Effects of Exchange Rates on Disaggregated Components of Balance of Payment in Nigeria

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Abstract
This study examined the impact of exchange rate on disaggregated components of balance of payment in Nigeria for the period 2005-2020, using quarterly time series data generated from Central Bank of Nigeria Statistical bulletin, 2020. The Autoregressive distributed lag (ARDL) approach to co-integration and its corresponding error correction mechanism (ECM) were used as the method of analysis. The results indicated that exchange rate has a significant positive impact on individual components of balance of payment in Nigeria. However, inflationary pressures reduce the effectiveness of exchange rate in impacting positively on current account and capital and financial account components of balance of payment in Nigeria. Informed by these findings, the study suggested among other things that authorities in Nigeria should invest more attention in closing the gap between the official exchange rate and the real market exchange rate.
Keywords: *Current account, capital and financial account, exchange rate, interest rate*

1. Introduction

Nigeria aims to become one of the leading economies in the world by the year 2050. A crucial strategy towards attaining this aspiration is the development of a well-structured exchange rate policy. This is because, external balance is no less important to a country's development as its internal balance (Alasha, 2020). Nigeria, like many lower-middle income countries has experienced different exchange rate policies in the past. A most noteworthy period of Nigeria's exchange rate policy is the period following the breakdown of the Bretton Woods' system in 1973 which results in the failure of the fixed exchange rate to yield the desired favorable balance of payment position and also consequential in the adoption of the flexible exchange rate regime in 1986 (Ahmed & Yussuf, 2001, Eze & Okpala, 2014).

The deregulation of the exchange rate and introduction of the floating exchange rate regime following the Structural Adjustment Programme (SAP) era has led to series of fluctuations and depreciations in the Nigerian foreign exchange and hence reflected in instability of the country's

balance of payment position. This has led to several policy interventions by monetary authorizes in the foreign exchange market (Eze & Okpala, 2014). Despite the numerous efforts by monetary authorities, Nigeria has suffered persistent deterioration in her external balance; a situation that has been attributed to internal and external factors such as persistent shortfall in revenue, depletion in foreign reserves, high debt profile and servicing, fiscal and monetary policy distortions and persistent devaluation of the Naira (Gatawa, Sunday & Muhammed, 2018).

Among the many causes of balance of payment disequilibrium in the context of Nigeria, exchange rate stands out as a vital endogenous factor that directly affects balance of payment through its effects on imports and export prices; and indirectly through internal economic performance of macroeconomic variables such as output, inflation, interest rate, employment, income and wealth among others (Dabwor et al., 2018). Given these direct and indirect influences of exchange rate on balance of payment, an effective exchange rate policy becomes a necessary condition in improving the external balance in Nigeria (Chang & Tan, 2008).

It is worthy of note that, in search for an effective exchange rate regime, Nigeria has since the SAP era, favored the floating exchange rate system. It therefore follows that any study on exchange rate in Nigeria that covers the post-SAP era is essentially a study of the floating exchange rate regime (Gatawa et al., 2018). The floating exchange rate regime though has its merits; however, it has resulted in several episodes of volatility in exchange rate with some implications for trade, external reserves, inflation, money supply and economic growth. Due to the continuous exchange rate volatility and deficits in balance of payment in Nigeria, the investigation on exchange rate dynamics and balance of payment in Nigeria is still subject to further findings because the persistence changes in exchange rate has increased uncertainty in international trade transactions in the country (Dayo & Akindele, 2017).

Recent empirical studies in Nigeria, notably, Oladipupo and Onotaniyohuwo**,** (2011), Echekoba (2017), Nwanosike et al., (2017), Dabwor et al., (2018), Gatawa et al. (2018) and Alasha (2020) generally focused on the effect of exchange rate on the aggregate balance of payment without considering the different components of balance of payment. A study by Dayo and Akindele (2017) have looked at the impact of exchange rate on disaggregated components of balance of payment. The scope of their research however did not cover recent happenings in the macroeconomic events, most notably, the consistent devaluation of the Naira in response to a

sustained shortfall in fiscal revenue and capital flight owing to the escalating insecurity across the Nigeria.

The aim of this study therefore is to empirically analyze the impact of exchange rates on different components of balance of payment. Specifically, the study investigates the effect of exchange rate on current account and capital and financial account components of balance of payment in Nigeria. This is anchored on the premise that knowledge of the influence of exchange rate on different components of the balance of payment will help trace and detect with better precision, the aspect of balance of payment that is most responsive to exchange rate variation in Nigeria. Following this introduction, the remaining part of this paper is structured into 4 sections. While section 2 is the literature review; section 3 presents methodology of analysis. As the major findings of the study are presented and discussed in section 4, section 5 concludes the paper.

2. Literature Review

There is a vast body of empirical studies that have investigated the relationship between exchange rate and balance of payment. Owning to peculiarity of these individual empirical investigations, their findings have led to mixed conclusions. The most recent and relevant among these empirical studies to this research are hereby reviewed.

Alasha (2020) relied on the Vector Error Correction (VEC) model and the Granger causality test to empirically investigate the impact of floating exchange rate on balance of payment in Nigeria during 1986-2016. Quarterly time series data were sourced from the CBN statistical bulletin 2020. The findings of the study revealed a positive and statistically significant relationship in both short-run and long-run between balance of payment and exchange rate of the Nigerian economy during the period considered. The findings further reveal that the nexus among the variables run from government expenditure to real GDP and money supply to exchange rate, and then to Balance of Payment. The study concludes that there is a need for the CBN to maintain a policy of exchange rate depreciation by applying expenditure reducing monetary policies through money supply and domestic credit to promote favorable balance of trade which invariably stabilizes the balance of payment.

The findings by Alasha (2020) seem to have replicated that of Gatawa et al., (2018) who have earlier used the ordinary least square method (OLS) approach to analyze the impact of exchange

rate and economic growth in Nigeria during the period 2006-2018. Using quarterly time series data sourced from CBN statistical bulletin & publications from the National Bureau of Statistics (NBS), Gatawa et al., (2018) found exchange rate fluctuations to be pivotal to the growth of the Nigerian economy, hence concluded in favor of the need to develop an effective exchange rate regime that will improve Nigeria's balance of trade and boost production capacities of the economy.

Using a different approach, Dabwor et al. (2018) relied on the Autoregressive Distributed Lag (ARDL) techniques to examine the effect of exchange rates on balance of payments in Nigeria between 1999 and 2016. Findings from the study revealed that the nominal exchange rate has a significant effect on Nigeria's balance of payment, and that a causal link exists between Nigeria's balance of payment and exchange rates. The study thus concluded that effort be made to increase the consumption of made-in-Nigeria goods, which includes the usage of raw material that can be sourced locally by Nigerian industries in order to increase foreign exchange earnings.

In a disaggregated approach, Dayo and Akindele, (2017) examined the effect of exchange rate on aggregate balance of payment, current account balance as well as the capital account balance in Nigeria. The authors also adopted the Autoregressive Distributed Lags (ARDL) technique to cointegration to estimate the models and found exchange rate appreciation to adversely affect the country's general balance of payment position and its current account balance. However, no statistically significant effect of exchange rate on capital account was obtained. The study concluded that an effective management of the exchange rate by the monetary authority is essential to yield a favorable balance of payment position in Nigeria.

Nwanosike et al. (2017) adopted the multivariate regression model to ascertain the effects of devaluation of domestic currency on balance of payment of the Nigerian economy as in line with the arguments of the Marshall-Learn (ML) condition for the period 1970-2016 to measure the effect of exchange rate devaluation on the Nigerian balance of payments. Real exchange rate, trade openness and foreign direct investment were adopted as the explanatory variable while balance of payment was used as the dependent variable. The result revealed that, a unit devaluation of exchange rate on the average will result in 2.3% decrease in balance of payment through balance of trade mechanism. The study concluded that the Marshall-Lerner condition is not satisfied in the short run in Nigerian case within the period considered. During the same period, a study by Iyoboyi and Muftau (2017) employed the VEC model to investigate the

impact of exchange rate depreciation on the balance of payments. their findings seem to support that of Nwanosike et al. (2017) as their variance decomposition indicates that exchange rate changes do not account for a significant variation in balance of payments in Nigeria.

Relevant studies conducted outside Nigeria have also revealed mixed findings with regards to relationship between exchange rate and external balance. Bonface and Barasa (2013) examined the relationship between exchange rate volatility and BOP in Kenya using the simple linear regression model and monthly time series data between 2001 and 2012. They found that there is a direct relationship between foreign exchange rate volatility and balance of payments and concluded that as the Kenya currency depreciates, the balance of payments for Kenya worsens. Similarly, in the quest to validate empirically the monetary approach to balance of payment in Mexico, Martinez (2018) employed Mexico quarterly data between the first quarter of 1971 and the second quarter of 2018. This study revealed that monetary authority adjusts domestic assets to neutralize exogenous balance of payments deficits. In a similar study on Mexican economy.

From the reviewed studies in this section, it became obvious that there are quite limited number of studies that have considered the impact of exchange rate on disaggregated components of balance of payment. In view of this, the closest study to the current study is that of Dayo and Akindele, (2017) who examined the impact of exchange rate on current and capital account components as well as the aggregate component of balance of payment in Nigeria. Their study in the context of the current examination is limited by time as it has not covered the responses of disaggregated balance of payment components to structural shocks in exchange rate beyond the 2016 period.

3. Methodology

This paper employs the ARDL method of cointegration developed by Pesaran and Shin (1999) and its corresponding error correction mechanism to investigate the long run and dynamic relationship between disaggregated components of balance of payment, exchange rate and interest rate. Specifically, the paper investigates the impact of nominal effective exchange rate (NEER), real effective exchange rate (REXR) and interest rate (INTR) on current account (CA) and capital and financial account (CFA) components of balance of payment in Nigeria. The choice of this methodology is anchored on the fact that it accommodates variables of different orders I(0) and I(1) as against the methodologies of Engel Granger and Johansen cointegration approach. However, if the variables of this research are not integrated to different orders the

ARDL model cannot be used. The stationary unit root test is carried out using the Phillip-Peron (PP) test on the variables to avoid spurious regression as suggested by Engel and Granger (1987). The ARDL model has been used by previous studies of this nature including Dabwor et al. (2018), Dayo and Akindele, (2017) and Okwuchukwu (2014) amongst others. The study relies on quarterly time series data spanning the period 2005 to 2020. Data for the study were sourced from the CBN Statistical Bulletin 2020.

The models for this study are stated as;

The Current Account Model

To examine the impact of nominal and real effective exchanges rate on the current account component of balance of payment in Nigeria, the model in equation 1 is specified.

$$CA_t = f(NEXR_t, REXR_t, INTR_t) \quad (1)$$

Where:

CA_t=*Current account component of balance of payment*

$NEXR_t$=*Nominal effective exchange rate*

$REXR_t$=*Real effective exchange rate*

$INTR_t$=*Interest rate*

The model in equation (1) is a general model which defines CA as a function of nominal effective exchange rate, real effective exchange rate and interest rate. Parameterizing this model in an ARDL form to allow for accounting of underlying dynamics in the data is presented in equation (2)

$$\Delta CA_t = \varphi_{0i} + \sum_{t-1}^{m} \varphi_{1i}\, \Delta CA_{t-1} + \sum_{t-1}^{m} \varphi_{2i}\, \Delta NEXR_{t-1} + \sum_{t-1}^{m} \varphi_{3i}\, \Delta REXR_{t-1} + \sum_{t-1}^{m} \varphi_{4i}\, \Delta INTR_{t-1} + u_t \quad (2)$$

Where:

φ = *parameters I = 1, …3*

u_t = *structural shock (stochastic error term)*

The stability of the model in equation (2) is ensured by the autoregressive parameters to be summed less than unity. Similarly, the reliability of the model is ensured by the parameter to be white noise. The immediate impact (short run impact) of the NEXR, REXR and INTR variables on CA is captured by the $\varphi_{2i,}\ \varphi_{3i}$ *and* φ_{4i} respectively, while the long run impact of each policy tool on CA are captured by sum of the immediate impact and the distributed lag impact scaled by one less the sum of the autoregressive coefficients.

The Capital and financial Account Model

To examine the impact of nominal and real effective exchange rates on the capital account component of balance of payment in Nigeria, the model in equation 3 is specified.

$$CFA_t = f(NEXR_t, REXR_t, INTR_t) \qquad (3)$$

Where

CFA_t=*Capital and financial account component of balance of payment*

$NEXR_t$=*Nominal effective exchange rate*

$REXR_t$=*Real effective exchange rate*

$INTR_t$=*Interest rate*

The model in equation (3) is a general model which defines CFA as a function of nominal effective exchange rate, real effective exchange rate and interest rate. Parameterizing this model in an ARDL form to allow for accounting of underlying dynamics in the data is presented in equation (4).

$$\Delta CFA_t = \varphi_{0i} + \sum_{t-1}^{m} \varphi_{1i}\,\Delta CFA_{t-1} + \sum_{t-1}^{m} \varphi_{2i}\,\Delta NEXR_{t-1} + \sum_{t-1}^{m} \varphi_{3i}\,\Delta REXR_{\,t-1} + \sum_{t-1}^{m} \varphi_{4i}\,\Delta INTR_{t-1} + u_t \quad \ldots\ldots\ldots\ldots (4)$$

Where:

φ = *parameters I = 1… 3*

u_t = *structural shock (stochastic error term)*

The stability of the model in equation 4 is ensured by the autoregressive parameters to be summed less than unity. Similarly, the reliability of the model is to be ensured by the parameter to be white noise. The immediate impact (short run impact) of the NEXR, REXR and INTR variables on CFA is captured by the $\varphi_{2i,}$ φ_{3i} *and* φ_{4i} respectively, while the long run impact of each policy tool on CFA are captured by sum of the immediate impact and the distributed lag impact scaled by one less the sum of the autoregressive coefficients.

4. Presentation of Results, Interpretation and Analysis

Table 1

Summary of Descriptive Statistics

Statistic	CA	CFA	NEXR	REXR	INTR
Mean	4173.060	-1152.089	122.4798	94.81434	14.05078
Median	3432.595	-1134.329	99.65339	87.28334	12.37500
Maximum	7958.100	1932.253	191.6302	154.2899	48.25000
Minimum	1907.420	-4623.720	81.16013	66.69755	6.125000
Std. Dev.	2011.955	1977.913	39.51298	28.21873	9.629550
Skewness	0.800171	0.010984	0.862185	1.198592	3.003014
Kurtosis	2.140614	2.117068	1.951348	3.112990	11.38126
JarqueBera	2.199759	0.520034	2.715414	3.839505	70.87857
Probability	0.332911	0.771038	0.257250	0.146643	0.000000
Sum	66768.97	-18433.42	1959.678	1517.029	224.8125
Sum Sq.	60719417	58682112	23419.13	11944.45	1390.924
Observations	48	48	48	48	48

Source: Author's Computation Using EViews software 9.0

Table 1 suggests that the number of observations is 68 after adjustments; represent the quarterly report of 16 years by the study. 4173.060 is the mean of CA in million Naira, while 1907.420 and 7958.100 are its maximum and minimum. -1152.089 is the mean of CFA in million Naira and 1932.253 is its maximum and minimum -4623.720. The mean of NEXR is 122.4798 while 191.6302 and 81.16013 are the maximum and minimum respectively. For REXR mean is 94.81434, 154.2899 and 66.69755 are the maximum and minimum respectively. And finally, the mean of INTR is 14.05078 while 48.25000 and 6.125000 are its minimum and maximum values. Also reported from the data, all the variables are positively skewed since their skewness values are positive. Again, the skewness of INTR (3.003014) is the strongest among the variables followed by that of REXR (1.198592). The table also indicates that the tails of data on REXR

and INTR are heavy because their Kurtosis values are greater than 3. In other words, the data on REXR and INTR have lepto-kurtic curve. However, the tails of CA, CFA and NEXR are light or have platy-kurtic curve because their respective Kurtosis values are less than 3.

4.2 Inferential Results

Table 2
Results of Phillip-Peron Unit Root Test

Variables	Level Value	Value	Order of Integration
CA	0.0098*****	0.0009	I(0)
CFA	0.4389	0.0081*****	I(1)
NEXR	0.9160	0.0142*****	I(1)
REXR	0.3897	0.0080******	I(1)
INTR	0.0568*****	0.0022	I(0)

Source: Author's Computation Using EViews software 9.0. Note ***, **, * indicate the level of significance at 1%, 5% and 10% respectively.

Before proceeding to estimate the ARDL model, a necessary condition that must be met is the unit root test to determine the order of difference of the time series data employed. This study has adopted the Phillip-Peron unit root test for this purpose. Table 2 presents a summary of the unit root test results. From the table, it is seen that the variables CA and INTR are found to be stationary at level. On the other hand, the variables CFA, NEXR and REXR are found to be stationary only after taking their first difference. This finding satisfies the condition for the adoption of the ARDL model which requires a mixture of I(0) and I(1). Since none of the variables considered is found to be integrated to the second order I(2), the ARDL bound test for cointegration is applied.

Table 3
ARDL Bound Test for Cointegration (CA Model)

Test statistics	Value	K
F-statistic	6.557403	2
Critical value bound		
Significance	I0 Bound	I1 Bound
10%	2.72	3.77
5%	3.23	4.35
2.5%	3.69	4.89
1%	4.29	5.61

Source: Author's Computation Using EViews software 9.0

From table 3, it is established that the F-statistic derived from the bound test is 6.557403 which is the value obtained from the Pesaran table at 5% level of significance. Comparing this to the critical value, it is observed that the F-statistic (6.557403) is greater than the critical values at

both upper bound (4.35) and lower bound (3.23) respectively. This is indicative of the fact that the variables are cointegrated. In other words, there is a long run cointegrating relationship among the variables considered in the CA model.

Table 4
ARDL Long Run Regression Result (CA Model)

Variable	Coefficient	Std. error	t-statistic	Prob.*
$NEXR_t$	48.216725	1.542928	31.250137	0.0000***
$REXR_t$	-17.951218	2.256015	-7.957049	0.0000***
$INTR_t$	-0.997542	5.932905	-0.168137	0.8671

Source: Author's Computation Using EViews software 9.0

The long run results as seen on table 4 shows that holding other explanatory variables constant, there is a positive long run association between NEXR and CA. This implies that a unit increase in nominal effective exchange rate results in an increase in current account component of BOP by 48.21 at 1% level of significance. On the contrary, a negative relationship is found between REXR and CA, implying that a one Naira change in real effective exchange rate results in a decrease in current account by 17.95 Naira. This relationship is also significant at 1% level. Moreover, the association between interest rate which is the control variable of this paper and CA is found to be negative but insignificant.

Table 5
Error Correction Model Result (CA Model)

Variable	Coefficient	Std. Error	t-statistic	Prob.*
$NEXR_t$	26.966815	2.843653	9.483158	0.0000***
$NEXR_{t-1}$	0.000000	3.827867	0.000000	1.0000
$NEXR_{t-2}$	8.106727	3.068269	4.238259	0.0109
$REXR_t$	-8.328559	1.965090	-2.642118	0.0001**
$REXR_{t-1}$	-6.138377	2.263441	-2.711967	0.0091*
$INTR_t$	-0.462815	2.751263	-0.168219	0.8671
ECM(-1)	-0.463955	0.085179	-5.446805	0.0000***
$R^2 = 0.60$				
ADJ $R^2 = 0.54$				
S.E = 211.7737				
DW statistic = 1.8				
F-statistic 6.634527 (0.000241)				

Source: Author's Computation Using EViews software 9.0

Table 5 reveals the dynamic relationship between current account component of BOP and the exchange rates and interest rate. It is observed that 2 lags are applicable to nominal effective exchange rate, 1 lag to real exchange rate and 0 lag for interest rate. This implies that lags impact plays a major role in determining the current account component of BOP in Nigeria. From the

short run regression results as on table 5 therefore it is inferred that the explanatory variables with the exception of INTR have short run significant impact on the dependent variable. Specifically, NEXR is significantly related to CA at 1% level of significant in the current period. However, its impact on CA in the two past quarters are found to be insignificant. Similarly, REXR is negatively and significantly related to CA at 5% level of significant in the current period. Moreover, REXR has a significant negative impact on CA in the previous quarter at 10% level of significance. The ECM parameter is -0.463955 which indicates that 4% disequilibrium in the previous period is corrected to restore equilibrium in the current period.

The R-squared and adjusted R-squared showed goodness of fit of the regression model, while the D.W statistic indicate that there is no first order serial correlation in the regression model. The standard error of the regression however is high indicating that the fitted regression line is not close to the true regression. Moreover, the F-statistic indicates that the model is adequately specified.

Table 6

ARDL Bound Test for Cointegration (CFA Model)

Test statistics	**Value**	**K**
F-statistic	7.684149	3
Critical value bound		
Significance	I0 Bound	I1 Bound
10%	2.72	3.77
5%	3.23	4.35
2.5%	3.69	4.89
1%	4.29	5.61

Source: Author's Computation Using EViews software 9.0

From table 6, comparing this to the tabulated value, it is observed that the F-statistic value (7.684149) is greater than the tabulated values at both upper bound (4.35) and lower bound (3.23) respectively at 5% level of significance. This is indicative of the fact that the variables are co-integrated. In other words, there is a long run cointegrating relationship among the variables considered in the CFA model.

Table 7

ARDL Long Run Regression Result (CFA Model)

Variable	**Coefficient**	**Std. error**	**t-statistic**	**Prob.***
$NEXR_t$	18.242727	10.645961	1.713582	0.0927*****
$REXR_t$	-4.141166	4.260119	-0.972078	0.3356
$INTR_t$	31.213330	10.666071	2.926413	0.0051******

Source: Author's Computation Using EViews software 9.0

The long run results as seen on table 7 shows that holding other explanatory variables constant, there is a positive long run relationship between NEXR and CFA. This implies that a unit increase in nominal effective exchange rate results in an increase in capital and financial account component of BOP by 18.24 at 10% level of significance. On the contrary, a negative association is found between REXR and CFA, implying that a one Naira change in real effective exchange rate leads to a decrease in capital and financial account by -4.14 Naira. This relationship however is found not to be significant at any level. Moreover, the association between interest rate and CFA component of BOP is found to be positive by 31.21 and significant at 5% level of significance.

Table 8

Error Correction Model Result of the (CFA Model)

Variable	Coefficient	Std. error	t-statistic	Prob.*
$NEXR_t$	18.242727	10.645961	1.713582	0.0927*
$NEXR_{t-1}$	0.000000	14.724326	0.000000	1.0000
$NEXR_{t-2}$	0.000000	14.724326	0.000000	1.0000
$NEXR_{t-3}$	35.182089	12.072266	2.914290	0.0053**
$REXR_{t-1}$	-4.14116	4.260119	-0.972078	0.3356
$INTR_t$	31.213330	10.666071	2.926413	0.0051**
ECM(-1)	-0.457495	0.083233	-5.496552	0.0000***

Source: Author's Computation Using EViews software 9.0

Table 8 shows the dynamic relationship between current account component of BOP and exchange rates and interest rate. It can be observed that 3 lags were selected for nominal exchange rate and 1 lag for real exchange rate and 0 lag interest rate. This implies that lags impact plays a major role in determining the capital and financial account component of BOP in Nigeria. From the short run regression results as on table 8 therefore, it is inferred that while the REXR has an insignificant impact on the CFA, NEXR and INTR have short run impact on CFA at differing lag periods. Specifically, NEXR is significantly related to CFA at 1% level of significant in the current period and significant at 5% level of significance during the past three-quarter period. Conversely, REXR is negatively associated with CFA during the immediate past-quarter, but this association is insignificant at all levels. Further than that, the INTR has a short run significant quarterly impact on capital and financial account component of the BOP in Nigeria at 5% level in the current period. Moreover, the ECM parameter is -0.457495 which indicates that 4% disequilibrium in the previous period is corrected to restore equilibrium in the current period.

As for the traditional diagnostic test, the R-squared and adjusted R-squared are high which is suggestive that most of the variations in the dependent variable are explained by the explanatory variables of the model. The D.W statistic also suggests that there is no first order serial correlation in the regression model. While the standard error of the regression however is high suggesting that the fitted regression line is not close to the true regression line of the model, the F-statistic is significant which indicates that the model is adequately specified.

5. Conclusion and Recommendations

This paper adopted a disaggregated approach to investigate the impact of exchange rate on balance of payment in Nigeria, where impact of effective exchange rates and interest rate on current account and capital and financial account components of balance of payment were separately analyzed. The findings from our analysis inform the conclusion that changes in exchange rate bring about a resultant significant change in individual components of balance of payment in Nigeria. Further, internal balance is found to be effective in bringing about external balance through monetary tools, especially interest rate.

Based on the findings and conclusion reached by this study, we recommend that the monetary authorities in Nigeria should pay closer attention on the impact of domestic inflationary pressures during exchange rate devaluation. One of the ways it can achieve this is to invest more attention in measures that will help close the gap between official exchange rate and parallel-market exchange rate in Nigeria. Similarly, we recommend in favor of effective interest rate management as interest rate is consequential in bringing about favorable behaviors of balance of payment components in Nigeria.

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