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Foreign Exchange Market and Monetary Management in Nigeria

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Abstract
The main objective of this paper is to provoke some thoughts on the foreign exchange market and monetary management in Nigeria. To achieve this objective, time series data are obtained from the Central Bank of Nigeria publications on Trend of Monetary Policy Instruments, Money Supply, the Structure of Output proxied by Gross Domestic Product, Naira Exchange Rate Movements in the Official/ Parallel Foreign Exchange Market and the Foreign Exchange Allocation Utilization by End Users. Given the observed trends and variations in the exchange rate particularly within the Structural Adjustment Programme (SAP) periods and post-SAP periods, money supply and interest rate variations, it is clear that the monetary policy instruments were not efficacious in the attainment of price and exchange rate stability. Besides, growths in M1 and M2 cause inflation and there is an established relationship among Minimum Reserve Requirement (MRR), bank lending rate / savings deposit rate on one hand and inflation on the other. The study therefore recommends that there is the need for monetary authorities to recognize the importance of the linkage between the real sectors of the economy and the monetary system. Above all, interest rates should be to the benefit of the players/ actors in the real sector.

Keywords: price, exchange rate, monetary policy instruments, money supply and monetary management

INTRODUCTION

Amidst complex economic development problems (broadly, summarized under huge external and internal debts, chronic fiscal deficit and serious economic decline, reflecting in stagflation pressure despite abundant primary resources), there is the general consensus in Nigeria that the primary goal of current macroeconomic policy is to put the economy back on a path of sustainable, non -inflationary and self reliant growth of output, employment and income. In this regard, this primary goal is subsequently reinforced by the general assumption that price and exchange rate stability are necessary for the growth of output, employment and income. This assumption is couched under the awareness that price and exchange rate instability are injurious to existing producers, new investors and consumers alike as they introduce uncertainty which discourages long-term commitments without which sustained self-reliant growth of output, employment and income will be difficult to achieve. In recognition of the foregoing, both the monetary and fiscal authorities have usually aimed at the attainment of price and exchange rate stability. In this regard, while the monetary authorities in Nigeria constantly search for the optimal quantity of money and interest rate, that would support stable prices and exchange rate, the fiscal authorities on their part constantly look for the constellation of government revenues and expenditure that will attain the same objective all in a bid to foster economic growth and development. Given the foregoing, it is conventional to assign the goal of price and exchange rate stability primarily to monetary authorities. Thus, over the years, the primary goal of monetary policy in Nigeria always relates to that of the achievement of price and exchange rate stability, enunciated by the Central Bank of Nigeria (CBN) in its various issues of Monetary, Credit, Foreign Trade and Exchange Policy Guidelines.

This paper therefore proposes to provoke some thoughts on the foreign exchange market and monetary management in Nigeria. Towards this end, the paper is in six parts. Following this introduction is Part II which is on the operational conceptualization and framework of exchange rate. Whereas, Part III, IV and V are on the structure of the country's output, overview of the Nigeria's foreign exchange policy and the efficacy of monetary policies in the management of the Foreign Exchange Market (FEM) in Nigeria. Part VI presents the conclusion and some policy issues.

Exchange Rate: Operational Conceptualization and Framework

Conceptually, an exchange rate constitutes the price of one currency in terms of another. Nominally, in the Nigerian situation, it is the units of naira needed to purchase one unit of another country's currency (e.g. the United States dollar). That is, the value of the naira in terms of the dollar or pounds sterling in the cases of the United States (U.S) or United Kingdom (U.K) respectively. This type of definition reflecting a rate between two currencies is very often known as the Nominal Exchange Rate (NER). However, given that the currencies of some major trading nations are on the floating exchange scheme, the movement of NER may not necessarily give an accurate figure of the real exchanges in the

international purchasing power of any given currency. Against the background of this awareness; the concept of real exchange rate (RER) became developed and recognized as the standard technique for dealing with groups of floating currencies. Incidentally, about 5 computing definitions of the RER are available in the exchange rate literature. There is consensus among the five definitions that the RER is a relative price while disagreeing on whether or not the relative price should be defined as the real exchange rate. For the purpose of this paper, three major definitions of the real exchange rate will be considered. The first group of definition is made in line with the Purchasing Power Parity. According to this definition, the real exchange rate can be defined as in the long run as the nominal exchange rate NER (E) that is adjusted by the ratio of the foreign price level (P_f) to the domestic price level (P_d). Mathematically, it can be expressed as:

$$rppp = E \; P_f / P_d \quad (1)$$

In terms of this definition, the decline in the rppp can be interpreted as the real appreciation of the exchange rate. Secondly, in another version, the RER is defined in the context of dependent economies as the relative price of tradables and non-tradables. That is, this definition takes the relative price of tradables and non-tradables in the country as an indicator of the country's competitiveness level in the foreign trade. The rationale behind this definition is that the cost differentials between the countries are closely related with the relative price structures in these economies. Under the assumption that the prices of the tradables will be equal all around the world, the real exchange rate defined on the basis of tradable and non-tradable goods distinction can be mathematically represented as:

$$RER = P_t / Pn = E \; P_t^* / P_n \quad (2)$$

Where P_t and P_t^* stand for the domestic and international prices of the tradables respectively, while the prices of the non-tradables are denoted by P_n. In this definition, the decline of r_r indicates the real appreciation of the domestic currency.

Thirdly, some authors relate the RER to the domestic relative price of importable (P_m) to non-tradables (N)

$$E_{RER} = P_M / P_N \quad (3)$$

Where P_m = domestic price of importables
P_N = domestic price of non -tradables

In recognition of the simplicity and the operational tractability of the Eppp definition of the RER discussed in equation (1), its definition is often adopted in calculating the equilibrium RER. In this regard, the ppp is a long-run rate and is usually used to explain the movements in the long-run RER globally. Given the above definitions, it is possible through relative inflation rates to derive the equilibrium RER in the medium or long term rate. Thus, the equilibrium RER becomes the relative price of international (tradable) to domestic (non-tradable) goods that for given long-run sustainable values of other real variables (the so-called RER fundamentals)is consistent with the simultaneous attainment of internal and external balance. Incidentally, it would be certain from the discussion, thus far, that the equilibrium RER is not a constant number but a function of the market fundamentals. In this sense, the RER also responds within the short and even the medium run to monetary and fiscal disturbances. It is important to note that expansive but inconsistent macroeconomic policies usually generate RER movements. If such movements are sustained, the resultant output is the misalignment of the RER. In this regard, disentangling equilibrium movements i.e. movements generated by changes in fundamentals) from disequilibrium movements of the RER constitutes one of the most challenging tasks which analysts and policy makers face. This shows that at any point in time, misalignment in exchange rate is determined by changes in market economic fundamentals and the anticipated rate of change (depreciation) of the exchange rate. It can be deduced then that the exchange rate is dependent positively on money supply, the world interest rate and the RER but negatively on the domestic output and money demand shocks. Additionally, the exchange rate is a positive function of the expected rate of depreciation. Given all of these, it is obvious that, any change in some or all of the market fundamentals would impact a change in the equilibrium RER, culminating in misalignment; movements in market fundamentals are not solely responsible for exchange rate volatility and market expectations are important determinants, especially of short -term movements in the exchange rate.

The structure of the country's output

Whichever of the primary, secondary and tertiary sectors is playing a domineering role in the country's output would determine the sectoral allocation of monetary resources. A country where the primary sector (agriculture) predominates and is peasantry indicates that operators in this sector and those in the informal retail trade are largely accountable for the high percentage of currency outside the banks in total narrow money (M_l) supply. Countries that tend to import more goods and services will see their currencies depreciate in real terms over time, while countries that export more than import will experience real appreciation. This is a major constraint to the efficacy of monetary policy in achieving the objective of price and exchange rate stability. Given the foregoing market fundamentals, it is important to note that their implication take varying dimensions in varying countries depending on which exchange rate system such countries manage - fixed or floating exchange rate system. In a system of floating/flexible exchange rate system, exchange rate volatility may be a function of the volatility of market fundamentals and expectations.

However, in a system of fixed exchange rate regime, the country's exchange rate could face misaligned problems frequently overvaluation/undervaluation requiring modification. The exchange regime a country adopts depends on the authority's consideration of the impacts on the external sector (i.e. export sector), cost (price) functions of industrial, manufacturing and agricultural sectors. All of these issues are considered on how the exchange rate will make the economy, the export sector and the real sector competitive in order to allow business to earn normal profit particularly now under a globalizing world(Ayodele,1997).

Overview of the Nigerian Exchange Rate Policy

The Nigerian exchange rate policy could be perceived from two major different periods since its political independence in (1960). These are the pre-Structure Adjustment Programme (SAP) and the SAP-cum- post-SAP periods, respectively, discussed as follows:

The Pre-SAP (1960-86) Period

Certainly, there were a lot of shifts within the Nigerian exchange rate policy during the 1960/85 period. Nonetheless, the monetary authorities maintained overvalued exchange rates, probably to maintain a relatively low cost of imports, particularly at the initial stages of the post independence era. As time went on, there was policy shift in favour of gradual depreciation of the naira particularly, under the adoption of the import substitution model development in Nigeria. Incidentally, within the 1973/76 period when the need to douse the inflationary pressures arose from the monetization of the windfall gains from the crude oil boom period, monetary authorities deliberately kept the naira at an overvalued rate. However, at the wake of weak balance of payments position in 1977, a gradual depreciation of the naira became resorted to. Whatever the shifts, it is important to note that the determination of naira exchange rate within the pre-SAP period was achieved, pegging the local currency to a single intervention currency, and later to a basket of currencies. The naira overvaluation had its telling implications on the economy. Such implications include, making imports cheaper relative to domestic substitutes and exports relatively expensive and uncompetitive culminating in the encouragement of the importation of various items on a large scale at the expense of discouraged exports. It also encouraged capital flight and made for the dependence of the manufacturing sector on imported inputs. In recognition of these implications, the overvalued local currency became propped up by a pervasive system of exchange control which was not easy to administer while breeding various corrupt practices which undermined its usefulness.

The SAP and Post - SAP Period

Against the background given in the foregoing section, a floating exchange rate regime under a deregulated foreign exchange market was proposed in the SAP document of 1986. Within this process a Second-tier Foreign Exchange Market (SF EM) was introduced on the 26th of September, 1986. The SFEM was expected to evolve an effective mechanism for exchange rate determination and allocation of foreign exchange in order to guarantee short –term stability and long-term balance of payments equilibrium SFEM started off as a dual exchange rate system which produced official first tier exchange rate and the SFEM or the "free" market exchange rate. Under SFEM, authorized dealers would bid for foreign exchange whose exchange rate would be determined by averaging the successful bid rates. There was actually the merger of the first and second tier foreign exchange markets in July 1987 at the rate of ₦3.74:$1.00. Some analysts however described this as forced (Obadan, 2006). A unified exchange rate system that emerged them was referred to as the foreign Exchange Market (FEM). In order to achieve the objectives of exchange rate policy, various modifications have been made on the institutional frame work and management strategies such that SFEM later metamorphosed from FEM, later into the Autonomous Foreign Exchange Market (AFEM), Inter-Bank Foreign Exchange Market (IFEM), the Dutch Auction System (DAS) and currently the Wholesale Dutch Auction System (WDAS). The Inter-bank Foreign Exchange Market became operational in January, 1989, to unify the rates in the official and autonomous market to the reduction of the distortions inherent in the old system and was couched under daily auctions. The exchange was determined relying on any or a combination of the following options: weighted average of all quotations submitted by the banks; simple average of all quotations submitted by the banks; the highest and lowest banks' quotations, provided that the latter does not depreciate by more than 2% when compared with the rate that emerges above; intelligence reports on exchange rate movements during the previous day both in the inter-bank and in some world financial centres. For the correction of the noticeable deficiencies in the IFEM, the DAS was re-introduced in 1990. However, in order to stabilize the exchange rate, the implementation of complementary demand-management measures was an additional policy measure introduced. These arrangements and re-arrangements are done within the FEM paradigm to provide institutional framework for the determination of a realistic exchange rate in Nigeria relying on the interplay of market of market forces of supply and demand. A critical review of the performance of the exchange rate under IF EM shows that, there was sharp depreciation of the rate initially in January, 2000; and thereafter it became relatively stable. Thus, the naira exchanged at the rate of ₦102.10: $1in 2000, depreciated to ₦111.96:$1 in 2001. By 2002, the

DAS was re-introduced again and then, it aimed at the achievement of a rate that would not erode the measures of the competitiveness in the economy. This has served to stabilize the naira exchange rate. As at 2002 and 2004, the exchange rate moved to ₦121.0:US:$1.00 and ₦133.5:US$1.00 respectively. It is noteworthy however that since 2005, the exchange rates has featured some notable appreciation and stability. For instance an appreciation by 1.8 percent in 2005 (See CBN, Statistical Bulletin, 2008). This development can be related to the increases in oil prices in the international market which culminated into drastic increase in the foreign exchange earnings of the, country.

The Efficacy of Monetary Policies in the Management of FEM

An attempt is made in this section to examine the efficacy of the Nigerian monetary policies, particularly with respect to the management of the FEM. In this regards, emphasis will be placed on the linkage with the achievement of price and exchange rate stability in the country. Thus, it would be necessary to examine the extent to which established policy targets for each monetary policy instruments are attained./unattained. Comparing the trends of monetary policy instruments (narrow money, M_1; broad money, M_2; credit to the public/private sectors, the bank spread); and the structure of M_1 supply; all within the 1991/2006 period with the structure of the country's output proxied by the GDP also within the 1991/2006 period indicate that the actual growth rates M_1 and M_2 exceeded the anticipated targets in most cases widely within the period of analysis with 1996 being the only exemption when the targeted growth rates of M_1 and M_2 were exactly attained. However, 2004 experienced a situation in which the targeted growth rates M_1 and M_2 exceeded actual growth rates. This development indicates excess supply of M_1 and M_2 into the Nigerian economy. In 10 of 16 years of analysis targeted rate of growth of credit were exceeded while in the remaining six years, actual growth rate of credit fell below their targets. This shows mixed developments in the creation of credit in the economy. However while excess credit creation was intermittently interchanged with shortfalls in the public sector, it was excess credit creation with respect to the private sector (1991-1995, 1997, 1999, 2000-2001, 2004-2005) within 11 out of the 16 years period of analysis. This suggests that the private sector within these years was privileged to have access to funds for operations including those of the operations in the FEM in the face of restricted foreign exchange supply. The trend of the MRR shows that the monetary authorities desired restrictive monetary policy in 1991-1993 and 1999 while a relatively more accommodating monetary policy became desired in 1994-1998 and between 2000 - 2006. Changes in MRR are designed to signal the desired direction of change in interest rates. Apparently, the trends of the bank lending and savings deposit rates were in consonance with that of the MRR within the 1991/95 period. Whereas bank lending rate remained generally consistent with the MRR within the 1996/2001,2002/2006 period, savings deposit rate was inconsistent because it declined from 10.1 % in 1996 to about 5% in 2001 and 3% by 2006 (CBN, Annual Report and Statement of Accounts, Various Years). Incidentally, the interest rates spread rose from 8.2% in 1995 to 26.2% in 2001 only to start declining between 2002 – 2006 from 22.0% to 15.4% price and exchange rate stability was assumed reasonably attained within the 1997/2000 period. It is important to note that during this period, neither the target growth rates of M_1 nor M_2 were achieved while growth rates of credit to the economy were only attained in 1997 and 2000 because of the absolute decrease in credit to the public sector. On whether changes in one of these variables can cause a change in another variable" Ajakaiye (2002) conducted a causality test couched under the Granger approach to determine the relationship among MRR, M_1 and M_2. The findings show that the growths M_1 and M_2 cause inflation, and that the relationship between inflation and the growth of credit is weak. In a further critical analysis of the empirical relationships, information on the structure of output in Nigeria proxied by the GDP indicate that the agricultural and industrial sector accounted for an average of 45% of this share throughout the period of analysis(CBN, Annual Report and Statement of Accounts, Several Years). Incidentally agriculture is still peasantry in the country. It can therefore be presumed that operators in the sector as well as those in the industrial sector retail trade could have accounted for the high percentage of currency outside the banks in total narrow money supply. This suggests that the efficacy of monetary policy instrument is decimated by the structure of output in the economy and the reliance of agricultural production on weather which makes it difficult to secure steady food supply every year.

Conclusion and Policy Recommendations

Given the foregoing discussions on the market fundamentals and the efficacy of monetary policies in the management of FEM, it is apparent that exchange rate was fairly stable within the pre-SAP period. Exchange rate became unstable within the SAP and Post -SAP periods. It is therefore clear from the trends of the exchange rate, particularly within the SAP and post SAP period, that monetary policy causing frequent variations in the market fundamentals was not very efficacious in the achievement rate stability although there could be intermittent periodic exchange rate stability. Besides, foreign exchange allocations are mostly made to raw materials, finished goods and invisibles. For monetary policy to be efficacious in the achievement of exchange rate stability, monetary authorities must recognize the importance of the supply channel of

this linkage and subsequently adopt heterodox monetary policy. This requires the reliance on the growth of money supply and credit to manage money supply, while avoiding high interest rates policy due to its deleterious implications on production cost and the competitiveness of the emerging product globally.

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