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EXCHANGE RATE MANAGEMENT IN NIGERIA

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Aims and Scope

Understanding Monetary Policy Series are designed to improve monetary policy communication as well as economic literacy. The series attempt to bring the technical aspects of monetary policy closer to the critical stakeholders who may not have had formal training in Monetary Management. The contents of the publication are therefore, intended for general information only. While necessary care was taken to ensure the inclusion of information in the publication to aid proper understanding of the monetary policy process and concepts, the Bank would not be liable for the interpretation or application of any piece of information contained herein.

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Central Bank of Nigeria

Mandate

▪Ensure Monetary and Price Stability

▪Issue Legal Tender Currency in Nigeria

▪Maintain External Reserves to safeguard the international value of the Legal Tender Currency

▪Promote a Sound Financial System in Nigeria

▪Act as Banker and Provide Economic and Financial Advice to the Federal Government

Vision

"By 2015, be the Model Central Bank delivering Price and Financial System Stability and promoting Sustainable Economic Development"

Mission Statement

"To be proactive in providing a stable framework for the economic development of Nigeria through the effective, efficient and transparent implementation of monetary and exchange rate policy and management of the financial sector"

Core Values

- Meritocracy
- Leadership
- Learning
- Customer - Focus

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SECTION ONE

Introduction

1.1 What is Exchange Rate?

The exchange rate is the price of one currency expressed in terms of another currency. It is a vital macroeconomic indicator used in determining the overall performance of economies and remains one of the most important prices in any economy. It is usually expressed as the units of foreign currency needed to purchase one unit of domestic currency, or as units of the domestic currency needed to purchase one unit of foreign currency. The systems of exchange rate determination are known as exchange rate regimes. Basically, there are two extreme cases of exchange rate regimes, namely, fixed and floating exchange rate systems.

1.1.1. Fixed Exchange Rate System

Under the fixed exchange rate system, the exchange rate is determined by administrative fiat/decree of government or monetary authorities like central banks. Foreign exchange is disbursed mainly through allocation or a rationing system usually associated with exchange controls. This system requires the maintenance of large external reserves to sustain its operations. Variants of the fixed regime include adjustable peg, crawling peg and target zone/crawling bands.

1.1.2 Floating Exchange Rate System

A floating or flexible exchange rate system refers to a situation in which the exchange rate is determined by the forces of demand and supply of foreign exchange. In this circumstance, monetary authorities mostly rely on the foreign exchange market to determine the exchange rate.

1.2 Other Related Concepts

1.2.1 Concept of Depreciation and Appreciation

Appreciation (depreciation) refers to a rise (fall) in the value of one currency (usually the domestic currency) when expressed in terms of another (a foreign currency) under the floating or flexible exchange rate system.

1.2.2 Concept of Devaluation and Revaluation

Similarly, a rise (fall) in the value of the domestic currency in terms of other foreign currencies in the case of fixed exchange rate system is referred to as revaluation (devaluation).

1.2.3 Exchange Rate Swaps

Foreign exchange swap refers to purchase and sale of identical amounts of one currency for another with two different value dates. This is a type of financial derivative used in foreign exchange transaction.

1.2.4 Purchasing Power Parity

This is an economic theory used in determining the relative value of currencies, estimating the amount of adjustment needed in the exchange rate between countries, in order for the exchange to be equivalent to each currency's purchasing power. It establishes the relative amount of money needed to purchase the same quantity of goods and services in two countries, and uses that rate to calculate an implicit foreign exchange rate. Using the PPP rate, an amount of money has the same purchasing power in different countries. The PPP enables the international comparison of income. Simply, the PPP equates the national price levels in two countries expressed in a common currency. At that rate, the purchasing power of one unit of a currency would be the same in the two countries.

1.3 Key Macroeconomic Implications of Exchange Rate

1.3.1 Exchange Rate and Inflation

A devaluation or depreciation of exchange rate makes exports cheaper and imports costlier which increase cost of imported raw materials and imported goods. This situation increases the general price level especially for an import-dependent economy like Nigeria. Thus, depreciation or devaluation puts pressure on inflation.

1.3.2 Exchange Rate and Oil Prices

Rising oil prices is expected to increase foreign exchange earnings of oil producing countries like Nigeria. This also leads to accretion of foreign reserves, an increase in the supply of foreign exchange, moderation of demand pressure in the foreign exchange market and likely appreciation of the domestic currency. However, a decline in oil prices results in a fall in foreign exchange earnings leading to a fall in the supply of foreign exchange. The resultant excess demand in the foreign exchange market would put pressure on the exchange rate leading to the depreciation of the domestic currency.

1.3.3 Exchange Rate and Reserve Management

Reserve management is designed to achieve safety (capital preservation), liquidity and return. Besides, many central banks also use foreign reserve to intervene in foreign exchange markets to ensure exchange rate stability. In this case, efficient reserve management also ensures sound exchange rate management.

1.3.4 Exchange Rate and Government Expenditure

In a situation where government is the major earner of foreign exchange, depreciation or devaluation of local currency would increase revenue in domestic currency, consequently leading to increase government expenditure. Conversely, when domestic currency appreciates or is revalued, revenue to government declines, resulting to reduction in government expenditure.

1.3.5 Exchange Rate and Domestic Interest Rates

Rising domestic interest rates could attract capital inflow from foreign investors, leading to appreciation of the domestic currency. Also, as interest rates decline, foreign investors in the domestic money market would withdraw their investment and put demand pressure on the foreign exchange leading to depreciation of the domestic currency.

1.3.6 Exchange Rate and Asset Prices

Asset prices could be financial asset such as stock prices and non-financial assets such as house prices. When the currency of a particular country depreciates in relation to other countries, this will put pressure on investors' sentiment on the country's stock markets. Similarly, high productivity gains and stock market boom would lead to exchange rate appreciation.

1.3.7 Exchange Rate and Stock Market Prices

When exchange rate depreciates, it increases the value of foreign currency in the domestic economy; investment in asset prices such as stock becomes attractive to foreign investors. As such, increased volume of investment would exert pressure on the capital market leading to rising stock prices. However, when the domestic currency appreciates, the impact on stock market prices would be the reverse.

1.3.8 International Trade and Exchange Rate

The interaction of the demand and supply of goods and services across international borders has implication for the exchange rate. Net Importing countries tend to have lower exchange rate relative to trading partners. The reverse holds for net exporting countries. Therefore, for a country to appreciate her currency, there is need to stimulate local production with the aim of exporting as well as reduce the volume of imports.

1.4 What is Exchange Rate Management?

Exchange rate management involves the choice of a suitable foreign exchange regime by the monetary authorities aimed at preserving the external value of the domestic currency, attainment of healthy balance of payments and price stability. When changes in exchange rate do not take account of changes in price level or inflation rate, it is referred to as nominal exchange rate. On the other hand, when it takes account of price level changes, it is called real exchange rate.

In Nigeria, during the period of 1960 -1974, exchange rate targeting was used as a major framework for monetary policy. The exchange rate targeting framework was designed to support the newly introduced Nigerian Pound to avoid undue volatility in the exchange rate and thus achieve international credibility for the new currency. Between April 1974 and late 1976, the Nigerian monetary authorities attempted an independent exchange rate management policy that pegged the naira to either the US dollar or the British pound sterling, whichever currency was stronger in the foreign exchange market.

Recently, the CBN's management of the naira exchange rate has been with a view to safeguarding the international value of the legal tender currency. Consequently, the Bank operates a managed float system of exchange rate determination, in which it intervenes when appropriate. The CBN's market-based wholesale Dutch Auction System (wDAS) of exchange rate management allows users of foreign exchange access to the foreign currency through their banks: who apply on their own accounts to the CBN based on the perceived need of their customers. Overall, the main objective of the exchange rate management policy is to stabilise the exchange rate at levels consistent with prudent reserve management and growth prospects of the economy.

1.4.1 Objective of Exchange Rate Management

The short and medium-term objectives of exchange rate management include:

- To ensure stability and sustainability of the exchange rate;
- To maintain a favourable external reserve position, reduce capital flight and ensure external and internal balance; and
- To diversify the export base of the economy and reduce the dependence on imports and oil exports.

Specifically, the CBN's exchange rate management policy is designed to achieve three out of five core mandates of the Bank as follows:

I. Ensure monetary and price stability;
II. Maintain external reserves to safeguard the international value of the legal tender currency; and

III. Promote a sound financial system in Nigeria.

The Board of Directors of the CBN is statutorily responsible for exchange rate policy in Nigeria.

SECTION TWO

Overview of Exchange Rate Management Framework

Since 1971 when the Gold Standard of exchange rate that had been instituted under the Bretton Woods system ended, a variety of exchange rate mechanisms or frameworks have been adopted by different countries. The major issue in every exchange rate management framework is the exchange rate policy. According to Argy (1989), in the aftermath of the end of the International Monetary Fund system, countries had six exchange rate policy options as follows:

1. An independent adjustable peg regime to a single currency or a basket of currencies;
2. A crawling peg in which adjustments of the exchange rate are more frequent;
3. An independent peg, for an indefinite period, to a major currency or to a basket of currencies;
4. A collective exchange arrangement aimed at stabilising the bilateral exchange rates of participating countries;
5. A dual exchange rate system in which a regulated exchange rate applies to commercial, while an unregulated exchange rate applies to capital transactions; and
6. A floating exchange rate, with different degrees of management, ranging from pure float to loose exchange rate targets (target zones) to a variety of rules for exchange rate managements (such as leaning against the wind).

Reddy (1997) identified three main objectives of an optimal exchange rate policy as:

(i) To reduce volatility of exchange rates, while ensuring that the market correction of overvalued or undervalued exchange rate is orderly and calibrated;

(ii) To help maintain an adequate level of foreign exchange reserves; and

(iii) To eliminate market constraints with a view to developing a healthy foreign exchange market.

Exchange rate regimes of member countries were classified by the International Monetary Fund (IMF), from 1975 to 1998 according to their official announcements and the degree of their exchange rate flexibility. Three basic classifications were recognised: pegs, limited flexibility (usually within a band or cooperative arrangement) and greater flexibility (managed or floats). These were further categorised into fifteen sub categories. Actual practice often differed from what member countries declared to be their exchange rate policy. In 1999, the IMF introduced a new classification system based on available information on exchange rate and monetary policies and formal/ informal policy intentions with data on actual exchange rate regimes. As a result, eight categories of exchange rate regimes were recognised: separate legal tender, currency boards, conventional fixed (pegged against a single currency or a basket of currencies or a commodity such as gold), pegged exchange rates within horizontal bands, crawling pegs, crawling bands, managed floating with no predetermined path for the exchange rate and independent floating.

2.1. Fixed Exchange Rate Regime (Exchange Rate Targeting)

A fixed exchange rate regime (also called a pegged exchange rate regime) is one in which the value of a (country's) currency is pegged relative to the value of another (country's) currency or to a basket of other (countries') currencies, or to another measure of value, such as gold (called the anchor currency/basket of currencies/product) (Mishkin, 2007). In small open economies where the contribution of external trade to gross domestic product is significant, a fixed exchange rate regime stabilises the value of the domestic currency, making trade and investment predictable and smooth.

The fear of floating exchange rate system is caused by concerns for exchange rate stabilisation, which generally arises from a desire to lower exchange rate risk and transaction costs. In open economies, the concerns are on the pass through to CPI- inflation. To maintain a fixed exchange rate regime, a country (or better her central bank) would need to hold sufficient external reserves in order to be able to intervene in the foreign exchange market and defend the domestic currency. Without sufficient external reserves, a fixed exchange rate regime would experience frequent currency devaluation or revaluation in reaction to exchange rate shocks. Countries without sufficient foreign reserves to defend a fixed exchange rate would outlaw currency trading at any rate other than the official (fixed) rate. This is difficult to enforce and usually creates an informal foreign exchange market.

There are variations of the fixed or pegged exchange rate regime as discussed below:

Conventional Fixed Peg Regime

The domestic currency is pegged within margins of ± 1 per cent or less relative to the currencies of major trading partners. There is no commitment to keep the parity irrevocable and the exchange rate may fluctuate within narrow margins of less than ± 1 per cent around a central rate – or the maximum and minimum value of the exchange rate may remain within a narrow margin of 2 per cent – for at least three months. The central bank maintains the fixed parity by direct intervention in the foreign exchange market through sale and purchase of currencies or indirectly through changes in the monetary policy (interest) rate, and regulation of the foreign exchange market.

Pegged within horizontal bands

This is a regime in which the value of a country's currency is maintained within certain margins of fluctuation of more than ± 1 per cent around a fixed central rate or the margin between the maximum and minimum value of the exchange rate exceeds 2 per cent.

Crawling Peg

Crawling peg is an exchange rate regime commonly seen as a part of fixed exchange rate regimes which allows appreciation or depreciation in an exchange rate periodically, in small amounts. The changes may be at a fixed preset rate or in response to changes in inflation differentials, relative to major trading partners or between the target inflation rate and expected inflation rate in major trading countries.

In a backward-looking crawl, the rate (of crawl) is set to adjust for measured inflation or other indicators. A forward-looking crawl sets the rate at a pre-announced fixed rate and or below the projected inflation differentials.

Exchange Rates within crawling bands

The currency is maintained within certain fluctuation margins of at least ± 1 per cent around a central rate – or the margin between the maximum and minimum value of the exchange rate exceeds 2 per cent – and the central rate or margins are adjusted periodically at a fixed rate or in response to changes in selected quantitative indicators. The extent of the flexibility of the exchange rate will depend on the band width. Bands are either symmetric around a crawling central parity or widened gradually with an asymmetric choice of the crawl of upper and lower bands.

The commitment to maintain the exchange rate within the band imposes constraints on monetary policy, with the degree of policy independence being a function of the band width.

Rigid peg (Currency areas)

There are two rigid peg exchange rate arrangements. One is the exchange arrangements with no separate legal tender which allows the currency of another country to circulate as legal tender ("dollarisation"), or the country is part of a Monetary or Currency Union where all members share the same legal tender. A second arrangement is the Currency Board Arrangements (CBA). In a currency board, there is a legislative commitment of the central bank to exchange the domestic currency for a specified foreign currency, termed the reserve currency, at a fixed rate of exchange. These kinds of arrangement do not allow central banks to have independence in controlling the domestic currency.

Adjustable peg

An adjustable pegged exchange rate is a term which is used to describe a method of stabilising the rates at which the currency of one country may be swapped for another convertible currency by preserving a 'pegged' level for an exact period. Usually, the peg involves a degree of flexibility of 2 per cent around a certain level. It is a flexible system of fixing the rate of exchange and allows insignificant deviations from the 'pegged' (fixed) level. The system allows countries to revalue their peg, if it is necessary, to regain competitiveness. The Bretton Woods system, which ended in 1971, was an adjustable peg system.

Advantages and Disadvantages of Fixed Exchange Rate Regime

Advantages

a. Make trade and investments between countries easier and more predictable
b. There is less speculative attack on the currency if the dealers in the foreign exchange market regard a given fixed exchange rate as appropriate and credible
c. Fixed exchange rates can exert a strong discipline on domestic firms and employees to keep their costs under control in order to remain competitive in international markets
d. It's attractive to foreign investors because it covers their exchange rate risk
e. Rigid pegs restrain central banks from following loose monetary policy.

Disadvantages

a. The central bank has to maintain a high level of foreign reserves to keep the exchange rate fixed, as well as instill confidence in the foreign exchange rate regime
b. The central bank may have to alter the interest rate from time to time in directions opposite the pressure on the exchange rate
c. Misalignment of the exchange rate when fixed at suboptimal rate may cause domestic producers to become uncompetitive in foreign markets
d. International disputes frequently follow fixed exchange rates, leading to accusations of unfair trade.

2.2 Flexible Exchange Rate Regime

A flexible or floating exchange rate regime allows the exchange rate to be determined by market forces. It is associated with advanced industrial economies such as the United States of America, Japan and the European Union where the central banks intervene in the foreign exchange market only in the event of wide and unexpected fluctuations in the value of the currency.

This system is also called fluctuating exchange rate regime, and a currency within it is termed a "floating currency". Adopting a flexible exchange rate regime requires a high degree of monetary and fiscal policy management and coordination, and a willingness to maintain convertibility of the domestic currency. Sound macroeconomic management is required for an economy operating a flexible exchange rate regime because it goes with capital account convertibility, which in turn, will require sound banking and other sector fundamentals.

In response to sharp movement in major currencies, increased international capital mobility, steep rise in international interest rates, acceleration of inflation, slowdown in rate of growth in industrial countries, and the debt crisis in the 1980s, which caused a series of external shocks in many developing countries, the pressure for flexible exchange rate regimes increased.

There are two variations in flexible exchange rate regimes: the independent or floating and managed floating regimes.

Floating Exchange Rate Regime

A floating or independent exchange rate regime is strictly determined by the free movement of demand and supply of currencies in a country. Sometimes this regime is termed pure float. The system allows the exchange rate to move without intervention from the central bank or the government. Exchange rate movements in this regime result directly from trade and capital flows. Changes and movements in market supply and demand cause changes in the value of currency of a country that adopts floating exchange rate regime.

A country with significant payment deficit would benefit from this regime because fluctuations provide automatic adjustment. Such a country has no need to hold large foreign reserves and the exchange rate places no barriers on monetary and fiscal policy.

Managed Floating Exchange Rate Regime

This is a hybrid between a pure float and a fixed exchange rate regime. It represents a system which many governments desire because of their 'fear of floating'. In a managed floating exchange rate system, the currencies are allowed to move, but within a limited range. Monetary authorities operating this system would lean towards exchange rate targeting. Interest rate policy could be employed to achieve this objective.

The central bank intervenes in the foreign exchange market by buying and selling domestic and foreign currency to keep the exchange rate close to an implicit target value or an explicit range of target values. Thus, in a country that operates a managed floating exchange rate regime, the central bank is a key participant in the foreign exchange market. To successfully intervene in the foreign exchange market, the central bank must hold a large amount of foreign reserves.

According to Xiaolian (2010) there are three characteristics of the managed floating exchange rate regime.

i. The floating exchange rate is based on market supply and demand;
ii. The range of floating adjustments is based on trade and current account balances to reflect the "managed floating" nature; and
iii. The exchange rate is determined with reference to a basket of currencies, rather than the bilateral exchange rate between the domestic and any single currency.

Advantages and Disadvantages of Flexible Exchange Rate Regime

Advantages

a. Monetary policy can be successfully used to pursue domestic economic objectives such as full employment and/or low inflation, without worrying about depleting official reserves of foreign exchange
b. Exchange rate adjustments offer an automatic means of responding to adverse shocks without any overt policy action
c. Governments are free to choose their domestic policy because a floating exchange rate would allow for automatic correction of any balance of payment disequilibrium, that might arise from the implementation of such policy
d. There is insulation from external economic events as the country's currency is not tied to a possibly high world inflation rate as obtainable under a fixed exchange rate
e. If a government has a policy of a floating exchange rate, it does not need to hold large reserves of foreign currency with which to adjust the exchange rate by buying and selling its own currency.

Disadvantages

a. Automatic changes in the exchange rate due to trade may not bring about the necessary changes in the volumes of imports and exports to restore equilibrium to the balance of payments, depending on the elasticities of supply and demand for imports and exports
b. Fluctuations in the exchange rate can have negative consequences for other objectives of government
c. Variations in the exchange rate may cause uncertainty and discourage trade. Constant changes in the external price of domestically produced goods mean that the demand for exports would be unstable
d. If a country is experiencing inflation, the consequent depreciation of its currency can cause cost push inflation due to the relative expensiveness of imported materials.

2.3 Multiple Exchange Rate Regimes

A country can opt to have a dual or multiple foreign exchange rate regimes. This implies a country has more than one rate at which its currencies are exchanged. So, unlike the other exchange rate regimes, the dual and multiple systems consist of different rates, fixed and floating, which are used for the same currency during the same period of time.

In a dual exchange rate system, there are both fixed and floating exchange rates in the market. The fixed rate is only applied to certain segments of the market, such as "essential" imports and exports and/or current account transactions. In this case, the price of capital account transactions is determined by a market-driven exchange rate.

In a multiple exchange rate system, the concept is the same, except that the market is divided into different segments, each with its own foreign exchange rate, whether fixed or floating. It is also a way to subdue local inflation and importers' demand for foreign currency.

The use of multiple exchange rates has been seen as an implicit way of imposing tariffs or taxes. For example, a low exchange rate applied to food imports functions like a subsidy, while the high exchange rate on luxury imports works to "tax" people importing goods, which in a time of crisis are perceived as non-essential. Similarly, a higher exchange rate in a specific export industry can function as a tax on profits. While multiple exchange rates are easier to implement, most economists agree that the actual implementation of tariffs and taxes would be more effective and transparent solution in solving the underlying problem in the balance of payments.

Finally, multiple exchange rates result in problems with the central bank and the federal budget. The different exchange rates likely result in losses in foreign currency transactions, in which case the central bank must print more money to make up for the loss, which might lead to inflation.

Advantages and Disadvantages of Multiple Exchange Rate Regime

Advantages

1. It is implemented to stop capital flight and prevent financial crises in situations where a united devaluation is not a viable policy option. This is because high pass-through and liability dollarization imply that unitary devaluation would lead to high inflation, deteriorating balance sheets and bankruptcies
2. It preserves the stabilisation role of monetary policy and might also stop capital flight without having an inflation spike
3. It protects domestic prices from speculative attacks on a country's currency
4. It is a form of capital control.

Disadvantages

1. The ability to insulate the economy from shocks fades over time
2. Parallel exchange rates typically hide structural fiscal problems that ultimately result in higher parallel premiums and traumatic unifications
3. Restrictions on capital mobility increase the probability of speculative attacks
4. Encourages rent seeking behavior through round tripping
5. May put upward pressure on domestic prices in a mark-up pricing regime as prices may be set on the basis of the higher exchange rate.

SECTION THREE

Institutional Framework for the Design and Implementation of Exchange Rate Policy in Nigeria

3.1 Introduction

The Central Bank of Nigeria derives its power to formulate and implement exchange rate policies from the CBN Act of 1958 and its subsequent amendments. The CBN Act 2007 empowers the Board of the CBN to formulate and implement exchange rate policy as contained in Section (6) sub-section (3) (c). The following briefly describes the institutional framework within the CBN for formulating and implementing exchange rate policy in Nigeria. Specifically, we examine the role of the CBN in the exchange rate determination process and institutional arrangements for doing that.

3.2 The Institutional Framework for Exchange Rate Policy Formulation and Management in Nigeria

The decision making process of formulating and implementing monetary and exchange rate policies is coordinated by the CBN, although the actual process is shared among various government agencies including the Presidency, the Federal Ministry of Finance (FMF) and the Debt Management Office. Since exchange rate policies are part of the Bank's overall Monetary policy package, it is not formulated and implemented in a vacuum. Nigeria's Exchange rate policies are included in the annual monetary or medium-term monetary programme and guidelines for Nigeria.

At the beginning of every fiscal year, the CBN, would through the Monetary Policy Department (MPD), on behalf of the MPC, prepare the Monetary Policy Programme (MPP), titled "Monetary, Credit, Foreign Trade and Exchange Rate Policy Guidelines". In doing so, the MPD requests and collates inputs from relevant departments within the CBN and prepares the MPP or medium-term monetary policy programme covering a period of two years. The MPD computes the relevant monetary aggregates within a financial programming framework and estimates the required amount by which money supply should grow using the simple monetary rule, if the Federal Government's inflation and growth targets are to be achieved. They also identify the policy instruments that would be best suited for achieving the specific targets on a monthly, quarterly and annual basis. In the MPP, a section is earmarked to deal with exchange rate management and policy.

The MPD then forwards the MPP to the Monetary Policy Implementation Committee (MPIC) through the Monetary Policy Technical Committee (MPTC), which screens the proposal and returns same to the MPD. After the MPC has discussed and vetted the MPP, it is sent to the Committee of Governors (COG), which ratifies the document before forwarding it to the CBN Board for final approval. It is when the Board has approved the MPP that it is sent to the President for integration into the nation's annual budget.

The President forwards the MPP to the National Assembly (NASS) as part of the Federal Government's Executive budget bill. When the NASS passes the bill into law and is accented to by the President, it is sent to the Federal Ministry of Finance for implementation. It is important to note that due to the changing statue of the CBN, the Ministry had at several times in the Bank's history, participated in foreign exchange management, bank licensing and supervision of banks. By the 1991 and 1999 amendments to the CBN Act, the conduct of monetary policy management was consolidated within the CBN. However, as an agency of government, the CBN performs its monetary policy functions through the Board, MPC and Monetary Policy Implementation Committee (MPIC) in consultation with relevant government ministries and agencies.

The Central Bank has the sole responsibility of formulating exchange rate policy. The exchange rate policy decision reside with the Board of the Central Bank of Nigeria following a proposal from the MPCl. The management of Nigeria's exchange rate policy is mainly handled by the Trade and Exchange Department (TED) of the CBN, while the implementation of exchange rate policies in Nigeria is a joint responsibility of all stakeholders.

In Nigeria, the three segments of foreign exchange market are the wholesale Dutch Auction system (wDAS), Interbank and the Bureau de Change (BDC) markets. The wDAS is the official market from where banks and Bureau de Change operators come to buy and sell foreign exchange. The forces of demand and supply of foreign exchange regulate activities in the market. The Banks/BDCs bid for foreign exchange from the CBN, the bids are collected and through some guidelines, a buying and selling price for foreign currency is obtained for the day, which rules until another bidding day. Operators in the foreign exchange market are expected to add one per cent commission on top of the CBN's selling or buying price. For funds obtained from sources other than the CBN, they are free to sell or buy at prevailing market price.

SECTION FOUR

Factors that Influence Exchange Rate Movements in Nigeria

The factors that drive exchange rate movements in Nigeria include among others: economic fundamentals, such as the GDP growth rate, balance of payments position, external reserves, interest rate movements, external debt position, productivity; market psychology and expectations; socio-political factors; macroeconomic shocks and speculative contagion. These drivers influence exchange rate dynamics through the demand for and supply of foreign exchange which can exert or ease the pressure on the market and cause the exchange rate to depreciate or appreciate. For instance, a draw-down on external reserves, increase in external debt servicing, low productivity and macroeconomic shocks that precipitate capital reversals can cause the exchange rate to depreciate. Socio-political factors such as political tension, social unrest, pipeline vandalism and hostage taking usually send wrong signals of an unfriendly investment environment to foreign investors, thereby exerting pressure on the foreign exchange market and inducing capital flight. Similar impact is expected for an envisaged poor growth prospects and renewed inflationary pressures and expectations. Uneasiness in market psychology, as manifested in the phenomenal increase in foreign exchange demand for both hedging and speculative purposes, can trigger exchange rate movements.

Exchange rates are strongly influenced by market expectations of future exchange rates, and these expectations are in turn influenced by beliefs on the future course of monetary and fiscal policies as well as socio-political developments in the market, which could induce capital flight. Lack of depth at both the inter-bank autonomous and parallel markets segment could induce speculative attack, as a result of scarcity of foreign exchange in the market, in the wake of increased demand pressure. Thus, relatively small changes in demand or supply are reflected in even larger and exaggerated movements in the exchange rate. Structural rigidities, undue dependence of the economy on oil and imports, poor performance of non-oil exports and low level of productivity in the country, also bring about a depreciation of the exchange rate.

SECTION FIVE

Exchange Rate Practices in Nigeria

Prior to the introduction of the second-tier foreign exchange market in Nigeria, the management of foreign exchange was through a fixed exchange rate regime. The objectives were to maintain low inflation and ensure price stability, which was necessary for imports of capital goods for the development of the domestic economy. The fixed exchange rate regime was also complemented by exchange control measures. Over the years, the naira became over-valued with attendant economic problems such as massive imports of consumer goods, depletion of external reserves, worsening terms of trade and uncompetitiveness of exports, accumulation of payments arrears and debt burden.

The Second-tier Foreign Exchange Market (SFEM) was introduced on September 26, 1986, under the structural adjustment programme to address the afore-mentioned problems. Exchange rate management assumed a more dynamic approach following the introduction of SFEM, reflecting both market fundamentals and other prevailing economic conditions.

5.1 The Dual Exchange Rate System

The dual exchange rate system consists of the first-and the second tier foreign exchange markets. While the first-tier was administered to serve official transactions, including debt service payments, embassies and other external obligations, the second-tier (SFEM) was market-driven and served all private sector uses. Under the SFEM, the demand and supply of foreign exchange were critical for the determination of exchange rate. At the commencement of the system, the average pricing method was used in determining the ruling exchange rate. However, owing to the continued depreciation of the naira, coupled with the need to achieve a stable and realistic rate, the marginal pricing method replaced the average method. Neither the average nor the marginal pricing method could address the problems of speculative or fictitious demand from multiple bidding by authorised dealers.

5.2 The Retail Dutch Auction System (RDAS)

In order to fine-tune the system marketing arrangement and ensure professionalism in the bidding process, the Retail Dutch Auction System (RDAS) was introduced in April, 1987. The RDAS allowed end-users (customers) to bid through their authorised dealers who specify the rates as requested by their customers (end-users). The CBN supplied the foreign exchange demanded by authorised dealers, who were required under the DAS to pay according to the bid rates as specified by the customers. Thus, the ruling rate (exchange rate) was the marginal rate that finally emerged. By this method, inept dealers received less amount of foreign exchange, while greedy dealers were penalised through their high bid rates. In spite of the introduction of the RDAS, the problems of the foreign exchange market persisted, leading to rising demand pressures and the continued depreciation of the Naira.

5.3 Other Systems of Foreign Exchange Management

The continued efforts of the CBN at evolving a method for enthroning an efficient pricing mechanism that could guarantee a stable and realistic exchange rate for the Naira led to some adjustments made in the structure of the foreign exchange market and pricing mechanism. To eliminate foreign exchange subsidy accruing to public sector users in the first-tier segment, the first-tier was merged with the SFEM to form the enlarged Foreign Exchange Market (FEM) on July 2, 1987. Thus, the movement of public sector demand through the merger to the market-based SFEM further intensified the demand pressures and accentuated the depreciation of the Naira.

The emerging developments in the FEM were indicative of the unabating demand pressures in the official supply of foreign exchange. Between July 1987 and 1989, there were a number of actions undertaken to achieve a realistic exchange rate of the naira. First, an autonomous foreign exchange market (AFEM) was introduced in 1988 to encourage the inflows of non-oil foreign exchange earnings into banks as a measure to relieve the demand pressure on the CBN. Secondly, an enlarged interbank foreign exchange market (IFEM) replaced the AFEM in January 1989, where authorised dealers (banks) traded among themselves, while the CBN as a participant was only expected to intervene in order to achieve a realistic rate.

As part of the measures to ameliorate demand pressures, the **Bureaux de Change were also licensed in 1989** to create other official outlets for dealing in foreign exchange. The objectives were: to provide access to small users of foreign exchange who need to purchase foreign exchange over the counter without formalities. To expand the scope of access, reputable hotels were granted the status of authorised dealers. However, the BDCs were limited to dealing in private or autonomous sources of foreign exchange and from imports finance. However, speculative activities further increased the demand pressures at the IFEM with widening exchange rate premium. Thus, interbank procedures were modified to allow for the re-introduction of the DAS in 1990.

In spite of these arrangements to manage the exchange rate, the foreign exchange market continued to experience profound instability as the exchange rate premium widened rapidly above the international benchmark rate of 5 per cent. The premium rose to 20, 35 and 79.2 per cent in 1990, 1991 and in February, 1992, respectively. As a result, the CBN completely deregulated the foreign exchange market and floated the naira on March 5, 1992. Authorised dealers were supplied unlimited amount of foreign exchange as long as they provided the equivalent naira cover. Under the system, the premium was reduced to 10 per cent. However, naira average N21.9 per dollar in 1993 from N17.3 per dollar in 1992 due to persistent demand pressures and rapid depreciation. Indeed, for most part of 1993, the naira was administratively pegged at N21.9900 per dollar.

A pro-rata system of allocating foreign exchange to the priority sectors of the economy was introduced. To stem the volatility in exchange rate movement in 1993 and the widening premium between the official and parallel market rates, the Federal Government in 1994 officially fixed the naira at N21.9960 per dollar and re-introduced some regulatory measures to address the free fall of the naira and enhance the balance of payments position of the country. The pro-rata system of foreign exchange allocation to end-users was retained in 1994; manufacturing, finished goods, agricultural and invisible trade sub-sectors received foreign exchange allocations in that order of priority. At the end of 1994, the policy measures adopted failed to address the depreciation of the exchange rate, widening premium, rising inflation rate and external imbalances as well as the poor performance of the non-oil sector, which necessitated the need for more policy reforms.

Consequently, in 1995, there was a complete policy reversal under the 'guided deregulation' reforms. First, the foreign exchange market was deregulated and the Autonomous Foreign Exchange Market (AFEM) was re-introduced to meet foreign exchange needs of private sector end-users through market forces. The CBN was authorised to intervene in the market in order to stabilise the market rate, and the BDCs were also allowed to trade in the autonomous market rather than being buyers only. The fixed official rate of N21.9960 per dollar was retained to serve public sector uses, such as debt service payments and national priority projects. In effect, a dual exchange rate system was in operation in 1995. AFEM was expected to reduce the parallel market premium, increase non-oil exports revenue, stabilise exchange rate and reduce demand pressures.

In addition, the abrogation of the Exchange Control Act of 1962 and the Enterprises Promotion decree of 1989, as well as the granting of permission to exporters to sell their foreign exchange proceeds at autonomous rates were deregulatory measures aimed at enhancing the operational efficiency of the AFEM. These measures were retained in 1996; but in 1997, there was further liberalisation in order to deregulate current account transactions. Limits on basic and personal travel allowances, as well as remittances for educational instructions were removed. The suspension on open account and bills for collection as methods for international payments were lifted.

In spite of these measures, exchange rate premium widened, as the incidence of round tripping increased and distortions created by the fixed subsidised official rate led to the rapid depreciation of the naira. At a fixed exchange rate of N21.9960 in 1994, the naira depreciated further under the AFEM to N84.4 per dollar in 1998. In January 1999, the official fixed rate component was abolished leaving the AFEM as the only source of foreign exchange dealings. The emerging rate from the AFEM was unsustainable, which led to the re-introduction of the Inter-bank Foreign Exchange Market (IFEM) on October 25, 1999, to replace the AFEM. The objectives of the IFEM were to broaden the supply of foreign exchange by allowing oil companies, non-bank financial institutions, bureaux de change, parastatal and private companies to participate in buying and selling of foreign exchange along with authorised dealers, while the CBN was only to intervene when the rate moved in undesired directions.

The IFEM was expected to improve the transparency of the market and reduce speculative attacks. Other complementary measures included the imposition of sanctions on dealer(s) involved in sharp practices; the directive to government agencies to transfer their capital accounts to the CBN, while maintaining their recurrent accounts in banks; to encourage foreign exchange earnings, exporters were granted some incentives to promote exports and 100 per cent retention of their export proceeds; and the introduction of 100 per cent destination inspection to check indiscriminate imports. In February, 2002, the foreign exchange market was further liberalised with the designation of private institutions such as the Travelex Global and Financial Services and American Express (AMEX), as outlets for the sales of Travellers' Cheques (TCs) to end-users, thus providing easy access to end-users and further narrowing the existing exchange rate premium.

However, IFEM also suffered the same fate as other preceding systems of foreign exchange management; these included mounting demand pressures, continued depreciation of the naira and high exchange rate premium. In the wake of these developments, the CBN inevitably remained a major participant rather than an intervener, supplying about 90 per cent of foreign exchange to defend the naira. The emergence of more speculators, arbitrageurs and multiple exchange rates, led to a sharp decline in external reserves from $10.0 billion at end-December, 2001 to $8.0 billion as at July, 2002. Therefore, the IFEM failed to achieve the set objectives and was consequently replaced.

5.4 The Re-introduction of the Retail Dutch Auction System (RDAS)

The failure of the IFEM compelled the CBN to re-introduce the Retail Dutch Auction System (RDAS) on July 22, 2002 to address the widening premium, reduce demand pressures, conserve external reserves, curb capital flight and ensure market transparency. RDAS was relied upon to enhance professionalism in the foreign exchange market, as it has the potential to curtail outrageous high bid rates. Other complementary measures adopted for foreign exchange management were the utilisation of funds in non-oil domiciliary accounts for only eligible transactions, while ordinary domiciliary accounts holders had easy access to their funds. Oil domiciliary accounts and oil service companies were allowed to continue to sell their foreign currencies to any bank, including the CBN to offset their expenses. Purchase of Business Travel Allowance (BTA) and Personal Travel Allowance (PTA) were subject to a maximum of $2,500 per quarter and $2,000 biannually to applicants from 12 years and above, respectively. BTA and PTA to citizens of ECOWAS member countries were issued as ECOWAS Travellers' cheques.

Under the RDAS, the adoption of non-accommodating monetary policy stance, stringent fiscal discipline, buoyancy of external reserves level which increased foreign exchange market confidence, increased surveillance over the activities of authorised dealers and occasional intervention through special auction sales significantly moderated foreign exchange demand pressures. Consequently, exchange rate premium between the official and BDC rates declined from 18.2 per cent in 2001 to 13.5 per cent in 2002. It was recorded at 9.8, 5.5 and 8.0 per cent in 2003, 2004 and 2005, respectively. Thus, the RDAS achieved relative exchange rate stability.

5.5 The Wholesale Dutch Auction System (WDAS)

The introduction of the Wholesale Dutch Auction system (WDAS) was aimed at consolidating on the gains of the RDAS and further liberalisation of the foreign exchange market. Given favourable macroeconomic conditions in 2005, particularly a healthy external reserves level, WDAS became operational in February 20, 2006. Under the WDAS, authorised dealers were allowed to buy on their own accounts rather than on customers' behalf. They were also required to observe the 2-way quote system and to trade with WDAS funds at the interbank market. As usual the CBN remained an active participant.

Other complementary measures adopted to ensure the success of WDAS were the special intervention foreign exchange sales to DMBs, direct foreign exchange sales to licensed BDCs in April 2006 and further increase in BTA and PTA from $2,500 and $2,000 to $5,000 and $4,000 per quarter, respectively. The foreign exchange manual was also reviewed in the year to include all transactions that were liberalised. The CBN maintained a non-accommodating monetary policy stance and ensured effective surveillance over the activities of authorised dealers. The fiscal authority on the other hand pursued stringent fiscal measures to ensure macroeconomic stability. These policy measures were retained in 2007 and 2008. The naira continued its appreciation by 2.6, 8.7 and 5.8 per cent for 2006, 2007 and 2008, respectively.

At the beginning of 2009, there was a policy reversal and the re-introduction of the RDAS in foreign exchange management to reduce capital outflow and drawdown in reserves. This was complemented by the suspension of trading in the interbank segment of the foreign exchange market, the restriction of foreign exchange sales by oil companies and government agencies as well as the suspension of sales of foreign exchange to the BDCs. However, in April, 2009, only BDCs which met the CBN recapitalisation as Class "A" BDCs had access to purchase official foreign exchange from the CBN. These measures were short-lived in the first half of 2009, as another policy reversal took place in July, 2009. This included the re-introduction of the WDAS, the granting of permission to oil companies and government agencies to sell their foreign exchange to authorised dealers; the CBN, BDCs and any organisation.

In August 2009, the CBN commenced sales of foreign exchange to other BDCs as Class "B" BDCs, the difference being the amount of foreign exchange applicable to the two classes. While Class A was subject to a maximum purchase of $1 million, Class B was limited to $250,000. Consequently, there was substantial supply of foreign exchange to the market. However, the global economic downturn which led to the decline in commodity prices and poor foreign exchange earnings, exacerbated foreign exchange demand pressures and led to the depreciation of the naira by 20.1 per cent.

Under the WDAS in 2010, renewed demand pressures occasioned by the global economic crisis and abuse of official foreign exchange funds, had a destabilising effect on the foreign exchange market, prompting the phasing out of the Class A BDCs in November 2010. The Class A BDCs could however convert to Class B BDCs, as long as they met the stipulated licensing requirements. At end-2010, the average naira exchange rate depreciated by 0.9 per cent as against the level in 2009.

SECTION SIX

Macroeconomic Implications of Exchange Rate Management

There are a number of macroeconomic consequences and implications of exchange rate management. A review of the links between exchange rate, interest rate and inflation would help to establish the consequences. The exchange rate is a price and its level affects the price at which imports are bought with direct impact on domestic prices. The interest rate is the price of credit/ money and its level could affect the demand for credit and foreign exchange. Excess liquidity in the economy fuels the demand for foreign exchange and aggregate demand generally, putting pressure on inflation. The sustained rise in domestic prices on its part results in the misalignment of the exchange rate. When the interest rate is adjusted upward in order to control inflation, it reduces demand pressures in the foreign exchange market but where import demand is somewhat inelastic, significant drop in imports may not materialise. This is because the additional cost can easily be transferred to the final consumers.

The intricate links between inflation and interest rate on the one hand; inflation and exchange rate on the other, as well as implication for the competitiveness of the external sector of the economy, makes it imperative for central banks in developing and emerging market economies to pursue a policy of exchange rate stability. This is in recognition of the fact that it may not be possible to control exchange rate movements and interest rates at the same time. Sound and prudent macroeconomic policy is required for the attainment of a realistic and sustainable exchange rate in the medium-term, irrespective of exchange rate regime in place.

In theory, the exchange rate, when solely determined through the interplay of market forces of demand and supply, is expected to be self-adjusting. It attains market clearing equilibrium without the need for official intervention by the central bank. Under the circumstance, the central bank retains monetary policy independence. In addition, external reserves are protected from depletion as the system can adjust without the use of external reserves. This is because the burden of adjustment is on the exchange rate.

The management of the exchange rate, although necessary to stem volatility, could put pressure on external reserves as the central bank deploys part of the reserves to fund the foreign exchange market and stabilise the exchange rate. The CBN has approached the management of the exchange rate with great caution as a result of the many challenges. The drive to attain an appropriate exchange rate that promotes external balance and competitiveness has been balanced with the need to avoid volatility in the exchange rate.

The CBN currently applies a managed floating system in realisation that a floating exchange rate could compromise macroeconomic stability and make inflation difficult to control, while a fixed exchange rate would require massive reserves deployment to defend the value of naira. This system does not commit the CBN to the attainment of a particular level of the exchange rate, although a fluctuation band is prescribed. A major challenge of exchange rate management in Nigeria relates to the ability of the CBN to achieve an appropriate exchange rate that would help in the attainment of stable inflation and competitiveness of the external sector, in an environment of fiscal expansion and excessive demand for foreign exchange.

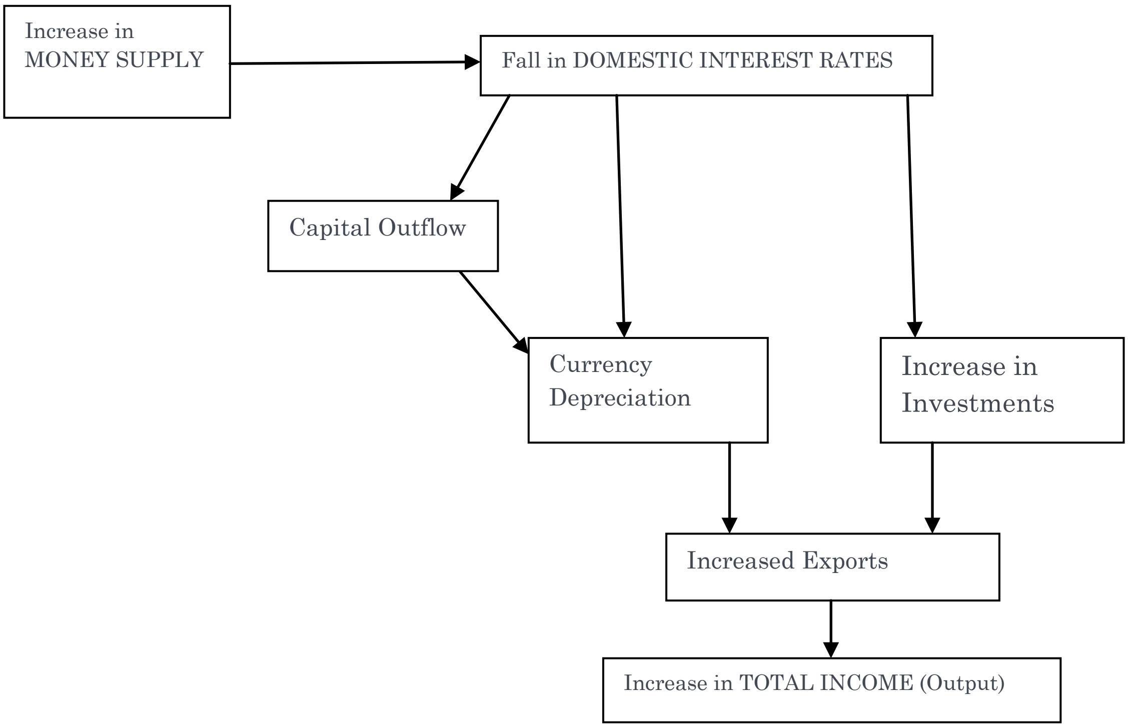
6.1 The Exchange Rate Channel of Monetary Policy

The exchange rate is one of the channels through which monetary policy decisions are transmitted to the economy in general, and the price level in particular. Other channels of monetary policy transmission include the interest rate channel, credit channel, and asset prices.

The exchange rate is the price of one currency in terms of another. It represents the price of domestic currency in terms of the foreign (trading partner) currency, or vice versa. It, in effect, reflects relative prices of domestic assets in terms of foreign assets. As such, when the relative prices of domestic and foreign assets are changed, this effect is transmitted to the economy through the exchange rate channel. The mechanism can work through an increase in the supply of money which causes a fall in domestic interest rates. A fall in domestic interest rates implies a fall in the prices of domestic assets relative to foreign assets, resulting in the depreciation of the domestic currency, making the prices of exports or domestically-produced goods cheaper, relative to imports. This process induces expenditure-switching in favour of exports and domestic import substitutes, ultimately leading to increase in net exports and income or gross domestic output.

The exchange rate channel works through the medium of net exports to impact on total output or income. Also, a fall in domestic interest rates due to expansion in money supply implies that the returns on financial assets in the domestic economy is lower relative to foreign investments. This induces the outflow of capital from the domestic economy to take advantage of the higher interest rates elsewhere in the international economy, thereby putting demand pressure on the foreign exchange market. The demand pressure for foreign currency would lead to a depreciation of the domestic currency, making domestic goods and services cheaper relative to imports. These processes are shown in the diagram below:

Figure 1: The Exchange Rate Channel[1]



On the other hand, an increase in domestic interest rates following a tightening of monetary policy generates the opposite effect. Such an increase in rates would lead to increased inflow of capital into the domestic economy to take advantage of the relatively higher returns to financial assets, leading to an appreciation of the domestic currency. The increased interest rates would lead to a reduction in investments as it becomes more expensive to borrow. The reduced investments coupled with an appreciated currency leads to a drop in net exports and total income.

6.2 Exchange Rate and Management of External Reserves in Nigeria

External reserves is a major national asset and a crucial tool for monetary and exchange rate policy management. They represent the official public sector foreign assets that are readily available to, and controlled by, the monetary

[1] This channel was abstracted from the price channel in an import-dependent economy

authorities for direct financing of payment imbalances, and for directly regulating the magnitude of such imbalances through interventions in the foreign exchange markets to affect the currency exchange rate and/or for other purposes (IMF, 2011). Thus, one of the reasons for holding or maintaining external reserves is to enable the central bank to intervene in the foreign exchange market to maintain stability in the exchange rate, achieve orderly absorption of international money and capital flows, and sustain confidence in the currency.

In doing this, the Bank attempts to control the money supply, as well as achieve a balance between demand for and supply of foreign exchange through intervention (i.e. offering to buy or sell foreign currency to banks) in the foreign exchange market. For instance, when CBN sells foreign exchange to commercial banks, the level of reserves declines by the amount of the sale, as it has to draw on the reserves to consummate the sale. At the same time, the domestic money supply (in naira) also declines by the naira equivalent of the sale as the banks have to pay for the transaction drawing on their balances at the central bank. Conversely, when the CBN purchases foreign exchange from the banks, her level of reserves increases, and by crediting the accounts of the banks with the naira equivalent of the purchase the domestic money supply increases.

In reality, it is actually the CBN's portion of the external reserves that is used for the foreign exchange market interventions. Nigeria's external reserves comprise of three components namely, the federation, the federal government, and the Central Bank of Nigeria portions. The Federation component is the sterilised or unmonetised fund that is held in the excess crude and Petroleum Product Tax (PPT)/Royalty accounts at the CBN, which belongs to the three tiers of government--the Federal, State and Local governments. This portion has not yet been monetised (or converted into the domestic currency) for sharing by the federating units. The Federal Government portion consists of funds belonging to some government agencies such as the NNPC, PHCN, Ministry of Defence, etc. The CBN portion consists of funds that have been monetised and shared.

The monetisation becomes necessary since the CBN receives foreign exchange inflows or receipts from crude oil sales and other oil revenues on behalf of the governments of the Federation. For the governments to have access to their funds, such foreign currency proceeds are purchased by the CBN and the Naira equivalent credited to the Federation Account for sharing among the federating units in accordance with the existing revenue sharing formula. Thus, the monetised foreign exchange belongs to the CBN from which it conducts monetary policy to defend the value of the Naira, including intervening in the foreign exchange market.

6.3 Challenges of Exchange Rates Management in Nigeria

During the evolution of the foreign exchange market, the Interbank Foreign Exchange Market (IFEM) was designed as a two-way quote system where the CBN would sell and buy foreign exchange. In practice, the CBN has been the major seller with little foreign exchange to buy from the market (Obaseki, 2001). This in part stemmed from the mono-cultural nature of the Nigerian economy, with oil as the major export and source of foreign exchange receipts for the government. Oil receipts improve accretion to foreign reserves, which is partly used by the CBN to fund the foreign exchange market.

In the evolution of foreign exchange management in Nigeria, the transitional period, 1986 -2006, which was characterised by the presence of official and parallel exchange rates under a guided deregulation scheme, resulted in sharp practices by market operators in the form of inflated demand and round tripping. As such, foreign exchange obtained from the official window at concessionary rates was sold at the parallel and other markets at a premium, thereby undermining the integrity and efficiency of the market. Even under the current fully liberalised system of the WDAS, the system is still prone to speculative attacks during periods of excess liquidity in the banking system. The challenge is, therefore, to ensure the efficient management of banking system liquidity so that it does not become a source of speculative pressure on the exchange rate.

SECTION SEVEN

Conclusions

Exchange rate management is an important tool of macroeconomic policy. In conjunction with monetary policy, it is applied to ensure that the exchange rate is consistent with external balance and the objective of price stability of the monetary authority. Exchange rate management entails balancing the stability of the exchange rate with reasonable degree of flexibility that guarantees the competitiveness of the domestic economy. This is with due regard to the need for adequate external reserves that serves as buffer for addressing unforeseen volatility in the foreign exchange market and misalignment of the exchange rate.
Exchange rate management, especially in an import-dependent economy with capital mobility, may not be completely disentangled from monetary policy is one part of the instruments for ensuring that monetary policy attains its objective of price stability. In most externally dependent economies such as Nigeria, exchange rate management is critical to the monetary policy process because of its strong link with external reserves, domestic interest rates, asset prices and inflation.

Nigeria has operated various systems of exchange rate management over the years. Developments in market conditions and the need to prevent the misalignment of the exchange rate, by moving it close to the level that would reduce excessive pressure on the foreign exchange market have played major roles in the design and implementation of exchange rate policy in Nigeria. The fixed exchange rate system, and its variants, was adopted with trade and exchange controls before September 1986, when the domestic currency was floated in the Second-tier Foreign Exchange Market (SFEM). Trade and exchange controls were replaced with a liberalised system for the determination of the exchange rate of the naira, largely dependent on the interplay of market forces.
The current practice of exchange rate management is based on a managed float mechanism, which seeks to achieve exchange rate stability within upper and lower fluctuation margins of +/- 3.00 per cent. The CBN does not dictate the rate at which foreign exchange is traded in the WDAS. It only intervenes as appropriate through the supply of foreign exchange in order to influence exchange rate movement towards the fluctuation band. This has ensured that while the flexible exchange rate system is sustained, the exchange rate is prevented from excessive volatility.

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