The Effect of Foreign Exchange Transaction on the Performance of Nigerian Banks

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Abstract

This study investigated the effect of foreign exchange transaction on the profitability of Nigerian banks for the period of 2010 to 2014. The study employed annual data generated from the annual report of ten (10) publicly quoted banks in Nigeria. To test for the properties of panel data, Levin, Lin and Chu (2002), Breitung (2000), Im, Pesaran and Shin (2003), Hadri (2000) and Maddala and Wu (1999) test of panel unit root were deployed. Based on the popularity of the result we concluded that the variables are integrated of order one I(1). The result of Kao panel co-integration test indicates that there exists a long run relationship between the variables under study. The result of the DOLS revealed that foreign exchange income has a negative and insignificant effect on the profitability of Nigerian banks for the period. Total asset which was used as a control variable was shown to exert positive impact on the profitability of Nigerian banks, while total equity has a negative effect on profitability of banks in Nigeria for the same period under study. The studies recommend that CBN and other monetary authorities should monitor the activities of the banks to ensure that they don't charge high premium for selling or buying foreign exchange to their customers. Banks should enhance their assets base so as to increase profitability.

Key Words: Foreign Exchange Transaction, Profitability, Nigerian Banks.

1. Introduction

The correlation between foreign exchange transaction and banking sector profitability is current issue in literature and has remain newsworthy among researchers, economists and policy makers alike. Numerous countries of the world have witnessed foreign exchange reforms culminating to currency over-valuation and under-valuation due to currency differentials among nations. Ani, et. al (2013) affirms that the supply of foreign exchange in Nigeria comes in various ways and the various circumstances tasks the dexterity and financial ability of the nations' financial managers to achieve efficiency in foreign exchange management and thus further the frontiers of the nation's economy. As such foreign exchange market reforms have always impacted in the overall reform pattern of the financial sector in Nigeria.

The role of the Nigeria commercial banks in the buying and selling foreign exchange is undeniably inevitable as they (Banks) remains the most active participants in the Foreign Exchange Market (FEM). Before the establishment of the Central Bank of Nigeria (CBN) in 1958 and the consequent enactment of the Exchange Control Act of 1962 access to foreign exchange by the private sector were made possible by commercial banks which maintain balances abroad and acted as agents for both importers and exporters. This was made possible because Nigerian pound sterling (the then National currency) can easily be converted into another country's currency being valued at par with that of the British pound sterling. The non-existence of a viable regulatory institution as well as effective regulatory framework for foreign exchange transaction actually hindered the early development of an active foreign exchange market in Nigeria but with the establishment of the Central Bank of Nigeria (CBN) in 1958 with the sole authority in foreign exchange management, the need to develop a domestic foreign exchange market came to beam (CBN, 2013).

The Nigerian economy has witnessed various foreign exchange reforms following the establishment of CBN in 1958 with various outcomes on the nation's economy and financial institutions. Meanwhile the trade liberalization policy of the Nigerian economy which took effect in the year 1986 created undue pressure on the domestic demand for foreign currencies causing Nigerian naira to lose its value against other nation's currencies. Reacting to this, various practical measures measures have being taken with the view of arresting persistence depreciation and fluctuation of exchange rate against naira. Although a number of exchange rate reforms

have been carried out by successive governments, the participation of the banking sector in foreign exchange market continued to increase.

In attempt to stabilize and ensure single rate for the Naira, exchange rates moved from officially pegged exchange rate system between 1970 and 1985 to a market-determined system in 1986. The naira exchange rate is now determined through the foreign exchange market by the forces of demand and supply. In a bid to enhance access to foreign exchange to small users and to enlarge the foreign exchange market in Nigeria, the monetary authorities licensed the Bureau de Change in 1989. The foreign exchange reform of 1994 cumulated to pegged exchange rate between naira and other currencies. In that same reform, Bureau de Change was also restricted from buying foreign exchange as agents of the CBN. In 1995 the Foreign Exchange Market was liberalized with the consequent introduction of an Autonomous Foreign Exchange Market (AFEM) for the sale of foreign exchange to end-users by the monetary authority through selected authorised dealers at market determined exchange rate. Again Bureau de Change institutions were once more accorded the status of authorized buyers and sellers of foreign exchange. In 1999, the Inter-bank Foreign Exchange Market (IFEM) was introduced. The retail Dutch Applied System was also introduced which allows end users to bid through authorized dealers who acted as intermediaries in the bidding process. The Dutch Auction System was again introduced in 2002 as a result of the intensification of the demand pressure in the foreign exchange market and the persistence incessant depletion of the country's external reverses. In 2006, the wholesale DAS was introduced which sees authorised dealers as principal and not as agents as they used to be and were then expected to sell to their customers at a permitted margin (CBN, 2013). Despite all this reforms and monetary policies the activities of the Nigerian commercial banks in foreign exchange market have continued to gain fresh momentum as the year role by and with increasing dependence of Nigerian populace on imported good.

Undoubtedly, foreign exchange market is one of the largest financial markets globally with banks as key player. This however was made possible through the performance of their role as financial intermediaries between sellers and buyers of foreign exchange for international transactions. Foreign exchange market activities massively affect banks due to their involvement in foreign exchange transaction. Ideally, banking sector in all countries are considered one of the most important financial entities and has an important part to play in overall financial

activities especially financial matters involving foreign exchange transaction due to its essential position in monetary system and its role in foreign exchange currency services including international and domestic money transmission. Globally, foreign exchange transaction has been an important and obligatory aspect of banking operation necessitating from the differentials in nations' exchange rate. As a result, banks have accorded great recognition to activities involving currency swap by establishing a crucial unit to oversee all the operations involving foreign currencies. This becomes necessary to facilitate international transaction between merchants while encouraging economic growth and becoming one of the largest economy through balance of payment improvement. To achieve the aim of becoming one of the largest economy, according to Sansui (2012) the banking sector is expected to effectively play its actual role in intermediation and for the banks to be among global players in the international financial markets.

As international competitiveness increases, the demand and supply for foreign exchange also increases in the same magnitude, and this increases the volume of foreign exchange transaction which also translates to increase in the volume of banking sector activities as they remain the major player in foreign exchange market. Reacting to this, Rasaq (2013) stressed that exchange rate is an important macroeconomic variable used as parameter for determining international competitiveness and it is being regarded as an indicator of competitiveness of currency of any country. Exchange rate trading is an important factor to banks as foreign exchange income, commissions and fees from foreign exchange operations has been considered one of the major revenue sources to banks. Exhaustive examination on banks activities as regards foreign currency trading reflects that banks rely on rate variation as their stock- in- trade. In other words, banks trade on exchange rate by advantageously utilizing the opportunity arising from exchange rate volatility. Exchange rate variation will encourage speculative activities on the basis of expectations that the exchange rate will appreciate. Based on the maturity structure and currency denomination of assets and liabilities in the economy, sharp exchange rate movements could result in liquidity shortages and trigger significant balance sheet effects (Babazadeh & Farrokhnejad, 2012).

Over the years banks has continuously remained a key player in FEM, with a view to make profit. And so, the need to investigate the effect of foreign exchange transaction on bank profitability has

remained a topical issue among researchers and practitioners alike. The question in the mind of every one is, considering the volume of transaction and the level of banks involvement in FEM by banks, to what extent has profit from this transaction contributed to the overall performance of the banking industry. This study however seeks to evaluate the impact of foreign exchange transaction on the profitability of the banking sector in Nigeria.

2.0 Literature review

Banks profitability on exchange rate transaction is affected by many factors comprising of bank specific (internal) and macroeconomic fundamentals (external) arising from government reforms and regulations. Macroeconomic factors study the behaviour of the economy and these factors are exchange rate, interest rate, inflation rate and gross domestic product (Karl, Ray, and Shannon, 2009). Owoeye and Ogunmakin (2013) noted that exchange rates affect interest rates and have an indirect impact on profitability through cost of loanable funds. High exchange rates increases value commercial banks gain from selling foreign currency that result to increased profitability. High interest rates will lead to increased commercial banks interest income but also lead to low demand for the loans and hence reduces the increased interest income (Sayedi, 2013). These factors are indirect factors which are uncontrollable but could have great impact on bank's profitability and may be triggered by regulations imposed on banks. The premise underlying banks profitability from foreign exchange rate transaction lies on banks speculation of buy low and sell high syndrome among other sources as commissions and interests arising from their operations. Ojo and Alege (2014) opined that exchange rate directly influences prices and /or profitability of traded and non-traded goods and as a relative price affects the allocation of resources over the short to medium term.

Central banks attributed the recent appreciation of exchange rate to wide interest rate differentials among advanced economies which is seen to result mainly from the continuation of the near zero policy rates in developed countries. It is imperative to understand the role of foreign exchange and convertibility of currencies in nationwide economy and the interrelationships between banks, as active financial institutions in the foreign exchange markets with regard to the risk of changes in the exchange rates (Babazadeh1& Farrokhnejad, 2012).

Banks occupy important position as commercial brokers in financial transaction and monitoring foreign exchange changes may unexpectedly result in their profit and in turn their countries. Razi, et. al., (2012) noted exchange rate has greater impact on profitability of businesses having foreign direct investment and could enhance the risk and uncertainty to remarkable extent in case of foreign investment. Wong, et.al, (2008) asserted that large foreign exchange losses occasioned by foreign exchange rate movements is a source of risk to banking institutions which could cause huge burdens on banks' profitability and could lead to bank failure.

For profit motive, banks, bankers and bank managers are required to have a full understanding of the concept of bank profit in their foreign exchange operations and investigate the effects of exchange rate changes on their foreign exchange reserves and income, to enable them to know how much risk they can take in their foreign exchange operations to maximum the wealth of the stake holders. Thus, continuous movements of the exchange rate on the competitive position of domestic industry in relation to foreign industry in both domestic and foreign markets as well as uncertainties resulting from unanticipated changes in the domestic and international macroeconomic environments necessitates serious attention.

Due to economic losses resulting from exchange volatility, most countries have at one time or another engaged in exchange rate reform and adopting different exchange rate systems which either mare the nations economy or allows them achieve sustainable levels of growth and development(Bakare, 2011). For instance, Pakistan shifted its exchange rate system from managed Float to market Based Floating Exchange rate system allowing commercial banks and authorized dealers to hold and conduct transaction in foreign currencies Sabri (2011)

Poland's exchange rate policy evolved from the fixed exchange system to the pure float. Poland uses two kinds of stable exchange rate regime: the crawling peg (1991-1994) and the crawling band (1995-1999) till the end of 1990s. The official floating of the Polish currency was announced in 2000. Poland adopted floating exchange rate due to the cost of having stable exchange rate in the atmosphere of the increased mobility of international capital flows (Twarowska and Kąkol, 2014).

In Venezuelan, different exchange rate regimes have been adopted. Between 1973- 1989, exchange rate of Venezuelan changed three times at different pegged rates: that is, 1973 – 1984, 1984 – 1986 and 1986 -1989. During 1983-1988, the monetary authorities adopted a complicated four-tier exchange rate regime that offered subsidized exchange rates to selected priority activities. By 1989, the authorities pursued a floating exchange rate system for Venezuelan Bolivar. As a result, the exchange rate skyrocketed. In February 2002, due to substantial losses of foreign exchange reserves, declining oil prices, deteriorating government fiscal position, and very high interest rates, the authorities announced to adopt a free floating exchange rate). Since early 2003, the authorities have periodically fixed the Bolivar/USD exchange rate (Hsing, 2006).

When the Australian dollar was floated the Australian Government and the Reserve Bank of Australia (RBA) gave up the determination of the exchange rate to market forces with a discretion to intervene in the foreign exchange market from time to time if necessary(Becker and Sinclair, 2014). Review revealed that over the post-float period there has been number of interventions by RBA. The Reserve bank Of Australia's (RBA) approach to intervention was based in the findings which concluded that an absolutely 'clean' float was unrealistic and acknowledged that the authorities might wish to deal in the market from time to time, while at the same time cautioning against exchange rate targeting (Becker and Sinclair 2004).

3.0 METHODOLOGY

This study adopted a pool panel regression model using Ordinary Least Square (OLS) method of estimation. The choice of pooled panel regression is to enable capture the number of Banks used for the study in a single regression model. This is based on the assumption that since banks are in the same financial sector the share everything in common as the policies of the regulatory authorities affect each bank alike. Since the banking sector of the Nigerian economy faces the same regulatory and environmental constraints at the same level, it is believed that there is no uniqueness among banks in Nigeria as no bank is exempted in the regulatory policy of the CBN and NDIC, similarly none of the banks operates in secluded environment instead they all face similar environmental challenges as well political influence. It is based on these similarities that pooled panel regression is considered appropriate for the analysis. By this we mean that emphasis will not be placed on the individual effect of the firms under consideration since all

the banks faces the same foreign exchange policy as well as trade in the same foreign currency. This model is in consonance with the model adopted by Babazadeh & Farrokhnejad, (2012). and Rasaq (2013) who in their work made use of pool panel OLS in establishing the effect of corporate governance on the performance of public quoted banks in Pakistan. Stated below are the model specified for this study.

Implicitly the model is stated as follows.

$PAT_{it} = f(FEXIN_{it}, CAPS_{it}, TA_{it})$……..(1)

Explicitly the model is stated as follows

$PAT_{it} = \beta_0 + \beta_1 FEXIN_{it} + \beta_2 CAPS_{it} + \beta_3 TA_{it} + Є_{it}$ ……(2)

Where

PAT = Profit After Tax

FEXIN = Foreign Exchange Income

CAPS = Capital Structure of the firms

TA = Total Assets

3.1 TEST FOR UNIT ROOT

To test for the stationarity of panel data, different researchers have come up with varying methods on how best to determine the existence or non-existence of unit root in a panel data series among which are Levin, Lin and Chu (2002), Breitung (2000), Im, Pesaran and Shin (2003), Harid (2000), Hadri and Larsson (2005), Maddala and Wu (1999) and Harris and Tzavalis (1999). These methods according to Hlouskova and Wagner (2005) are first generation test of panel stationarity which are designed on the assumption of cross-sectional independent panel. Although there are other methodologies used in testing for unit root in a panel data series which are designed without the assumption of cross-sectional independent panel, our study will adopt the afore mentioned methodologies which are based on the assumption of cross-sectional independent panel in determining the stationarity of the variables under consideration.

The following panel unit root test will be employed in testing for the stationarity of the variables used in this study.

LEVIN, LIN AND CHU (2002) TEST OF UNIT ROOT

The Levin, Lin and Chu (2002), test which should be known as LLC from hence is based on the following hypotheses.

H_0 = there is panel unit root in the variables ($H_0 : P_i = 1$) where i=1,2,3….N

H_1 = there is no panel unit root in the variables ($H_1 : -1<P_i= P<1$) where i=1,2,3….N

Meanwhile under the alternative hypothesis, the first order serial correlation coefficient p is assumed to be identical in all units. This restriction according to Hlouskova and Wagner (2005) stems from the fact that the test statistic is computed in a pooled fashion.

BREITUNG (2000) TEST OF UNIT ROOT

Breitung (2000) developed a pooled panel unit root test that does not require bias correlation factors, which is achieved by appropriate variable transformations. Due to its pooled construction Breitung test is a test against homogenous alternative. The Breitung test is conducted against the following hypotheses.

H_0 = there is panel unit root in the variables

H_1 = there is no panel unit root in the variables

It is important to note at this point that both the LLC and Breitung test assume common unit root process in testing the hypothesis.

IM, PESARAN AND SHIN (2003) TEST OF UNIT ROOT

Im, Pesaran and Shin (2003) henceforth known as IPS present two group-mean panel unit root designed against the heterogeneous alternatives unlike the LLC and Breitung test which are based on homogenous alternative. IPS test allows for individual specific autoregressive structure and individual specific variances. IPS test is based on the following hypothesis

H_0 = there is panel unit root in the variables

H_1 = there is no panel unit root in the variables

It is important to note that the different between the IPS hypothesis and LLC test and Breitung test stated above is that IPS test assumes individual unit root process as against the other which assumes common unit root process.

MADDALA AND WU (1999) TEST OF UNIT ROOT

Maddala and Wu tackles the issue associated with panel unit root test with a very well-designed idea dating back to Fisher (1932). This panel unit root test henceforth known as MW test is based on the assumption of cross-sectional independent panel. Hlouskova and Wagner (2005) argued that a any unit root test with continuous test statistic performed on the individual unit can be employed in constructing a Fisher type of panel unit root, provided that the p-values are available or can be simulated effectively. This idea can be implemented by applying the ADF test on the individual units. One of the key advantages of the Fisher test is that it does not require a balanced panel or identical lag lengths in the individual equations. MW test is based on the following hypothesis.

H_0 = there is panel unit root in the variables

H_1 = there is no panel unit root in the variables

Similar to IPS test, MW test assumes individual unit root process.

HADRI (2000) TEST OF UNIT ROOT

Hadri (2000) proposed a panel extension of Kwiatkowski et al (1992) test of stationarity which is based on the reversed hypothesis of the other methods. Hadri test as against other test of stationarity assumes the existence of unit root in the alternative hypothesis while stationarity (no unit root) is achieved when null hypothesis is accepted. In other words the null hypothesis is stationarity in all units against the alternative hypothesis of a unit root in all units. According to Hlouskova and Wagner (2005) the alternative unit root in all cross-sectional units stems from the fact that this test is based on the pooled panel. In Hadri test the individual specific variance and correlation patterns are allowed hence the test is based on a common unit root process.

Meanwhile to determine the stationarity of the variables using all the above listed methods, our decision will be based on the popularity of the result. By this we mean that result which is reported by the majority of the test method will be upheld as the prevailing result. If three out of four results indicates stationarity at level with only one indicating stationarity at first difference based on the popularity of the result we will take the variable to be stationary at level.

3.2 TEST FOR COINTEGRATION

The objective of co-integration test is to establish the existence of a long-run relationship between variables that are integrated of the same order. The second step in this panel data series analysis is to test for the presence or otherwise of co-integration between the series of same order of integration through forming a co-integration equation. The basic idea behind co-integration is that if in the long-run, two or more series move closely together, even though the series themselves are trended, the difference between them is constant. It is possible to regard these series as defining a long-run equilibrium relationship, as the difference between them is stationary (Hall and Henry, 1989). A lack of co-integration suggests that such variable have no long-run relationship: in principal they can wander arbitrarily far away from each other (Dickey et al, 1991). To establish the existence of co-integration among the series we employed Kao co-integration test. This test is appropriate for this study due to limited number of observations.

4.0 RESULT OF UNIT ROOT TEST

The test for unit root was conducted using various methods, the reason for the multiple methods is to enable us take advantage of the limitations suffered by one through the use of another for confirmation purposes. The result of LLC test which was based on the common panel unit root indicates that the series included in the model are all non-stationary at level but after the first difference the series became stationary I(1). This result of LLC test was consistent with that of the individual panel unit root conducted using IPS test and Fisher ADF (Maddala and Wu 1999), which indicates that all the variables under consideration are stationary at order one I(1). Similarly, the Hadri test which is also based on a common panel unit root but looks at the reversal of the hypothesis by assuming stationarity when the null hypothesis is accepted indicates that the variables are also integrated of order one I(1). However contrary to the above reported

result, the Brietung test of panel unit root test indicates that all the variables are integrated of order zero I(0). Based on the popularity of the result we therefore conclude that the variables are integrated of order one I(1).

4.1 THE RESULT OF CO-INTEGRATION TEST

The result of Kao co-integration test which is based on Engle and Granger approach that suggest the existence of long-run relationship between variables in a single equation, showed the existence of a co-integrating equation in the model. This implies that there exist long run relationships between the variables included in the model. And so we will estimate a co-integrating equation using Dynamic Ordinary Least Square to determine the effect of the independent variable on the dependent variable.

4.2 THE RESULT OF THE PANEL DYNAMIC ORDINARY LEAST SQUARE REGRESSION

The result of the panel DOLS analysis indicates that FEI has a negative and insignificant effect on the profitability of Nigerian banks for the period under study. This however suggest that Nigerian banks does not rely on the premium eared from foreign exchange transaction in other to remain profitable and competitive in the business. The result also reveals that the higher the FEI the lower the profitability of the Nigerian banks implying that banks will lose profitable opportunity from both individual and corporate customers if they increase the premium that they earn from selling foreign exchange to their customers. As banks increase the premium they earn from selling foreign exchange, the cost is born by the customers who purchases foreign exchange at a higher price hence negatively affecting their business which in turn affect the profit they make and as well affect the volume of deposit they make to the banks thus effecting the overall profitability of the bank by affecting banks capacity for credit creation. The result also revealed that banks total assets contribute positively to the profitability of Nigerian banks for the period under study. This indicates that the higher the assets base of Nigerian Banks the higher their profitability. Similarly, the result showed that Total Equity holdings of the Banks contribute negatively to the profitability of the Nigerian banks. This can be attributed to the fact that majority of the activities of the banks are largely funded by debt and other liabilities of the Banks like deposit.

5.0 CONCLUSIONS

This study investigated the effect of foreign exchange transaction on the profitability of the Nigerian Banks, and the result shows that foreign exchange income has a negative effect on the profitability of Nigerian banks for the period under consideration. And based on the result we conclude that Nigerian banks do not depend on the premium from selling foreign exchange to remain profitable in the business. Therefore the central bank and other monetary authorities should ensure that banks don't make outrageous premium from selling foreign exchange. The result also revealed that total assets of the banks contribute positively to the profitability of the banks. And so banks should focus on building strong assets base as it contributes positively to the profitability of the banks under study.

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