of origin, and it is often regarded as the second most steady source of external funding to several emerging and developing countries, besides foreign direct investment (FDI)

Remittances by migrants today play significant role in the performance of deposit money banks due to the fact that they are legally expected to create credit to borrowers from the deposits received from customers while at the same time, are also mandated by monetary authority to reserve certain percentages of these deposits as liquid reserves to meet daily withdrawal needs of customers. Therefore, for banks to be able to carry out their financial intermediation role in the economy, bridge the gap between the surplus unit and the deficit unit of the society, promote investment in the private sector and remain active in the real sector of the economy, they must be seen to be financial buoyant and constantly liquid. In this regard, foreign remittances that often come in huge sums into Nigeria if effectively harnessed and utilized through the banking sector, could bridge the financing gap, strengthen the assets and financial base of banks and eventually promote private sector investment (Hamdar & Nouayhid, 2017; Stojanov et al., 2019). This is true because, in developing countries (Nigeria inclusive), that are often characterized by weak regulatory framework, as well as underdeveloped financial markets, foreign remittances inflows are believed by financial experts to have enormous positive impact when compared to the developed economies (Adams & Klobodu, 2016).

Some prior studies like Demirgüç-Kunt et al. (2011), Olaniyan (2019) found that that increases in the amount of foreign remittances into Mexico and Nigeria increases the number of bank branches and bank accounts respectively. This further follows that migrants' families in the home country can either choose to deposit part or all the money received abroad in the bank and thereafter use same to buy assets or other investment of their choice through the same bank. This way, migrant remittances are able to influence positive the over activities and performance of the banking system.

2.3 Official Development Assistance (ODEVA) and Deposit Money Banks Performance

The Origin of official development assistance (ODEVA) has it that, it all started in form of foreign aid in 1969 as "gold standard" and till date it continues to be a veritable means of funding various forms of development across developing countries. Thus, ODEVA is a primary source of external

financing for Low-Income countries (LICs), which represents transfer of money and resources from advanced countries to developing countries or low income/middle income countries to enable them effectively tackle the detrimental effect of poverty, while at the same time promote economic development. Similarly, the OECD (2023a) sees official development assistance inflows (ODAI) as government aid used for assisting developing countries to promote their welfare as well as economic development.

2.4 Theoretical Review

2.4.1 The Resource-Based Performance Theory

The resource-based performance view provides a framework for evaluating the strategic fit of firms' resources in relation to developing economies. The theory was originally proposed by Wernerfelt (1984) and further developed by Barney (1991) and other scholars. The central focus of the resource-based performance view of firms is that competitive advantage is purely driven by a firm's inherent resources and capabilities (Wernerfelt, 1984; Conner, 1991). On this premise, "Barney (1991) outlined four specific characteristics of the types of resources that will strengthen a firm's competitive advantage which in turn enhances its overall performance: these include value, rarity, imperfect imitability, and lack of substitutability". Thus, "enormous resources at the disposal of the firm enable it at all times to exploit opportunities and/or avoid threats in the environment (Barney, 1991) and enable it to develop and/or implement strategies to improve its efficiency and effectiveness (Capron & Hulland, 1999)". The theory further stressed that, a firm can outperform other firms by the way it combines and utilizes its financial, technical, human, and other resources; and where these resources are considered to be strategic to the performance of the firm, then effort will be made to maximize their potentials and benefits for the overall interest of the firm in order to avoid their outflow by the use of ergonomics.

In relation to deposit money banks performance, foreign remittances by migrants if properly harnessed by banks becomes an inherent resources and capabilities that will help strengthen their competitive advantage which in turn enhances their overall performance. Thus, migrants can be motivated to either deposit several portion of their money in the banks, purchase assets or own equity shares in the banks, or purchase Treasury bills as well as bonds.

2.5 Empirical Literature

Several studies have examined the impact of remittances inflow on banking sector development. For instance, Aggarwal, Demirgüç-Kunt and Martínez Peria (2006) examined the impact of foreign remittances inflows on banking sector development in developing countries over the period 1981 to 2004. The panel data analysis technique was utilized and the finding showed that significant positive impact of remittances on banking sector development. Demirgüç-Kunt et.al (2011) employed regression analysis to investigate the relationship between foreign remittances inflows and the breadth and depth of banking sector in Mexico. It was found that foreign remittances inflows have significant positive relationship with banking breadth and depth in the country.

In a related study by Femi and Olusola (2016) on international remittances and banking sector performance in Nigeria over the period 1984 and 2014. The Johansen Maximum Likelihood Estimator Test and Toda-Yamamoto Granger non-causality (1996) was employed in the analysis of data. The empirical findings demonstrated a unidirectional causality from bank development to remittance inflows with the complimentary role of bank size and efficiency in remittance inflows.

Also, Ikechi, Emmanuel, Onyinyechi and Oluchi (2017) examined the effect of foreign remittance inflows on banking sector visa vice financial development in Nigeria over the period 1981 to 2015. The OLS techniques was utilized and the findings revealed that foreign remittance inflows have significant positive relationship with banking sector performance (credit to private sector and financial savings) at both the short and long runs.

Githaiga (2020) examined the impact of foreign remittances on private sector investment and the moderating role of banking sector development in 15 Sub-Saharan African countries for the period 1986 to 2017. Employing the regression analysis, it was found that foreign remittances and banking sector development had a significant and positive effect on private investment in Sub-Saharan Africa. Also, banking sector development significantly moderates foreign remittances and private sector investment relationship.

Similarly, Keho (2020) investigated how remittances affect financial development in ECOWAS countries for the period 1980 to 2017. Using the Common Correlated Effects Mean Group (CCEMG) to control for heterogeneity and cross-section dependence among countries, it was found that has significant negative effect on banks' domestic credit to private sector, while it has significant positive impact on money supply in the long run. Igbiniedion (2023) examined the relationship between foreign remittances inflows, bank credit and private sector performance in Nigeria over the period 1981 to 2021. The ARDL technique was employed for analysis of data, and the result indicate that while foreign remittances inflows and bank's loans have significant positive relationship with bank performance in the long run, but their impact on bank performance was significant and negative in the short run.

Ngea (2024) investigated how foreign remittances inflows and financial development affect access to financing by SMEs in 106 developing countries over the period 2005 to 2019. Employing the probit regressions technique, it was observed that Foreign remittances inflows has significant negative impact on SMEs access to credit, while remittances inflows and access to credit is predicated on the level of financial development.

3. Methodology

The study adopted the ex-post facto design because it entails the use of secondary that the researcher will not be able to manipulate due to the fact that they have already occurred hence, they are immanipulable. The population of the study which is also the sample size is the Nigerian banking sector covering the period 1998 to 2023 (26 years). The census population in which population equals sample size was employed in this regard. This period was chosen largely due to availability of data, and again, the period also witnessed the reconsolidation of the Nigerian banking system as well as the numerous policies implementations that occurred during the post consolidation era.

3.1 Sources of Data

Secondary data sources were used in this study covering the period 1998 to 2023 (26 years), and they were obtained from the Central Bank of Nigeria Statistical Bulletin (2023) and the World Bank Data.

3.2 Theoretical Framework and Model Specification

The theoretical framework for this study is anchored on the resource-based performance theory as originally proposed by Wernerfelt (1984) and further developed by Barney (1991). According to the theory, a firm's competitive advantage is purely driven by its inherent resources and capabilities. Therefore, in this study, the inherent resources and capabilities of deposit money banks (DMBs) is taken to be foreign remittances inflows (RI) and official development assistance (ODA). With effective management of these two variables in conjunction with other related variables like financial openness and exchange rate, DMBs will be able to strengthen their competitive advantage and in turn enhances their overall performance.

Therefore, deducing from the foregoing, the model for this study follows a simple linear form which is specified in its functional form as follows:

$$DMBP = f(RI, ODA, FO, EXR) \dots \dots \dots 3.1$$

Model 3.1 above is restated in its econometric form in line with the autoregressive distributed lags model (ARDL); and an ADL(p, q) model assumes that a time series Y_t can be represented by a linear function of p of its lagged values and q lags of another time series X_t : $Y_t = \beta_0 + \beta_1 Y_{t-1} + \beta_2 Y_{t-2} + \dots + \beta_p Y_{t-p} + \delta_1 X_{t-1} + \delta_2 X_{t-2} + \dots + \delta_q X_{t-q} + u_t$.

Hence, for this study, equation 3.1 is restated in the ARDL model as follows:

$$DMBP_t = \alpha_0 + \sum_{i-j} \alpha_1 DMBP_{t-1} + \sum_{i-j} \alpha_2 RI_{t-1} + \sum_{i-j} \alpha_3 ODA_{t-1} + \sum_{i-j} \alpha_4 FO_{t-1} + \sum_{i-j} \alpha_5 EXR_{t-1} + U_t \dots \dots 3.2$$

Where:

DMBP = Deposit Money Banks Performance (Measured as Return on Asset (ROA))

RI = Foreign Remittances Inflows

ODA = Official Development Assistance

FO = Financial Openness

EXR = Exchange Rate

U_{it} = is the error term

Apriori Expectations are: $\alpha_1, \alpha_2, \alpha_3 > 0$; $\alpha_4 < 0$

3.3 Method of Data Analysis

In this study, two main methods were used for the analysis of data and are unit root test and the Autoregressive Distributed Lags (ARDL). The unit root test was used to ascertain the stationarity properties of the data. The study then employs the Autoregressive Distributed Lags (ARDL) technique for modeling integration relationships. The ARDL approach to cointegration is based on Pesaran and Shin's technique (1999). The primary advantage of this approach is that it may be used regardless of the stationary qualities of the variables in the sample and permits inferences about long run estimates that are not achievable with alternative cointegration procedures. The parsimonious ECM is used because it can combine short and long run properties to produce an efficient estimate; thereby providing room for much flexibility. Finally, post regression test of

Breusch-Godfrey serial correlation test is used to ensure the absence of serial correlation in the model.

3.4 Measurement of Variables

Table 3.1: Description of Data

Variables	Expressed As	Measurement	Source	Expected Sign
Deposit Money Banks Performance	DMBP	Measured as Return on Asset (ROA)	Global Financial Development Index (2022); Femi and Olusola (2016)	
Foreign Remittances Inflows	RI	Measured by Transfers from International Migrants to Family Members in their Home Country of Origin	World Bank Data; Githaiga (2020), Igbiniedion (2023) and Ngea (2024)	+
Official Development Assistance Inflows	ODA	Government Aid Designed to Promote the Economic Development and Welfare of Developing Countries	World Bank Data; Sen (1999); Spenser (2020)	+
Financial Openness	FO	Ratio of foreign financial assets plus foreign financial liabilities to gross domestic products (GDP)"	Obayagbona and Igbinovia (2021), Azebi and Dein (2020); Obayagbona and Edo-Osagie (2024)	+
Exchange Rate	EXR	Real Effective Exchange Rate (REER; CPIw/CP	Ehigiamusoe and Lean (2019) and Elijah (2018)	-

Source: Author's Compilations 2024.

4. Data Analysis and Interpretation of Results

This section is on the method of analysis earlier established in preceding section, which includes augmented decay fuller unit root test (employed to test for the stationarity properties of the data), the bound test for cointegration and the Autoregressive Distributed Lags (ARDL) method employed for the main analysis of the study.

4.1 Unit Root Analysis

The results of the Augmented Dickey Fuller (ADF) test are presented in Table 4.1. The result indicates that while some of the variables were stationary at levels (see panel 1) others were taken the first difference, all the variables became stationary (see panel 2). Thus, we would accept the hypothesis that the variables possess unit roots. Indeed, the variables are integrated of order one (i.e. I[1]).

Table 4.1: Unit Root Tests

At Levels Panel 1				First Difference Panel 2		
Variable	ADF Test Statistic	95% Critical ADF Value	Remark	ADF Test Statistic	95% Critical ADF Value	Remark
DMBP	-5.356952	-2.986225	Stationary	-8.776486	-2.991878	Stationary
RI	-2.570230	-2.986225	Non-stationary	-4.986400	-2.991878	Stationary
ODA	-2.994959	-2.986225	Stationary	-5.044638	-2.998064	Stationary
FO	-1.417894	-2.991878	Non-stationary	-4.826435	-2.998064	Stationary
EXR	4.603958	-2.986225	Stationary	-3.850335	-3.004861	Stationary

Source: Author's Computation (2024)

4.2 Bound Test for Cointegration

The bounds test result for cointegration is carried out in Table 4.2; and it shows that the F -statistic value of 9.108182 is greater than the upper bound $I(1)$ value of 3.49 at the 5% significance level. Thus, we conclude that a long run relationship exist among the hypothesized variables in the model.

Table 4.2: Bounds Test for Cointegration Result

Test Statistic	Value	Significant	I(0)	I(1)
F-statistic	9.108182	10%	2.2	3.09
K	4	5%	2.56	3.49
		2.5%	2.88	3.87
		1%	3.29	4.37

Source: Author's Compilations, 2024.

4.3 The ARDL Error Correction Regression Result (Short Run Result)

The results of the short-run dynamics of deposit money banks performance and foreign remittances inflows are presented in Table 4.3. The outcome demonstrates high goodness of fit of R-squared value of 0.88, suggesting over 88 percent of the systematic variation in deposit money banks performance (DMBP) is explained by short term movements in the explanatory variables including the ECM. Even the R-Bar squared value of 0.85 is also very high.

With respect to the specific variable coefficients, it was found that foreign remittances inflows (RI) has significant negative relationship with deposit money banks performance in Nigeria; the variable was significant at the 1 percent level. This means that RI is a veritable factor for ascertaining the level of deposit money banks performance in Nigeria in the short run. However, the negative sign suggests that increases in the aggregate level of remittances inflows reduces overall performance of deposit money banks by approximately -1.990458%.

Those of official development assistance inflows (ODA) is positively signed and passed the 1 percent significance level. Indeed, it is seen that a unit increase in the level of ODA inflows leads

to about 1.72E-09% increase in the level of deposit money banks performance in Nigeria within the short run. The lagged value of deposit money banks performance $D(DMBP(-1))$ passes the 5 percent significance level, suggesting that previous value of deposit money banks performance significantly impact deposit money banks performance than the current value. The previous values of $D(ODA(-1))$ and $D(FO(-1))$ also has significant impact on deposit money banks performance in Nigeria in the short run.

The coefficient of the error correction (ECM) term (represented by $CointEq(-1)^*$) in Table 4.3 has the correct negative sign and is also significant at the 1 percent level. This goes to show that any short-term deviation of deposit money banks performance from equilibrium in the short-run, can be restored in the long run. The ECM value of -2.146665 (14%) means adjustment to equilibrium during the first year is low. The DW statistic value of 1.59 shows the absence of autocorrelation problem in the model.

Table 4.3: ARDL ECM Results

ECM Regression			
Case 2: Restricted Constant and No Trend			
Variables	Coefficient	T-Ratio	Prob.
$D(DMBP(-1))$	0.393604	2.811574	0.0157*
$D(RI)$	-1.990458	-4.023438	0.0017**
$D(ODA)$	1.72E-09	5.250236	0.0002**
$D(ODA(-1))$	-1.88E-09	-5.546046	0.0001**
$D(FO)$	-1.53E-08	-0.642701	0.5325
$D(FO(-1))$	7.25E-08	2.930774	0.0126*
$CointEq(-1)^*$	-2.146665	-8.798838	0.0000
$R^2 = 0.88$	$\bar{R}^2 = 0.85$		D.W.= 1.59

Source: Author's compilations (2024). Note: **sig at 1%; *sig at 5% level.

4.4 The ARDL Long Run Results

Since the bounds test result for cointegration earlier conducted in Table 4.2 indicated the existence of a long run relationship among the variables, we therefore conduct the ARDL long run test. The result is presented in Table 4.4 below. The coefficient of foreign remittances inflows (RI) has significant negative relationship with deposit money banks performance in Nigeria; the variable was significant at the 1 percent level. This result also aligns with the short run finding, meaning that in the long run, RI plays significant role in the determination of deposit money banks performance in Nigeria. However, the negative sign suggests that increases in the aggregate level of remittances inflows has detrimental effect on the overall performance of deposit money banks by approximately -1.686566%.

Those of official development assistance inflows (ODA) also aligns with those of the short run finding; it is positively signed and passed the 1 percent significance level. Indeed, it is seen that in the long run, a unit increase in the level of ODA inflows leads to about 2.09E-09 increase in the level of deposit money banks performance in Nigeria. The implication of this result is that, within the long run, disbursements of loans made on concessional terms, coupled with grants by official agencies of the members of the development assistance committee (DAC), as well as those of

multilateral institutions targeted at economic development and welfare of developing countries have significantly and positively enhanced the overall performance of deposit money banks in the country.

The coefficient of financial openness (FO) has a strong negative relationship with deposit money banks performance (DMBP); suggesting that the variable is a crucial factor for determining the performance of deposit money banks in Nigeria in the long run. Theoretically, it is expected that FO should positively promote financial market development due to the fact that it advocates total liberalization of the financial system to allow for foreign investors participation in the financial activities in the domestic economy, and thereby fast tract the overall development of the financial market. However, the opposite seems to be the case; probably the Nigerian financial sector and indeed, the banking sector has not been properly integrated into the global financial flows. There is need to reposition the deposit money banks activities in Nigeria by ensuring that all forms of inhibiting forces such as corruption, sharp bank practices, weak regulatory framework should be readdressed. Also, effort should be made to constantly update the current state of the art digital banking facilities, and this will enable DMBS in Nigeria to effectively track all remittances inflows as well as other forms of financial inflows. Doing these will definitely go a long way to ensuring the FO has the needed positive effects on deposit money banks performance in Nigeria in the long run.

There is urgent need to review the current exchange rate policy regime in Nigeria because, the finding from this study has demonstrated that exchange rate (EXR) is significant and negatively related to deposit money banks performance. This suggests that the high the rate of exchange between the naira and other international currencies, the higher the performance of DMBs. This is truly a reflection of what is currently happening in the Nigerian economy. The Central Bank of Nigeria (CBN) must re-initiate the right policy targeted at reducing the current exchange rate and further ensure its stability.

Table 4.4: ARDL Long Run Result

Levels Equation			
Case 2: Restricted Constant and No Trend			
Variables	Coefficient	T-Ratio	Prob.
RI	-1.686566	-4.356473	0.0009**
ODA	2.09E-09	4.973029	0.0003**
FO	-4.61E-08	-2.646347	0.0213*
EXR	-0.016847	-2.332973	0.0379*
Constant	12.21138	4.275096	0.0011

Source: Author's Compilations (2024). Note: **sig at 1% level; *sig at 5% level.

4.5 Breusch-Godfrey Serial Correlation LM Test

To test whether the residuals from the model are serially correlated in the estimation, we used the Breusch-Godfrey Serial Correlation LM Test as indicated in Table 4.5 below. Indeed, from the result, since the null hypothesis is that the residual are serially uncorrelated, and the F-Statistic p-value of 0.4232 indicates that we will fail to reject the null. Therefore, the residuals are serially uncorrelated.

Table 4.5: Breusch-Godfrey Serial Correlation LM Test

F-statistic	0.692046	Prob. F(1,11)	0.4232
Obs*R-squared	1.420547	Prob. Chi-Square(1)	0.2333

Source: Author's Compilation (2023)

Discussion of Findings

The significant negative relationship between foreign remittances inflows (RI) and deposit money banks performance suggests that RI has not been effectively harnessed by the banking sector of the Nigerian economy. This could probably be that most of the migrant inflows enter through the informal sector while the few ones that could be accounted for passed through the formal sector of the financial system (banking system). Hence, these small amount that comes through the formal sector and by extension the banking system are not huge/sufficient enough to do the magic (providing sufficient liquidity) to complement the shortfalls in domestic credits to private sector, promote domestic savings, improving banks deposits and asset base in such a way that it will impact positively on the overall performance of DMBs. This finding however negative the findings of Aggarwal, Demirgüç-Kunt and Martínez Peria (2006), Demirgüç-Kunt et.al (2011), Femi and Olusola (2016), and Igbinedion (2023), who unanimously submitted that foreign remittances inflows significantly and positively affect banks' performance. The finding also does not align with the views of World Bank (2018) and Adamu, Zasha and Umar (2022) who confirmed that migrants' remittances have emerged as the second most steady sources of funds (behind FDI) for complementing shortfalls in domestic credits to the private sector, promoting domestic savings, improving banks deposits and performance.

It therefore follows that government and the regulator of the financial system should ensure that migrants' funds remitted back home are properly channeled through the domestic banking system. Some of the ways to achieve this is encourage migrants and their respective families at home to either deposit part or all the money received abroad in the bank and thereafter use same to invest in other profitable short term or long term investment of their choice through the same bank, and these could either be companies shares, Treasury Bills, Bonds, Debentures, derivatives among others. Therefore, with proper management of remittances inflows by banks' management, regulatory authority and government, migrant remittances will be able to influence positively the over activities and performance of the banking system.

5. Conclusion

The nature of migrant remittances inflows to the Nigerian economy has been severally recognized but the extent to which it has impacted the banking sector has not been clearly ascertained. Hence, this study was carried out in order to find out how foreign remittances inflows have affected deposit money banks performance in Nigeria overtime. The autoregressive distributed lags (ARDL) technique was employed in the analysis of data and the results obtained generally revealed that, foreign remittances inflows (RI) has significant negative effect on deposit money banks performance in the short run and in the long run; official development assistance inflows (ODA) has significant positive impact on DMBP both in the short run and in the long run; financial openness (FO) and exchange rate (EXR) has a strong negative relationship with deposit money banks performance (DMBP) in the long run. The study conclude that, in the determination of deposit money banks performance in Nigeria, all the hypothesized variables in the model (RI,

ODA, FO and EXR) are critical factors that should not be ignored by the government and regulatory body.

5.1 Recommendations

From the findings of the study, the following specific recommendations for policy decisions are made:

First, the significant positive relationship between foreign remittances inflows and deposit money banks performance suggests the need for financial system regulators (CBN) to either sustain current policy on RI or improve on it so that more inflows of RI into Nigeria will be sustained to ensure high level of liquidity within the domestic banking system.

Secondly, the significant negative relationship between FO and deposit money banks performance is an indication that increases in the level of openness in the Nigerian financial system enhances the over performance of the banking sector. Hence, the governments and indeed, relevant regulatory agencies in Nigeria should endeavor to sustain or improve on current trade liberalization policy with a view to making it more banking-foreign investors friendly so as to engender sustained migrants remittances to the domestic banking system.

Lastly, there is need for the regulatory authority (CBN) and bank management in Nigeria to develop alternative channel for attracting migrants' remittances back home through the banking system. This can be done by channeling/converting most of these remittances to private investment back home, issuance of migrants/diaspora bonds and private debentures. This way, migrants will be attracted and very willing to invest in them and by so doing the banking system will have enough funds to support private sector investment and sustain steady liquidity in the banking sector.

References

- Adams, S., & Klobodu, E. K. M. (2016). Remittances, regime durability and economic growth in Sub-Saharan Africa (SSA). *Economic Analysis and Policy*, 50, 1-8.
- Adamu, I., Zasha, Z.T., & Umar, S. (2022). Foreign aid and economic development in less developed countries (LDC): Nigeria at glance. *Zamfara Journal of Politics and Development*, 3(2), 112-125.
- Aggarwal, R., Demirgüç-Kunt, A., & Martínez, P.M.S. (2011). Do remittances promote financial development? *Journal of Development Economics, Elsevier*, 96(2), 255-264.
- Barney, J. B. 1991. Firm resources and sustained competitive advantage. *Journal of Management*, 17, 99-120.
- Capron, L., & Hulland, J. (1999). Redeployment of brands, sales forces, and general marketing management expertise following horizontal acquisitions: A resource-based view. *Journal of Marketing* 63(2), 1-15. DOI:[10.2307/1251944](https://doi.org/10.2307/1251944)
- Chen, J. (2021). Foreign remittance definition, benefits, apps used. *Investopedia*, 1-7.
- Conner, K.R. (1991). A historical comparison of resource-based theory and five schools of thought within industrial organization economics: Do We Have a New Theory of the Firm? *Journal of Management*, 17(1), 1-6. <https://doi.org/10.1177/014920639101700109>

- Demirgüç-Kunt, A., Córdova, E.L., Pería, M.S.M., & Woodruff, C. (2011). Remittances and banking sector breadth and depth: Evidence from Mexico. *Journal of Development Economics*, 95(2), 229-241.
- Donaubauer, J., Meyer, B., & Nunnenkamp, P. (2016). Aid, infrastructure, and FDI: Assessing the transmission channel with a new index of infrastructure. *World Development*, 78, 230–245. doi: 10.1016/j.worlddev.2015.10.015
- Femi, K.O., & Olusola, A.J. (2016). International remittance inflows and banking sector development in Nigeria. *IOSR Journal of Economics and Finance (IOSR-JEF)*, 7(3), 1-8.
- Ferrouhi, E. M. (2018). Determinants of bank performance in a developing country: Evidence from Morocco. *Organizations & Markets in Emerging Economies*, 8(1), 118-129.
- Githaiga, P.N. (2020). The relationship between liquidity risk and financial performance of commercial banks in Kenya. University of Nairobi. *Journal of Business, Economics and Environmental Studies*, (10)7-18
- Hamdar, B., & Nouayhid, S. (2017). Remittances and foreign aid as sources of external development finance: Impacts on savings and investment in post-war Lebanon. *Economia Internazionale/International Economics*, 70(1), 47-72
- Igbinedion, S.O. (2023). Bank credit and private sector performance in Nigeria: Do remittances really matter? *ACTA Universitatis Danubius*, 19(3), 268-288.
- Ikechi, K.S., Emmanuel, N.C., Onyinyechi, O.P., & Oluchi, O.L. (2017). Foreign remittance inflows and financial sector development in Nigeria. *Journal of Economics and Sustainable Development*, 8(14), 20-41.
- Keho, Y. (2020). Impact of remittances on financial development: Revisiting the evidence for ECOWAS countries. *Theoretical Economics Letters*, 10, 169-179. doi: [10.4236/tel.2020.101011](https://doi.org/10.4236/tel.2020.101011).
- Maverick, J.B. (2023). *Key Financial Ratios to Analyze Retail Banks*. Retrieved on 21/10/2024 from <https://www.investopedia.com/articles/active-trading/082615/key-financial-ratios-analyze-retail-banks.asp>
- Migrant Data Portal (2024). *Remittances Inflow to Nigeria*. Retrieved on 27/07/2024 from <https://www.migrationdataportal.org/themes/remittances>.
- Nairametrics (2024). *Diaspora remittances fall 6.28% to \$282.61 million in Q1 2024 amid CBN's reforms*. Retrieved on 27/07/2024 from <https://nairametrics.com/2024/05/15/diaspora-remittances-fall-6-28-to-282-61-million-in-q1-2024-amid-cbns-reforms>.
- Ngea, R.G.M. (2024). Effect of remittances on access to financing by small and medium enterprises: The role of financial development. *Afreximbank Policy Research Working Paper Series*, 1-33.
- Olaniyan, T.O. (2019). Interactive effects of remittances and financial sector development on economic growth in Nigeria. *Remittances Review*, 4(1), 19-39.

- Stojanov, R., N`emec, D., & Židek, L (2019). Evaluation of the long-term stability and impact of remittances and development aid on sustainable economic growth in developing countries. *Sustainability*, 1-18.
- Wernerfelt, B. (1984). The resource-based view of the firm. *Strategic Management Journal*, 5, 171-180. <https://doi.org/10.1002/smj.4250050207>
- World Bank Group (2019). *World Development Report 2019: The changing nature of work*.