A Study of Volatility of Exchange Rate Fluctuations on the Nigerian Economic Growth

Obianuju Edith Ndu-Okereke (Ph.D)
Department of Banking & Finance
University of Nigeria Nsukka
Nigeria
fulyane@gmail.com

Rev. Timothy Nwachukwu (Ph.D)
Department of Accountancy
Imo State Polytechnic Umuagwo
Ohaji, Imo State
blocker199@gmail.com

Abstract
The study in question is the effect of exchange rate fluctuations on the Nigerian economy. The research was conducted with secondary data from the Central Bank of Nigeria (CBN) statistical bulletin. Secondary data included Gross Domestic Product (GDP) and Demand for Foreign Exchange (DFE). In examining the impact of exchange rate volatility on economic growth macroeconomic the study adopted the ordinary regression model just like Bakare (2011) and Ofurum and Tobira (2011). The justification for the use of these models was based on the volatility of exchange rate in impacting on macro-economic variables using a 14- year period. Employing the use of vector auto regression (VARs) models on the time series data, the result reveal that supply of foreign exchange has a positive and significant relationship with output level of Gross Domestic Product while the demand for foreign exchange has a negative relationship with gross demand product. The hypotheses stated will be tested using the two-stage least square (2LS). The statistical properties of the 2LS are contained in the popular Gauss- Markov theorem which sees the least squares estimators as unbiased linear estimator, having minimum variance. The model examines the relationship between a dependent variable and two or more regressor (independent variables). This suit the research since the intention of the researchers was to examine the impact of exchanges rate on these macro-economic variables on a variable by variable basis. The Granger Causality was also employed to test the causal relationship between exchange rate and major macro-economic variables. The research findings includes exchange rate fluctuations has negative and significant impact on Nigeria's gross domestic product (coefficient of EXR = -4.39, t-value = 2.130). This indicates that a one percent decrease in economic growth in Nigeria is due to 4.39 percent decrease in exchange rate fluctuations. The probability value of 0.0452 < 0.05 confirms the significance of the result. The coefficient of determination which measures the goodness fit of the model as revealed by R-square (R^2) indicates that 84% of the variations observed in the dependent variable were explained by variations in the dependent variable. This is quite high could be attributed to the inclusion of control variables such export rate (EXPR) and import rate (IMPR). The test of goodness of fit as indicated by R^2 was properly adjusted by the Adjusted R-Square to 73.1%. Most importantly the dependent economy like Nigeria faces the problem of foreign exchange rate volatility. Nigeria's over dependence in the Oil and Gas sector of the economy has affected the major macro economic variables and adverse foreign exchange rate regimes have affected the Nigeria economy over the years. Therefore, this study recommends an aggressive expansion

of the Nigerian economy especially investment in the agricultural and manufacturing sectors of the Nigerian economy. This obviously will lead to less dependent on oil revenue which is determined by fluctuations in exchange rate prices.

1.0 Introduction

The history of exchange rate systems in Nigeria date back to early 1960s (Bakare, 2011), according to Bakare (2011), before the establishment of the Central Bank of Nigeria in 1958 and the enactment of the Exchange Control Act of 1962, foreign exchange was earned by the private sector and held in balances abroad by commercial banks that acted as agents for local exporters. The oil boom experienced in the 1970s made it necessary to manage foreign exchange rate in order to avoid shortage. However, shortages in the late 1970s and the early 1980s compelled the government to introduce some ad hoc measures to control excessive demand for foreign exchange. However, it was not until 1982 that a comprehensive exchange controls were applied. Then a fixed exchange rate system was in practice. The increasing demand for foreign exchange and the inability of the exchange control system to evolve an appropriate mechanism for foreign exchange allocation in consonance with the goal of internal balance made it to be discarded in September 26, 1986 while a new mechanism was evolved under the Structural Adjustment Programmes (SAP). The main objectives of exchange rate policy under the Structural Adjustment Programmes were to preserve the value of the domestic currency, maintain a favourable external balance and the overall goal of macroeconomic stability and to determine a realistic exchange rate for the Naira (Bakare, 2011).

Macroeconomic performances under different exchange rate regimes have been a subject of continuing research and controversy. Ghosh, et. al., (1996) using a three-way classification analyzed the link between exchange rate regimes, inflation and growth. The result indicates that pegged exchange rates are associated with lower inflation and less variability. They therefore argued that this was due to a discipline effect the political costs of failure of defending the peg induce disciplined monetary and fiscal policy and a confidence effect to the extent that the peg is credible, there is a stronger readiness to hold domestic currency, which reduces the inflationary consequences of a given expansion in money supply. The study also found that pegged rates are associated with higher investment but correlated with slower productivity growth. On net, output growth is slightly lower under pegged exchange rates compared to floating and intermediate regimes (Ghosh, et. al., 1996)

A study by IMF that extends the period of analysis to mid-1990s reports similar findings (IMF 1997). However, in an analysis of experience with increasing capital market integration and the replacement of fixed exchange rates in the 1990s, Caramaza and Aziz (1998) found that the differences in inflation and output growth between fixed and flexible regimes are no longer significant.

More recent studies both in Nigeria and abroad abound with different perspectives on the impact of exchange rate on macro-economic fundamental of a country. Yougbare (2006), investigating the effect of exchange rate regimes on growth volatility found that fixity in nominal exchange rates increases the volatility of real GDP growth. Moreover, it amplifies the adverse impact of terms of trade instability on growth volatility whereas the negative impact of exchange rate fixity on growth stability is attenuated by a higher financial development. These results also suggest that as countries develop, they would gain more in terms of reduced growth volatility by adopting more flexible exchange rate arrangements.

Bacchetta and Wincoop (2009) posit that it is well known from anecdotal, survey and econometric evidence that the relationship between the exchange rate and macro fundamentals is highly unstable. This could be explained when structural parameters are known and very volatile, neither of which seems plausible hence they argue that large and frequent variations in the relationship between the exchange rate and macro fundamentals naturally develop when structural parameters in the economy are unknown and change very slowly.

Junye-Li and Weiwei-Yin (2008)**,** investigated the relationship between short-run exchange rate dynamics and macroeconomic fundamentals by adopting a no-arbitrage international macro-finance approach, under which the macroeconomic fundamentals enter into the exchange rate dynamics in a nonlinear form and having been amplified by the time-varying market prices of risks, the macroeconomic innovations help capture large volatility of exchange rate changes. The foreign exchange risk premium can largely alleviate the forward premium anomaly.

Mahmood, Ehsanullah, and Ahmed (2011) posit that the role of exchange rate in affecting the macroeconomic performance of any country is of leading nature. Hence, their study was conducted to investigate whether uncertainty or fluctuations in exchange rate affect the macroeconomic variables in Pakistan. If so, what is the direction of this effect will be? Although, there are large numbers of macroeconomic variables, but out of these only four variables i.e, GDP, FDI, growth rate and trade openness was included in this study. Finding of this study confirmed the impact of exchange rate volatility on macro economic variables in Pakistan. It was also concluded that exchange rate volatility positively affects GDP, Growth rate and trade openness and negatively affects the FDI.

A cursory look at literature on exchange rate and macro-economic fundamentals indicate that most studies are on exchange rate volatility and its impact on these macro-economic indices (Choo, Lee and Ung, 2011; Canales-Kriljenko and Habermeier, 2004). Where the study is not on volatility of exchange rate, it involves uncertainty in foreign exchange market on the domestic output of nations (see, Dunne, Hau and Moore, 2007), macro-economic and institutional factors (Claessens, Klingebiel, and Schmukler, 2003) impact on stock market indices (Gan, Lee, Yong and Zhang, 2006), development of government bond markets (Claessens, Klingebiel, and Schmukler, 2003), on alternative wage-setting regimes (Kouretas, 1991), exchange rate and inflation (Ghosh, Gulde, Ostry, and Wolf, 1996; Imimole and Enoma, 2011), exchange rate volatility, stock prices and lending habits of banks (Mbutor, 2010; Subair and Salihu, 2010). This study is an attempt to examine the impact of foreign exchange rate on major macro-economic variables from a holistic point, which is combining the macro-economic variables in the study. It is against this background that this study will investigate the impact of foreign exchange rates on major macro-economic variables in Nigeria.

1.1 Statement of problem

Foreign exchange volatility affects the performance of macroeconomic indicators positively and negatively. Most import dependent economy like Nigeria faces the problem of foreign exchange rate volatility. Nigeria's over dependence in the Oil and Gas sector of the economy has affected the major macro economic variables and adverse foreign exchange rate regimes have affected the Nigeria economy over the years. Obaseki (2007) argues that the Nigerian Economy has experienced a lot of setback over the years due to its over dependence on oil and gas exports which provide more than 95% of all foreign exchange earnings and most of

the Government revenue. Both have been scourged by the tumbling price of crude oil, compounded by the volatility of the country's foreign exchange rate regimes

Nigeria major foreign earning is from oil; hence, volatility of crude oil prices in the world market has made the Nigerian economy highly susceptible to the ever changing exchange rates thus affecting the prices of goods and services in the Nigerian economy. Nzekwe (2006) states that Nigeria's failure to diversify its economy which would have helped cushion the effect of the constant changes in oil prices stems in part from weaknesses in the nation's small and insular private sector.

1.2 Research Objective

The objective of the research is to examine the impact of exchange rate fluctuations on the growth in Nigeria. This is consistent with the problem stated above. Given the position by Obaseki (2007) on overdependence of Nigeria on oil revenue receipts then the research would require sufficient secondary data and the appropriate methodology to measure proxies representing foreign exchange fluctuations and the Nigerian economy. The research question to be addressed at the end of the research being to find out the extent exchange rate fluctuations positively and significantly impact on the growth of the Nigerian economy.

1.3 Research Hypothesis

Exchange rate fluctuations do not have positive and significant impact on economic growth in Nigerian.

1.4 Scope of study

This study will cover the period 1987 to 2011. Before the introduction of the Structural Adjustment Programmes (SAPs) in 1986, the country operated a fixed exchange rate regime based on trade and exchange controls, which was anchored through import license controls regime. However, Nigeria adopted the freely floating exchange rate regime in 1986 and between 1986 and 1995; different exchange rate management regimes were introduced by the various governments in power at the time, including a dual exchange rate regime in 1988, the Inter-Bank Foreign Exchange Market (IFEM) in 1989 and the reintroduction of a dual exchange rate system in 1995. Over this period, the demand for foreign exchange outstripped supply progressively. The demand for this foreign exchange is expected to have an effect on all macro-economic fundamental in Nigeria; hence this study will examine the impact of foreign exchange rate on major macroeconomic determinants after the introduction of SAP in 1987 to 2011 irrespective of the different exchange rate regimes in Nigeria in that period.

1.5 Significance of the study

This study will be most significant to the following groups. These groups are:

1. **Monetary Authorities:**

This study will be of immense benefit to monetary authorities by assisting them to formulate policies that will ensure the proper management of the Nigerian Foreign exchange market.

2. **Academia**

This research is intended to contribute to literature in no small measure especially in enriching literature in this area of finance for a developing economy like Nigeria.

3. Interested Public

The result of this study will also be of immersed benefit to interested members of the public. The research will enable them to understand the intricacies of foreign exchange market.

2.0 Review of Literature

By definition, the foreign exchange market is organized as an over-the-counter market in which several dealers (banks, companies and government) stand ready to buy and sell deposits denominated in foreign currencies (Mishkin, 1997). In this era of globalization, the interconnectivity among nations has made it possible for different countries to trade its foreign currencies. Thus, Dornbusch and Giovannini (1990) was of the opinion that the worldwide financial development offers more opportunities to countries but it also comes with constraints on all economic decisions such as exchange rate, monetary or fiscal policies. Financial conditions affect the impact of nominal exchange rate fluctuations on growth stability mainly through balance sheets effects and impacts on foreign currency-denominated debt in developing and emerging countries. The net impact of exchange rate fluctuations will depend on the relative importance of competitiveness changes and costs from balance sheets effects. Financial markets development affects economic performances through efficiency in the allocation of productive resources and adjustment to shocks and may result in a more stable or unstable growth (Dornbusch and Giovannini, 1990).

The importance of exchange rate cannot be over emphasized, hence, Evan and Lyons (2005) was of the view that exchange rate is an important economic indicator that has a strategic role in an economy and say that exchange rate movements widely influence various aspects of economy, including inflation, import-export performance which in turn affects the output of economy. He concludes that in the market, there are two main forces that interact with each other, namely supply and demand and they form an equilibrium which is reflected in the price and quantity levels where supply and demand curves meet.

Different countries use several exchange rate regimes to protect their national currencies from the variation in its national currency. The question of which exchange rate regime that a small open economy should choose has no definite answer, since such a choice depends on the objectives and focus of monetary authorities, as well as on assumptions about the structural characteristics of the economy. Structural characteristics of the economy in this sense imply the degree of openness, of capital mobility, of wage indexation, and of the level of economic growth and development.

Nations monetary policy is usually aimed at stabilizing exchange rate volatility. Such monetary policy formulation and implementation influence macroeconomic variables (hence, macroeconomic stability) in any economy be it developed or underdeveloped. The critical distinction often is the degree to which movements in the exchange rate pass through to affect domestic macroeconomic variables, most especially, consumer prices, output (as measured by the gross domestic product GDP) and private consumption. Hence the choice of an exchange rate regime is linked, to some extent, to the achievement of specific targets set by the monetary authorities. Therefore as argued by Devereux (2001) that the best monetary policy rule in an open economy is one which stabilizes non-traded goods price inflation and that policy of strict inflation targeting is much more desirable in an economy with limited pass-through. If the monetary authorities are concerned with consumer prices inflation then the flexible exchange rate regime brings some costs as well as benefits. Moreover, the same logic implies that a policy of strict inflation targeting is quite undesirable in an open

economy, since it effectively amounts to a requirement of fixing the exchange rate. It stabilizes inflation at the expense of a lot of output instability.

Therefore as opined by Obaseki and Bello (1996) exchange rate policy involves three elements, the policy environment the mechanism for exchange rate determination (exchange rate system), the policy instruments designed and course of exchange rate movements hence the policy environment sets the preconditions or minimum requirements for effective exchange rate management and stability, and ultimately determines the optimal exchange rate policy to pursue as the exchange rate mechanism depicts the system of exchange rate administration while the policies applied reflect the objective of moving the exchange rate through a defined path.
The history of exchange rate systems in Nigeria dated back to early 1960s. Before the establishment of the Central Bank of Nigeria in 1958 and the enactment of the Exchange Control Act of 1962, foreign exchange was earned by private sector and held in balances abroad by commercial banks that acted as agents for local exporters. The oil boom experienced in the 1970s made it necessary to manage foreign exchange rate in order to avoid shortage. However, shortages in the late 1970s and the early 1980"s compelled the government to introduce some ad hoc measures to control excessive demand for foreign exchange. However, it was not until 1982 that a comprehensive exchange controls were applied. Then a fixed exchange rate system was in practice. The increasing demand for foreign exchange and the inability of the exchange control system to evolve an appropriate mechanism for foreign exchange allocation in consonance with the goal of internal balance made it to be discarded in September 26, 1986 while a new mechanism was evolved under the Structural Adjustment Programmes (SAP). The main objectives of exchange rate policy under the Structural Adjustment Programmes were to preserve the value of the domestic currency, maintain a favourable external balance and the overall goal of macroeconomic stability and to determine a realistic exchange rate for the Naira.

In an attempt to achieve this, a transitory dual exchange rate system (First and Second –Tier – SFEM) was adopted in September, 1986, but metamorphosed into the Foreign Exchange Market (FEM) in 1987. Bureau de change was introduced in 1989 with a view to enlarging the scope of FEM. In 1994, there was a policy reversal, occasioned by the non-relenting pressure on the foreign exchange market. Further reforms such as the formal pegging of the Naira exchange rate, the centralization of foreign exchange in the CBN, the restriction of Bureau de change to buy foreign exchange as an agent of CBN etc. were all introduced in the foreign Exchange Market in 1994 as a result of the volatility in exchange rate. Still, there was another policy reversal in 1995 to that of "guided deregulation". This necessitated the institution of the Autonomous Foreign Exchange Market (AFEM) which later metamorphosed into a daily; two ways quote Inter-Bank Foreign Exchange Market (IFEM) in 1999. The Dutch Auction System was reintroduced in 2002 as a result of the intensification of the demand pressure in the foreign exchange market and the persistence in the depletion of the country's external reverses. Finally, the wholesales Dutch Auction System (W-DAS) was introduced in February 20, 2006. The introduction of the WDAS was also to deepen the foreign exchange market in order to evolve a realistic exchange rate of the Naira.

The concern with exchange rate management policy in Nigeria can be traced back to 1960 when the country became politically independent, even though the Central Bank of Nigeria and the Federal Ministry of Finance had come into being two years earlier (Ogiogio, 1996). Management of exchange rate can be traced to two divisions/phases; pre-Structural

Adjustment era of 1960-1985 and post-Structural Adjustment era 1986 – till date. The above binary classifications occasioned a closely historical sequence of about five phases, namely:

Phase I: Fixed parity between the Nigerian pound and the British pound (1960-1967)
There was a fixed parity of a one-to-one relationship between the Nigerian pound (N£) and the British pound sterling (B£) until the British pound was devalued in 1967.

Phase II: Fixed parity between the Nigerian pound and the American dollar (1967-1974)
This time, there was a fixed parity with the USD. As a result of the international financial crisis of the early 1970s, which constrained the US President Nixon to devalue the dollar, Nigeria then abandoned the US dollar and re-kept its currency at par with the British pound. During this stage of Nigeria's exchange rate policy it became apparent that there were drawbacks in pegging the naira to a single currency which led to its abandonment.

Phase III: Independent exchange rate policy (1974-1976);
Neglecting the peg policy of naira to a single currency of US dollar in 1974-1976, CBN opted to an independent exchange rate management policy that pegged the naira to either the US dollar or British pound sterling, whichever currency was stronger in the foreign exchange market (see Ogiogio, 1996).

Phase IV: Pegging the naira to an import-weighted basket of currencies (1976-1985)
Here, import-weighted basket experiment was carried out between 1976 and 1985. Due to oil boom of mid '70s, naira was deliberately depreciated, and, so as to ensure stability and viability of the naira, it was pegged to a basket of currencies which comprises the seven currencies of Nigeria's major trading partners; the American dollar (USD), the British pound sterling (GBP), the German mark, the French franc (CFA), the Dutch guilder, the Swiss franc (CHF), and the Japanese yen (JPY). The 1981-1985 global economic crises led to unavailability of exchange rate while naira was grossly over-valued against the US dollar and gave FGN two options; one is to continue with the overvalued naira as a result of fixed exchange rate while the second alternative is to adopt the IMF-World Bank imported SAP which enshrined market forces (free hands of DD and SS). The Federal Government of Nigeria chose the second option and introduced the Second-tier Foreign Exchange Market (SFEM) which later transformed to foreign exchange market (FEM) in September 1986 during IBB regime.

Phase V: Market determined exchange rate policy (1986 – Date)
The Nigerian fifth exchange rate management commenced during post-SAP era up to date. The first market, SFEM was established with immediate effect in September 26, 1986. The Nigerian forex market was liberalized with the introduction of an Autonomous Foreign Exchange Market (AFEM) and the Inter-bank Foreign Exchange Market (IFEM) in 1995 and 1999 respectively. The AFEM metamorphosed into a daily, two-way quote IFEM, October 25, 1999. From 16 July 2002, CBN has replaced IFEM with the Dutch Auction System (DAS) which has been in operation till date.

Fixed Exchange Rate Policy
Obstfeld (1994), argued that the opposite, under fixed exchange rate regimes, monetary policy will be diverted, partially or totally, to pursue external balance. And, in the presence of high capital mobility and perfect substitutability between domestic and foreign assets monetary policy becomes entirely devoted to the defense of the exchange rate parity. Indeed, when the nominal exchange rate is credibly fixed, interest rate parity predicts the equality of

domestic and foreign interest rates, adjusted for risk premium and transaction costs. Any additional money creation will push domestic interest rates downwards and trigger an equivalent amount of capital outflow. Therefore, in a small country, monetary policy becomes inefficient in stabilizing the economy when the exchange rate is pegged and capital is highly mobile.

Eichengreen (1998) was of the view that fixing the exchange rate implies three important dimensions, firstly, that the domestic country imports monetary disturbances occurring in the base country unless devaluation is carried out. Secondly fixing exchange rate also constrains monetary policy that is subordinated to the exchange rate policy leaving a leeway that depends on the amount of foreign exchange reserves available to monetary authorities. The room for fiscal policy can substantially diminish. Thirdly, the trade-off between the lender of last resort function and the defiance of the exchange rate parity sometimes makes monetary authorities interventions inefficient in the presence of bank runs Altogether, these points may make the defense of pegged rates undesirable to some countries at some periods of time. And pegged exchange rates would likely raise growth volatility in an insufficiently flexible economy because the loss of automatic adjustment and the decrease in monetary policy autonomy when capital markets are highly integrated are not sufficiently compensated for (Goldstein, 2002).

Most of the times, monetary policy target through exchange rate policies are related to internal and external imbalances, therefore, a correlation between the choice of the exchange rate regime and real output, prices, balance of payments stabilization, and the sources of shocks hitting the economy, is expected. When the goal is balance of payments stabilization, it is preferable to adopt a flexible exchange rate system to overturn any current or capital account dis-equilibrium. In this sense, a fixed exchange rate imposes a degree of financial discipline by discouraging recourse to inflationary finance. In contrast to this reasoning, proponents of exchange rate flexibility argue that the announcement of a fixed exchange rate would only cause financial crises followed by continuous devaluation. Finally, when the objective is to stabilize real output, the role of exchange rate regime is mainly viewed as a shock absorber. That is, the choice of the exchange rate regime is used to spread these effects. Therefore, this choice will depend on the nature of the shocks and the structural characteristics of the economy (Noor, Nugroho and Yanfitri, 2010).

2.2.7 The Concept of Exchange Rate Volatility

Mundell (1968) has brilliantly set out the implications of financial flows and financial markets integration. He demonstrated that, with increasing capital mobility, monetary policy is constrained and sometimes inefficient under fixed exchange rates. The stock of money, which is endogenous, adjusts to the economy. This implies an increased sensitivity of the economy and growth to disturbances.

Eichengreen and Hausmann (1999) and Kamil (2006) posit that external exposure may also be explained by if developing countries are unable to borrow from foreign financial markets in their own currency, no matter the term of the debt. All long run borrowings (domestic or foreign) must be made in foreign currency. Therefore, external exposure and exchange rate regimes are unconnected. If the principal causes of external exposure are other than the external borrowing in a foreign currency then, a more flexible exchange rate will introduce some exchange rate risk leading economic agents to hedge their foreign currency-positions. This lowers the vulnerability of domestic firms and banks to exchange rate changes and world financial markets disturbances thereby leading to a lower instability in growth rates.

Asides from risks related to external exposure, fixed exchange rate regimes often come under speculative attacks.

Levy Yeyati and Sturzenegger (2002) reached the conclusion that exchange rate flexibility reduces growth volatility in developing countries whereas fixed and intermediate regimes perform better than floats in industrialized countries. Bergwal (2002) simulated the Swedish GDP stability over 1974-1994 with different hypotheses about the exchange rate regime. He concluded that the GDP would have been more slightly stable under flexible exchange rates than under the actual adjustable peg which in turn would have clearly dominated an irrevocably pegged exchange rate.

Collard and Dellas (2002) also find that country-specific supply shocks are negatively transmitted abroad under the currency union which further amplifies their contribution to output volatility. Evidence that tends to corroborate the impact of exchange rate regime on the international transmission of disturbances and thereby on growth stability is found for country specific supply shocks and monetary disturbances. What emerges from this brief review is that empirical evidence on growth volatility impacts of exchange rate regimes remains somewhat mixed even though nominal exchange rate flexibility is likely to contribute to higher growth stability.

Casas (1975) assumed that it became clear in the mid - seventies that countries could no longer abstract from the effects that exchange rate movements have on prices. The implications of such considerations immediately led to the recognition that such exchange rate movements cause a different impact on the decisions of employers and of the workers. The implications of the assumption that a divergence can exist in the labour market between the producer's real wage and the consumer's real wage were far reaching for assessing the effectiveness of fiscal and monetary policy in a small open economy.

Kumar and Dhawan (1991) say the topic of exchange rate volatility impact on macroeconomic performance through macroeconomic variables has gained considerable importance in the research studies since 1973, when many developing countries shifted towards floating exchange rate from fixed exchange rate regime. Exchange rate liberalization and structural adjustment program introduced by many of the developing countries became the matter of global discussion.
The other standpoint states that financial vulnerability is due to the external borrowing by nations in foreign currency (see Eichengreen and Hausmann, 1999). In fact, none of both explanations taken individually is able to explain in a satisfactory way crises and the nature of actual capital flows. This is the conclusion reached by Eichengreen and Hausmann (1999) who examine the amounts and maturity of financial flows as well as many financial and exchange rates crises in developing countries.

Monetary policy refers to the combination of measures designed to regulate the value, supply and cost of money in an economy, to match with the level of economic activities. It can also be described as the act of controlling the direction and movement of monetary policy and credit facilities in pursuance of stable price and economic growth in an economy CBN (1992).

In modern economies, the central bank is the authority with the mandate of manipulating monetary policy; through monetary policy tools, to achieving desired macroeconomic objectives which includes; the achievement of price stability with respect to both domestic

and external prices. In the same vein uses inflation rate to track movement in the domestic price while exchange rate policy are used as tool in ensuring external stability thereby enhancing export performance in the economy according to Neaime (2008). In addition, exchange rate policy impacts on the outcome of stabilization measures and debt management strategies according to Busari and Olayiwola (1999) respectively in developing countries which includes Nigeria.

Emeka (2005) opined that the pursuit of price stability invariably implies the indirect pursuit of other objectives such as economic growth, which can only take place under condition of price stability and allocative efficiency of the financial markets, since inflation is generally considered as purely a monetary phenomenon, with significant cost to the economy. The primary goal of monetary policy to him is to ensure that money supply is at a level that is consistent with the growth rate will be ensured.

Literatures available in this area are of the view that the pursuant of price stability therefore encompasses all main areas in which the central bank can contribute towards stabilizing the macroeconomic environment of the country. Recent evidence is the one from the financial press in Nigeria as reported by Christopher et al, (2006) that investors generally believe that monetary policy and macroeconomic events have a large influence on the unpredictability of the stock price, which further implies that macroeconomic variables could exert shocks on share returns and thereafter influence inventors' investment decision. To buttress the above, Akinnifesi (1987) emphasized that there is a relationship between exchange rate and stock prices fluctuation. He found out that the impact of naira depreciating as a monetary policy tool goes a long way in increasing stock prices.

Masha (1999) opined that, in the latter 1980s as a result of structural adjustment program, the effects of wage increases created a cost-push effect on inflation which in the long run, was a structural feature of the economy coupled with the growth in money supply that translated these into durableness increases. In the literatures, the traditional approach to the study of inflation stresses the significance of the link between money supply and inflation.

Monetarists see inflation as always and everywhere a monetary phenomenon as examined by Masha (1999). Further Friedman (1956) argued that, inflation has a monetary character because it results from the rise in the quantity of money, through the change in prices may not show up at the same time as the rise in the quantity of money. The concept of inflation, which models money supply as an exogenous variable with causality running from money supply to prices, characterizes the works of Cagan (1956) and Neaime (2008), among others.

According to Fakiyesi (1996) in his study of inflation in Nigeria, he argued that, inflation depends on growth in broad money (m2), the rate of exchange (TRE) of the naira vis-a-vis the dollar ($) the growth of real income (GRI) or (Y); the level of rainfall (R) and the level of anticipated inflation which is based on the previous year's level of inflation.

Monetary transmission is a complex and interesting topic because there is not one, but many, channels through which monetary policy operates. The exhibit depicts schematically an eclectic view of monetary policy transmission, identifying the major channels that have been distinguished in the literature. The process begins with the transmission of open market operations to market interest rates, either through the reserves market or through the supply and demand for money more broadly. From there, transmission may proceed through any of several channels.

The interest rate channel is the primary mechanism at work in conventional macroeconomic models. The basic idea is straightforward: given some degree of price stickiness, an increase in nominal interest rates, for example, translates into an increase in the real rate of interest and the user cost of capital. These changes in turn lead to a postponement in consumption or a reduction in investment spending. This is precisely the mechanism embodied in conventional specifications of the "IS" curve—whether of the "Old Keynesian" variety, or the forward looking equations at the heart of the "New Keynesian" macro models developed by Rotemberg and Woodford (1997) and Clarida, Galí, and Gertler (1999), among others. But as Bernanke and Gertler (1995) have pointed out, the macroeconomic response to policy-induced interest rate changes is considerably larger than that implied by conventional estimates of the interest elasticities of consumption and investment. This observation suggests that mechanisms other than the narrow interest rate channel may also be at work in the transmission of monetary policy.

3.0. Methodology of research

A research design is a kind of blue print that guides the researcher in his or her investigation and analysis (Onwumere, 2009). It is a kind of format which the researcher employs in order to systematically apply the scientific method in the investigation of problems. The research design adopted in this research is the *ex-post facto* research design. This is the type of research involving events that have already taken place, data exists as no attempt is made to control or manipulate relevant independent variables apparently because these variables are not manipulatable. Also, as described by Kerlinger (1970), the *ex-post facto* research design also called causal comparative research is used when the researcher intends to determine cause-effect relationship between the independent and dependent variables with a view to establishing a causal link between them. Hence, the justification for the adoption of this research design hinges on the unmaniputability of data and the intention of the researcher to determine cause-effect relationship of the impact of exchange rate on macro-economic variables in Nigeria from 1987-2011.

The issue of data is at the very centre of research and also the nature of data for any study depends entirely on the objectives of the research and the type of research undertaken (Onwumere, 2005). Consistent with the above therefore and in line with researches conducted in this area of finance in Nigeria where most data utilized were obtained from the Central of Nigeria Statistical Bulletin for the relevant periods the nature and sources of data for this type of research will be secondary data. Hence, secondary data will be used in this research and are data already processed and collated.

3.1 Model specification

This study will adopt Ofurum and Torbira (2011) ordinary regression model in line the works of Bakare (2011), Accam (1997), Serven and Solimano (1992) and Akpan (2009) to examine the impact of exchange rate on macro-economic variables such as gross domestic product growth rate, balance of trade positions of Nigeria, consumer price index, foreign private investment in Nigeria. Ofurum and Tobira (2011) and Onoh J.O (2016) model is represented as;

GDP = a + a2DFE + a3 SFE + Ut ………………………………………. (i)

where GDP = Gross Domestic Product
DFE = Demand for Foreign Exchange
SFE = Supply of Foreign Exchange
a = Equation Constant

a2…a3	=	Coefficient of independent variables
ut	=	Error Term

However, modifying and rewriting Ofurum ans Tobira (2011) model in line with the objectives of this study, the following equations are used to represent the hypotheses of this study:
For hypothesis one which states that exchange rate in Nigeria does not have positive and significant impact on the enhancement of productivity of the Nigerian economy, it will be represented as;

GDPGR = $a + b_1ER + b_2EX + b_3IMP + \mu$…… (ii)

where;

GDPGR	=	Gross Domestic Product Growth Rate
ER	=	Exchange Rate
a	=	Constant of the Regression Function
b_1-b_3	=	Coefficient of the independent Variables
EX	=	Export Rate
IMP	=	Import Rate
μ	=	Error Term

A model according to Yomere and Aghonifoh (1999) is a simplified view of reality designed to enable the researcher describe the essence and inter-relationship within the system or phenomenon it depicts. The underlying assumptions for the modified Ofurum and Tobira (2011) model to be used in this study are:

i. It is a linear function of a random variable
ii. It is unbiased. Thus its average or expected value are equivalent to its true value
iii. It has minimum variance, i.e, it is an efficient estimator, given an unbiased estimator with the least variance (See Onwumere, 2009).

3.2 Description of Explanatory Variables

3.2.1 Dependent Variables

Gross Domestic Product Growth Rate (GDPGR)

Gross Domestic Product (GDP) is the total value of goods and services produced in a country over a specified period. It equals the total income of everyone in the economy, and the total expenditure on the economy's output of goods and services (Mankiw, 1994). GDP is a gauge of economic of economic performance because it measures something people care about their incomes. Similarly, an economy with a large output of goods and services can better satisfy the demands of households, firms and the government. In line with the works of Ofurum and Torbira, (2011), Farkas-Fekete and Judit (2005), Yougbare (2006), this research will adopt the gross domestic product growth rate as proxy for the productivity of the Nigerian economy.

GDPGR = (GDP2-GDP1)/GDP1*100…… (iii)

3.2.2 Independent Variable

Exchange Rate

The exchange rate is the rate at which a country's currency trades with the currency of other countries. Literature seems to suggest that keeping the real exchange rate at competitive levels and avoiding excessive volatility are important for growth though the statistical evidence is not overwhelming. But this fact, in and of itself, conveys an important message. A stable and competitive real exchange rate should be thought of as a facilitating condition for economic growth (Onwumere, 2009). Keeping it at competitive levels and avoiding excessive volatility facilitate efforts to capitalize on economic growth enhancing fundamentals: human capital, savings and investment, and the institutional capacity to assimilate and generate organizational and technological knowledge. Therefore, adopting works of Aguirrea and Calderon (2006) and Herve, Shen and Amed (2010), the annualized real exchange rate will be adopted as a measure of exchange rate.

3.2.3 Control Variables

Export Rate

An export of a good occurs when there is a change of ownership from a resident to a non-resident; this does not necessarily imply that the good in question physically crosses the frontier. Export of goods is a major source of foreign exchange to any nation. It determine the volume of foreign exchange available to that country hence a major determinant of exchange rate. In this study, total export ratio will be measure by Nigeria's total export divided gross domestic product by (Singh, 2002).

EX = Total Export/GDP…….. (iv)

Import Rate

An import of a good occurs when there is a change of ownership from a non-resident to a resident; this does not necessarily imply that the good in question physically crosses the frontier. Importation of goods and services is a major source of depletion of a country's foreign currencies hence has an impact on exchange rate. In this study, the total import ratio will be measured by Nigeria's Total import divided by gross domestic product (Singh, 2002).

IMP = Total Import/GDP……. (v)

3.3 Model Justification

As stated in chapter one of this study, most works in this area of finance examines the impact of exchange rate volatility on macro-economic variables. The justification for the use of these models was based on the volatility of exchange rate in impacting on macro-economic variables. For instance, Ofurum and Torbira, (2011) empirically examined the effect of the demand and supply of foreign exchange on the gross domestic product of the Nigerian economy over a fourteen (14) year-period (1995-2008). Employing the use of vector auto regression (VARs) models on the time series data, the result reveal that supply of foreign exchange has a positive and significant relationship with output level of Gross Domestic Product while the demand for foreign exchange has a negative relationship with gross demand product. Herve, Shen and Amed (2010) investigated the effect of real exchange rate on the balance of trade of Cote d'Ivoire using multivariate cointegration tests and vector error correction models with time series data covering the periods of 1975-2007. Their investigation results confirm the existence of long-run relationships among Trade Balance (TB), Real Exchange Rate (RER), and foreign and domestic incomes.

However, Opaluwa, Umeh and Ameh (2010) examined the impact of exchange rate fluctuations on the Nigerian manufacturing sector during a twenty (20) year period (1986 –

2005). The argument was that fluctuations in exchange rate adversely affect output of the manufacturing sector. This according to them is because Nigerian manufacturing is highly dependent on import of inputs and capital goods. These are paid for in foreign exchange whose rate of exchange is unstable. Thus, this apparent fluctuation is bound to adversely affect activities in the sector that is dependent on external sources for its productive inputs. The econometric tool of regression was used for the analysis. In the model that was used, manufacturing output employment rate and foreign private investment were used as the explanatory variables. The result of the regression analysis shows that coefficients of the variables carried both positive and negative signs. The study actually shows adverse effect and is all statistically significant in the final analysis. They therefore recommended that there is the need to strengthen the link between agriculture and the manufacturing sector through local sourcing of raw materials thereby reducing the reliance of the sector on import of inputs to a reasonable level. Bakare (2011) adopted the ordinary least square regression analytical method and the result indicate significant but negative relationship between floating foreign exchange rate and private domestic investment in Nigeria.

Therefore, this work will adopt Ofurum and Tobira (2011), Bakare (2011) ordinary regression model in line the works of Accam (1997), Serven and Solimano (1992) and Akpan (2009) to examine the impact of exchange rate on macro-economic variables such as gross domestic product growth rate, balance of trade positions of Nigeria, consumer price index, foreign private investment.

3.6 Techniques of Analysis

The hypotheses stated will be tested using the two-stage least square (2LS). The statistical properties of the 2LS are contained in the popular Gauss- Markov theorem which sees the least squares estimators as unbiased linear estimator, having minimum variance. The model examines the relationship between a dependent variable and two or more regressor (independent variables). This suit the research since the intention of the researcher is to examine the impact of exchanges rate on these macro-economic variables on a variable by variable basis. The Granger Causality will also be employed to test the causal relationship between exchange rate and major macro-economic variables.

4.0 Analysis of data and findings

4.1 Presentation of Data

Data are presented and interpreted in line with the objectives and models of the study. The treated and untreated values used to test the hypotheses are presented in tables 4.1 to 4.4.

1. Examine the impact of exchange rate fluctuations on economic growth in Nigerian.

Table 4.1 Exchange Rate and Economic Growth Indicator (1987-2011)

Year	Exr	Gdp (N,000)m	Gdpgr
1987	14.70	204,806.50	(0.57)
1988	13.00	219,875.60	7.36
1989	8.90	236,729.60	7.67
1990	7.70	267,550.00	13.02
1991	6.30	265,379.10	(0.81)
1992	3.70	271,365.50	2.26
1993	3.00	274,833.30	1.28
1994	3.00	275,450.60	0.22
1995	0.70	281,407.40	2.16

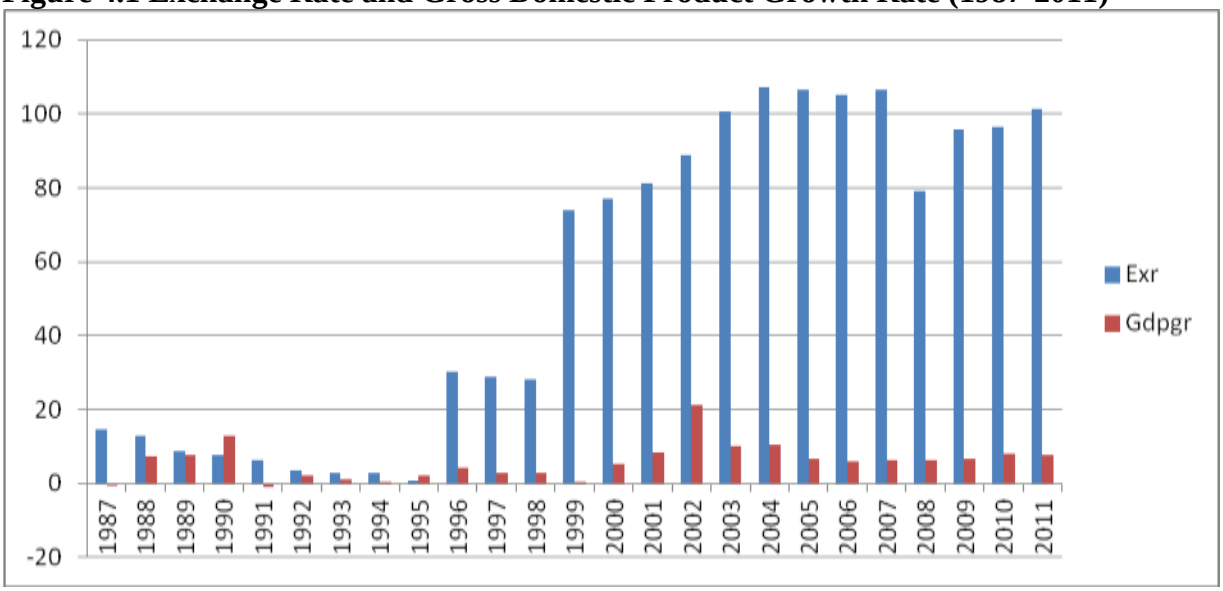
1996	30.17	293,745.40	4.38
1997	28.83	302,022.50	2.82
1998	28.32	310,890.10	2.94
1999	73.91	312,183.50	0.42
2000	77.21	329,178.70	5.44
2001	81.30	356,994.30	8.45
2002	88.95	433,203.50	21.35
2003	100.63	477,533.00	10.23
2004	107.07	527,576.00	10.48
2005	106.58	561,931.40	6.51
2006	105.02	595,821.60	6.03
2007	106.41	634,251.10	6.45
2008	79.01	674,889.00	6.41
2009	95.73	718,977.33	6.53
2010	96.57	775,525.70	7.87
2011	101.18	834,161.83	7.56

Source: CBN Statistical Bulletin Various Years

Table 4.1 presents data for objective one. The data presented involve the average real effective exchange rate, quantum gross domestic product and computed gross domestic product growth rate for the period 1987 to 2011. From 1987 to 1995, Nigeria's average real effective exchange fell from USD14.7 to USD0.70. There was a gradual decreased in average real effective exchange rate within the period. As revealed from the table, in 1987, the real effective exchange rate was USD14.70, and fell to USD13.00 IN 1988. A further fall was observed in 1989 (USD8.90), 1990 (USD7.70), 1991 (USD6.30), 1992(USD3.70), 1993 (USD3.00), 1994 (USD3.00) and in 1995 it was USD0.70 which was the lowest within the period. However, from 1996 to 2007, the average real effective exchange rate showed an upward fluctuation.

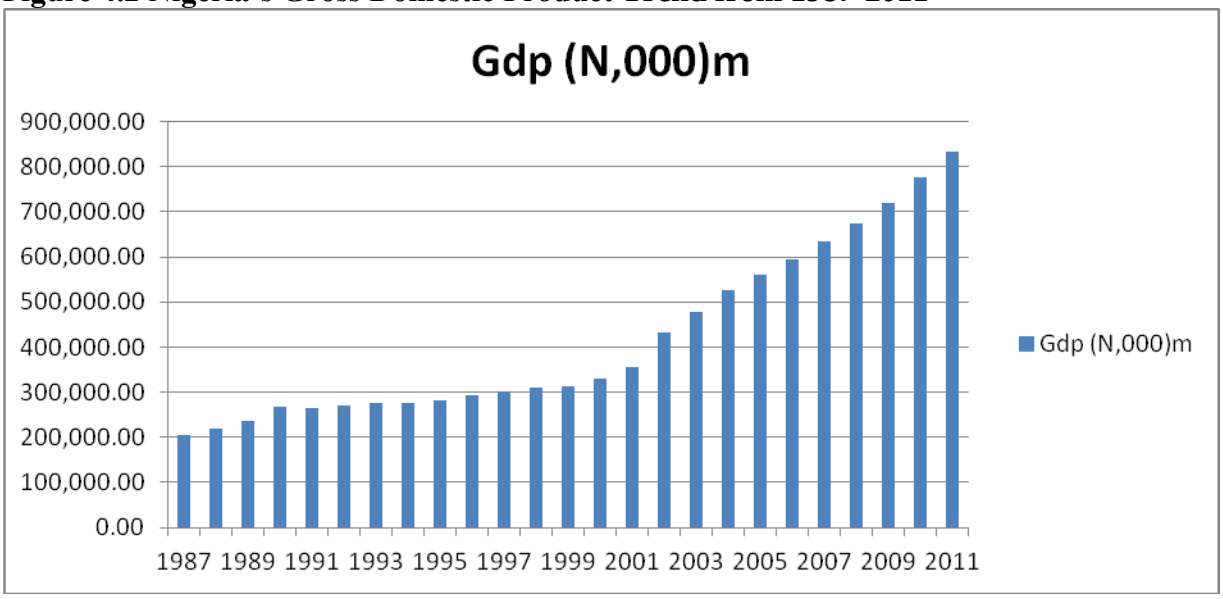
In 1996, the real effective exchange rate was USD30.17, but fell to USD28.83 and further fell to USD28.32 in 1997. However in 1998, it rose sharply to USD73.91. A further increase was observed in 1999 when it was USD73.91. The increase was sustained from 2000 to 2004 when the real effective exchange rate was USD77.21 in 2000, 2001 USD81.30, 2002 (USD88.95), 2003 (USD100.63), 2004 (USD107.07). The real effective exchange rate fell slightly in 2005 (USD106.58), 2006 (USD105.02) but rose slightly to USD106.41 in 2007. In 2008, it fell to USD79.01 and rose to USD95.73 in 2009 and further rose in 2010 and 2011 when it was USD96.57 and USD101.18 respectively. Figure 4.1 depicts a diagrammatically presents the trend of the real effective exchange rate and Nigeria's gross domestic product growth rate from 1987 to 2011.

Figure 4.1 Exchange Rate and Gross Domestic Product Growth Rate (1987-2011)



Source: Researchers Excel Computation

Figure 4.2 Nigeria's Gross Domestic Product Trend from 1987-2011



Source: Researchers Excel Computation

On the Gross domestic product, table 4.1 reveals a gradual but consistent increase in Nigeria's gross domestic product from 1987 to 2011. In 1987, Nigeria's GDP was ₦204,806.50million and grew by 7.36% to ₦219,875.60million in 1988. A further growth was observed in 1989 when the GDP grew by 7.67% to ₦236,729.60million. In 1990, the GDP grew further by 13.02% to ₦267,550.00million but it fell by 0.81% to ₦265,379.10million in 1991. The growth rate showed a gradual increase from 1992 to 1999. While it grew by 2.26% to ₦271,365.50million in 1992 and further grew by 1.28% to ₦274,833.30million in 1993. In 1994, it again grew by 0.22% to ₦275,450.60million. Grew by 2.16% in 1995 to ₦281,407.40million and in 1996, 1997 1998 and 1999 it again grew by 4.38%, 2.82%, 2.94% and 0.42% to ₦293,745.40million, ₦302,022.50million, ₦310,890.10million and ₦312,183.50million respectively.

From 2000 to 2011, GDP growth rate had remained over the 5% growth rate mark yearly. In 2000, GDP increased to by 5.44% to ₦329,178.70million and further grew by 8.45% in 2001 to ₦356,994.30million. In 2002, GDP growth rate grew by 21.35% (₦433,203.50million) which was the highest growth rate over the period of this study. In 2003, the growth rate was 10.23% (₦527,576.00million), in 2004 grew by 10.48% (₦527,576.00million). From 2005 to 2011, the growth rate again, was consistent and remained in the region of 6% to 7%. In 2005, the growth rate was 6.51% (₦561,931.40million), in 2006, it grew by 6.03% (₦595.821.60million), in 2007, grew by 6.45% (₦634,251.10million), in 2008, it again grew by 6.41% (₦674,889.00million), in 2009, grew by 6.53% (₦718,977.33) and climbed to the 7% mark in 2010 and 2011. Specifically, in 2010, it grew by 7.87% to ₦775,525.70million and in 2011, grew by 7.56% to ₦834,161.83million. Figure 4.2 depicts the diagrammatical presentation of Nigeria's gross domestic product in quantum from 1987 to 2011.

4.2 Test of Hypothesis

Three steps were used to test the hypotheses. In step one; the hypotheses were restated of in null and alternate forms. In step two, the results were analysed while in step three, decisions were made. The decision rule involved the rejection or acceptance of the null or alternate hypotheses based on criterion of the techniques of analyses.

4.2.1 TEST OF HYPOTHESIS ONE

Step One: Restatement of the Hypothesis in Null and Alternate forms:

Ho_1: Exchange rate fluctuations do not have positive and significant impact on economic growth in Nigerian.

Ha_1: Exchange rate fluctuations have positive and significant impact on economic growth in Nigerian.

Step Two: Presentation and Analysis of Result

Table 4.2 Regression Result for Hypothesis One

Dependent Variable: GDPGR

Variable	Coefficient	Std. Error	t-Statistic	Prob.
EXR	-4.390065	2.061081	2.129982	0.0452
EXPR	-0.445385	0.527284	-0.844678	0.4078
IMPR	0.546766	0.831464	0.657594	0.5179
C	0.216555	2.399287	0.090258	0.9289
R-squared	0.839874	Mean dependent var		5.858400
Adjusted R-squared	0.731285	S.D. dependent var		4.862100
S.E. of regression	4.531715	Akaike info criterion		6.005725
Sum squared resid	431.2653	Schwarz criterion		6.200745
Log likelihood	-71.07156	F-statistic		2.209000
Durbin-Watson stat	1.571733	Prob(F-statistic)		0.117033

Source: E-view Results

As revealed from table 4.6, exchange rate fluctuations has negative and significant impact on Nigeria's gross domestic product (coefficient of EXR = -4.39, t-value = 2.130). This indicates that a one percent decrease in economic growth in Nigeria is due to 4.39 percent decrease in exchange rate fluctuations. The probability value of 0.0452 < 0.05 confirms the significance of the result. The coefficient of determination which measures the goodness fit of the model

as revealed by R-square (R^2) indicates that 84% of the variations observed in the dependent variable were explained by variations in the dependent variable. This is quite high could be attributed to the inclusion of control variables such export rate (EXPR) and import rate (IMPR). The test of goodness of fit as indicated by R^2 was properly adjusted by the Adjusted R-Square to 73.1%.

4.3 DISCUSSION RESULTS WITH OBJECTIVES OF THE STUDY

The discussion of results was in line with the objectives of this study.

Objective One: To examine the impact of exchange rate fluctuations on economic growth in Nigerian.

Economic growth often expressed in terms of increase in gross domestic product measures an economy's total output of goods and services therefore like any other economic quantities, must is expressed in real terms and according to Caporale and Pittis (1995) the changes in arrangement of exchange rate have an impact on economic growth and the extent to which volatility of exchange rate may be responsible for changes in the rate of economic production is because development strategies by many countries especially developing economies may have either changed or are under consideration to change because of the type of exchange rate adopted thus an increase in nominal and real exchange rate volatility accompanying such moves will have an impact on domestic and foreign investment decision positively or negatively. This view was supported by Coes (1981), Brada and Mendez (1988), Caballero and Corbo (1989), Cote (1994), Baum et al (2001) and Arize, Osange, and Slottje (2004), hence the degree of variability associated with flexible exchange rate that is relatively high, becomes more important for the countries which switched from fixed exchange rate regime to flexible exchange rate regime over the period.

Again, according to Michael *et al*., (2003), literature seems to suggest that keeping the real exchange rate at competitive levels and avoiding excessive volatility are important for growth though the statistical evidence is not overwhelming. This actually confirms the evidence in our study which suggest that fluctuations in exchange rate have a negative and significant impact on economic growth in Nigeria. These, according to literature occur when an unstable and competitive real exchange rate facilitates condition for economic growth. Unless when kept at competitive levels and avoiding excessive volatility efforts to capitalize on economic growth thus enhancing human capital, savings and investment, and the institutional capacity to assimilate and generate organizational and technological knowledge thus growth.

5.0 Summary of findings, Conclusions and Recommendation

5.1 Findings

Exchange rate fluctuations have negative and significant impact on Nigeria's gross domestic product

5.2 Conclusions

The findings of this study suggest that fluctuations in exchange rate have a negative and significant impact on economic growth in Nigeria but have positive and non-significant impact on Nigeria's balance of payment. Foreign exchange volatility affects the performance of macroeconomic indicators positively and negatively. Most import dependent economy like Nigeria faces the problem of foreign exchange rate volatility. Nigeria's over dependence in the Oil and Gas sector of the economy has affected the major macro economic variables and adverse foreign exchange rate regimes have affected the Nigeria economy over the years. Nigeria major foreign earning is from oil; hence, volatility of crude oil prices in the world

market has made the Nigerian economy highly susceptible to the ever changing exchange rates thus affecting the prices of goods and services in the Nigerian economy. Nigeria's failure to diversify its economy which would have helped cushion the effect of the constant changes in oil prices stems in part from weaknesses in the nation's small and insular private sector.

5.3 Recommendations

Volatility in exchange rate was found to have negative and significant impact on economic growth in Nigeria in this study. This could be attributable to volatility in oil prices which the country actually depends on for its revenue. Therefore, this study recommends an aggressive expansion of the Nigerian economy especially investment in the agricultural and manufacturing sectors of the Nigerian economy. This obviously will lead to less dependent on oil revenue which is determined by fluctuations in exchange rate prices.

The parallel market in Nigeria is very vibrant and active; however, the specific focus of this study was to examine the impact of exchange rate fluctuations on major macro-economic variables in Nigeria based on the official quote of exchange rate in Nigeria. Therefore, for a further study, this study recommends an inclusion of the parallel exchange rate market on major macro economic variables in Nigeria.

Again, this study recommends a study that will examine the transmission mechanism of exchange rate on major macro-economic variables in Nigeria. The channels through which exchange rate impact on these major macroeconomic variables will determine the appropriateness of policies.

REFERENCES

Bacchetta, P. and E.V Wincoop (2003), "Can information heterogeneity explain the exchange rate determination puzzle?" *NBER Working Paper* #9498

Bakare A.S (2011), "The Consequences of Foreign Exchange Rate Reforms on the Performances of Private Domestic Investment in Nigeria" *International Journal Of Economics And Management Sciences* , Vol. 1, No. 1, Pp. 25-31

Caramazza F. and J. Aziz, (1998), "Fixed or Flexible: Getting the Exchange Rate Right in the 1990s", *IMF Economic Issues* 13

Ghosh, A.R., Gulde, A.M., Ostry, J. and H. Wolf (1997), "Does the Nominal Exchange Rate Matter?", *NBER Working Paper*, No: 5874

Goldstein, M. (2002), *Managed Floating Plus Policy Analyses in International Economics*, Washington DC: Institute for International Economics

Goodhart, A.E, Charles and L. Figliuoli (1991), "Every Minute Counts in Financial Markets", *Journal of International Money and Finance*, Vol.10, pp 23-52

Gosh, A.R. (1995), "Does the Nominal Exchange Rate Regime Matter?", IMF Working Paper /95/121Gotur, P. (1985), "Effects of Exchange Rate Volatility on Trade: Some further Evidence," *IMF Staff Papers*, 32, pp 475-512

Harberger R. (2003), "Securing Stability and Growth in a Shock Prone Region: The Policy Challenge for Latin America", *Inter-American Development Bank*, WP315

Hausmann R. and M. Gavin (1996), "Securing Stability and Growth in a Shock Prone Region: The Policy Challenge for Latin America", *Inter-American Development Bank*, WP315

Herve, D. B. G., Y. Shen, and A. Amed (2010), "The Effects of Real Exchange Rate on Trade Balance in Cote D'ivoire: Evidence from the Cointegration Analysis and Error- Correction Models" *Journal of Applied Research in Finance*, Vol 2, Issue 1(3), pp 44-60

Hnatkovska, V. and N. Loayza (2004), "Volatility and Growth" *The World Bank Policy Research Paper* 3181

Hooper, P., and S.W. Kohlhagen (1978), "The Effects of Exchange Rate Uncertainty on the Price and Volume of International Trade," *Journal of International Economics*, 8, pp 483-511

Husain, A.M., Mody, A. and K.S. Rogoff (2004), "Exchange Rate Regime Durability and Performance in Developing Versus Advanced Economies," *Journal of Monetary Economics*, Volume 52: 1, pp 35-64

Imimole, B. and A. Enoma (2011), "Exchange Rate Depreciation and Inflation in Nigeria (1986–2008)", *Business and Economics Journal*, Volume 2, BEJ-28

International Monetary Fund (1998) "World Economic Outlook", *International Monetary Fund Paper Release* IMF/WP/05

International Monetary Fund (1997) "World Economic Outlook", *International Monetary Fund* Paper Release IMF/WP/11

Iyoha, , M.L (1998), *The Economics of Development and Planning*, India: Vrinda Educational Books

Kabir, R. (1988) "Estimating Import and Export Demand Function: The case of Bangladesh," *The Bangladesh Development Studies*, pp 115-127

Kerlinger, F.N. (1973), *Foundations of Behavioural Research Techniques in Business and Economics Eleventh Edition*, Boston; Mcgraw Hill Irwin

Junye L. and W. Yin (2008), "Macroeconomic Fundamentals and the Exchange Rate Dynamics: A No-Arbitrage Macro-Finance Approach" *Asian Economic Bulletin* 17(1): 36 – 46

Kamil H, (2006), "Does Moving to a Flexible Exchange Rate Regime Reduce Currency Mismatches in firms' Balance Sheets?", *International Monetary Fund*, 7th Jacques Polak Annual Research Conference

Kemal, M. A. (2006), "Exchange Rate Instability and Trade: The Case of Pakistan" *Pakistan Institute of Development Economics Research Report*, No. 186, Islamabad

Kenen, P.B. and D. Rodrik (1986), "Measuring and Analysing the Effects of Short-term Volatility in Real Exchange Rates", *The Review of Economics and Statistics*, 68(2), pp 311–5

Kent, C. and R. Naja (1998), "Real Effective Exchange Rate and Irrelevant Nominal Exchange Rate Regimes" *Reserve Bank of Australia Research Discussion Paper* No. 9811

Korey, F. and W. D. Lastrapes (1989), "Real exchange rate volatility and the United States (U.S.) bilateral trade: A VAR approach" *The Review of Economics and Statistics*, 71: pp 702–12

Kouretas, G.P. (1988), "Flexible Exchange Rates, Commercial and Macro-stabilization Policies under alternative Wage - Setting Regimes", Unpublished Ph.D Thesis of *University of Birmingham*

Kouretas, G. P. (1991), "Flexible Exchange Rates, Macroeconomic Policy and Alternative Wage-Setting Regimes" in *Current Issues in Open Economy Macroeconomics*, London: Edward Elgar Gower Press

Krichene (1998), "Flexible Exchange Rates, Macroeconomic Policy and Alternative Wage-Setting Regimes" in Current Issues in Open Economy Macroeconomics, London: Edward Elgar Gower Press

Kruger, H. (1990), "Real exchange rate volatility and the United States (U.S.) bilateral trade: A VAR approach" *The Review of Economics and Statistics*, 71: pp 702–12

Krugman, K (2001), "Exchange rate risk and U.S. trade: A Sectoral Analysis", *Federal Reserve Bank of Kansas City, Economic Review*, March: pp 16–28

Kumar, R. and R. Dhawan (1991), "Exchange rate volatility and Pakistan's exports to the developed world, 1974–85", *World Development*, 19(9): pp 1225–40

Lanyi H. and F. Suss (1986),), "Evidence on Exchange rate policy" *Journal of Financial Investment Analysis*, 31(3), pp 419-439

Levy-Yeyati, E., and Sturzenegger, F., and R. Iliana (2007), "On the Endogeneity of Exchange Rate Regimes" (http://ideas.repec.org/p/udt/wpbsdt/veintiuno.html Retrieved on 12/11/01)

Li, L. and J. Yin (2008), "Classifying Exchange Rate Regimes: Deeds vs. Words", *European Economic Review*, 49 (6): pp 1603-1635Lipsey, R.G. (1986), *An Introduction to Positive Economics*, 6th Edn, London: Weidenfeld and Nicolson

Lyons, R., (1995), "Foreign Exchange Volume: Sound and Fury Signifying Nothing?" *NBER Working Paper* No. 4984

Mankiw G. N. (1994), *Macroeconomics*, New York: Von Hoffman Press

Mahmood I., M. Ehsanullah, and H. Ahmed (2011), "Exchange Rate Volatility & Macroeconomic Variables in Pakistan" *Business Management Dynamics* Vol.1, No.2, August, pp.11-22

Mbutor O. M. (2010), "Exchange rate volatility, stock price fluctuations and the lending behaviour of banks in Nigeria" *Journal of Economics and International Finance,* Vol. 2(11), pp.251-260

Marcello, P. and M. Taboga (2009), "Bond Risk Premia, Macroeconomic Fundamentals and the Exchange rate" *NBER Working Paper* No 7752

Mark, Nelson C. and S. Donggyu (2001), "Nominal exchange rates and monetary fundamentals: Evidence from a small Post-Bretton Woods panel", *Journal of International Economics*, vol.53, No.1, Pp.29-52.

Mark, N. (1995), "Exchange rates and fundamentals: Evidence on long-horizon predictability", *American Economic Review*, 85, pp 201-218

Markiewicz, A. (2006), "Choice of Exchange Rate Regime in Central and Eastern European Countries: An Empirical Analysis", *Center for Economic Studies Working Paper* No 127

Meese, A.R., and K. Rogoff (1983), "Empirical Exchange Rate Models of the Seventies: Do They Fit Out of Sample?" *Journal of International Economics*, 14, pp 3-24

Meon, P.G. and Rizzo, J.M. (2002), "The Viability of Fixed Exchange Rate Commitments: Does Politics Matter? A Theoretical and Empirical Investigation", *Open Economies Review*, 13 (2), pp 111-132

Michael *et al*., (2003), "Common Trends and Cycles in G-7 Countries Exchange Rates and Stock Prices", *Applied Economic Letters*, 7: pp 7–10

Mishkin F.S. (1997), *The Economics of Money, Banking and Financial markets* (5th ed), New York: Addision-Wesley Longman

Montiel, M. and K. Serven (2007), "New Zealand´s trade balance: evidence of the J-Curve and granger causality" *Applied Economics Letters* 11, pp 351-354

Mundell, R.A. (1963), "Capital mobility and stabilization policies under fixed and flexible exchange rates", Canadian Journal of Economics, 29, pp 475-85

Mundell, R. (1962), "Capital Mobility and Stabilisation Policy under Fixed and Flexible Exchange Rates" *Canadian Journal of Economic and Political Science* 29, pp 475-85

Musonda H. (2008), "Factors Affecting Exchange Rate Volatility" *IMF Working Paper Monetary and Financial Systems Department* WP/04/147

Mussa, M. (2002), "Exchange Rate Regimes in an Increasingly Integrated World Economy" *International Monetary Fund Occasional Paper* 193, Washington DC

Neely, J.C and L. Sarno, (2002), "How well do monetary fundamentals forecast exchange rates?" *Federal Reserve Bank of St. Louis Review*, September/October, Vol.84,

No.5, pp 51-74

Nnamdi, I.S. (2009), "A Virile Commodity Exchange and Futures market for Nigeria: Good Intentions and Hard Realities" Department of Finance and Banking, *University of Port Harcourt*, Nigeria

Noor-Nugroho, S.M. and I. Yanfitri (2010), "Effects Of Foreign Exchange Supply And Demand Dynamics to Rupiah Exchange Rate And Economic Performance", *Bulletin Of Monetary, Economics And Banking*, pp 289-328

Nusrate, A. (2008), "The Role of Exchange Rate in Trade Balance: Empirical from Bangladesh" *University of Birmingham*, UK.

Nzekwu. G. (2006)"Exchange Rate Stability and Poverty Reduction in Nigeria" Bullion (Publication of the Central Bank of Nigeria) 30(3), July/September: 52-63

O'Hara, J. (1995), "Determinants of Foreign Exchange in Britain" *New World Journal of International Finance*, Vol 2, No 5, pp 235-268

Obadan M.I (2004), Foreign *Capital Flows and External Debt Perspectives on Nigeria and The LDCs Group*, Ibadan: Ibadan University Printer

Obadan, M.l (2006) "Overview of Exchange Rate Management from 1986 to Date" Bullion (Publication of the Central Bank of Nigeria), 30(3), July/September: 1-8

Obaseki, P.J. (2001) "Issues in Exchange Rate Design and Management" Central Bank of Nigeria Economic and Financial Review, 39(2)

Obaseki E. and A. Bello (1996), *Foreign Exchange Rate In Nigeria*, Benin: University of Benin Publishers

Obstfeld, M. and K.S. Rogoff (1994), *Foundations of International Macroeconomics*, Cambridge, MA: MIT Press

Obstfeld, M. and K.S. Rogoff (2003), "Risk and Exchange Rates" *In Economic Policy in the International Economy: Essays* in Honor of Assaf Razin, E. Helpman and E. Sadka, eds. Cambridge: Cambridge University Press

Obstfeld M. (2002), "Exchange Rates and Adjustment: Perspectives from the New Open Economy Macroeconomics", *NBER Working Paper* 9118

Odozi M. (1995), "The Effect of Exchange Rate Uncertainty on Exports: A Case Study for Nigeria" *International Journal of Credit Management* Vol 7, No 2, pp 45-57

Ofurum C. O. and L.L. Torbira (2011), "Foreign Exchange Market and the Nigeria Economy" International Journal of Exclusive Management Research, October 2011-Vol 1 Issue 5 - Issn 2249 –2585

Ogun, O. (1998), "Real Exchange Rate Movements and Export Growth: Nigeria, 1960 1990", *International Journal of Business*, Vol 6, No 4, 235-49

Onoh, John Okey (2016), "The Effect of Stock Market Liquidity on Daily Returns in the Nigerian Capital Market, IIARD International Journal of Banking and Finance Research ISSN 2406-3634, Vol. 2 No.1 2016

Onwumere, J.U.J (2009), *Business and Economic Research Method*, Enugu; Vagassen Limited

Onwumere, J.U.J (2009), "Foreign Exchange Rate Management in Nigeria, 1960-2007" *The Nigerian Journal of Management Research*, 4(1), pp 18 – 29.

Opaluwa D., J. C. Umeh and A. A. Ameh (2010), "The effect of exchange rate fluctuations on the Nigerian manufacturing sector" *African Journal of Business Management* Vol. 4(14), pp. 294-298

Oyaide, W.G. (1977), *The Role of Direct Foreign Investment: A case study of Nigeria, 1963-1973*, Washington D.C: United Press of America

Oyejide TA, (1989), "Thoughts on Stability of Nigeria's Exchange Rate" *The Nigerian Banker*, September – December

Peree, E. and A. Steinherr (1989), "Exchange Rate Uncertainty and Foreign trade", *European Economic Review* 33, pp 1241-1264

Piazzesi, M. and M. Schneider (2006), "Equilibrium Yield Curves", *NBER Macroeconomics Annual*, pp 389-442

Poirson, H. (2001), "How Do Countries Choose Their Exchange Rate Regime?", *IMF Working Paper*, No: 01/46.

Ramey, M and R. Ramey (1994), "The role of exchange rate in a popular model of international trade: Does the Marshall-Lerner condition hold?", *Journal of International Economics* 30: pp 301-316

Rana, P. (1983), *The Impact of Generalized Floating on Trade Flows and Reserve Needs, Selected Asian Developing Countries,* New York: New York Garland Publishers.

Rangrajan J. (1986), "Evolution and Performance of Exchange Rate Regimes", *IMF Occasional Paper* 229

Rime, D., L. Sarno and D.E Sojli (2007), "Exchange Rate Forecasting, Order Flow, and Macroeconomic Information", *Oslo Business Review* 2007/2

Rizzo, J.M. (1998), "The Economic Determinants of the Choice of an Exchange Rate regime: a Probit Analysis", *Economics Letters*, 59: 283-287

Rogoff K. (1998), "Evolution and Performance of Exchange Rate Regimes", *IMF Occasional Paper* 229

Root, F.R., (1984), *International Trade and Investment*, 5th Edn, Ohio Cincinati: South Western Publication Company

Rose, A., and J. Yellen (1989), "Is there a J-curve?" *Journal of Monetary Economics*, Volume 24, Issue 1: pp 53-68

Russ, K.N. (2003), "The Endogeneity of the Exchange Rate as a Determinant Of FDI: A Model of Money, Entry and Multinational Firms"

Sarno, L. and M.P. Taylor (2001), "The microstructure of the foreign exchange market: A selective survey of the literature", *Princeton Studies in International Economics*-89

Serven, L. and A. Solimano (Eds.) (1993), "*Striving For Growth after Adjustment, The Role Of Capital Formation*" Washington D.C: The World Bank

Siddiqui S. and H. Salam (2000), "Exchange Rate Volatility and Exports: Regional differences between Developing and Industrialised Countries". *Review of International Economics*, 9(1) pp 133–52

Simeon C., I. Inyang and U. Akpang (2009), Real Exchange Rate Variability and the Choice of Exchange Rate Regime by Developing Countries," *Journal of International Money and Finance*, 9: pp 440–54

Singh, T. (2002), "India's Trade Balance: The Role of Income and Exchange Rates", *Journal of Policy Modeling* 24: pp 437-452

Subair, K. and O. M. Salihu (2010), "Exchange Rate Volatility and the Stock Market: The Nigerian Experience" International Journal of Current Research, Vol 3, No 6, pp 125 136

Svensson G. (2000), "Foreign Exchange Risk Management practice" *European Journal of Social Sciences*, 59(7-8), pp 344-369

Tadaro, M.P. and S.C Smith (2009), *Economic Department*, (10th ed), New York: Addision-Wesley/Pearson Education

Tavlas, S. (2003), *The Economics of Exchange Rate Regimes: A Review Essay*. Oxford: Blackwell Publishing Ltd

Tenreyro, D. (2006), "Is there a long-run relationship between trade balance and terms of trade? The case of Malaysia" *Applied Economics Letters* 13, pp 307-311

Thursby, M. C.,and J.G Thursby (1987), "Bilateral Trade Flows, Linders Hypothesis, and Exchange Risk," *The Review of Economics and Statistics*. 69, pp 488-495

Voivodas, C.S. (1973), "Exports, foreign capital and economic growth" Journal of International Economics 3(1), pp 231-256

Von Hagen, J and J. Zhou (2005), "The Choice of Exchange Rate Regimes: An Empirical Analysis for Transition Economies", *Economics of Transition*, 13 (4): 679-703

Von Hagen, J. and J. Zhou (2007), "The Choice of Exchange Rate Regimes in Developing Countries: A multinomial Panel Analysis", *Journal of International Money and Finance*, 26: 1071-1094

Wang, K.L. and Barrett, C.B. (2002), "A New Look at the Trade Volume Effects of Real Exchange Rate Risk," Department of Applied Economics and Management, *Cornell University, Ithaca*, New York, Working Papers 2002-4 1

Wickham, P. (1985), "The Choice of Exchange Rate Regime in Developing Countries" *IMF Staff Papers*, 32, 2: 248-288

Yeyati L. and Sturzenegge,r F (2000), "Exchange Rate Regimes and Economic Performance" Paper presented at the *first IMF Research Conference*, Washington, DC, 9-10 November

Yomere, G.O. And B.A. Agbonifoh (1999), *Research Methodology in The Social Sciences and Education*, Benin City; Centre Consultants Nigerian Limited

Yougbare, L. (2006), **"**Exchange Rate Regimes and Growth Volatility**"** *Center for Studies and Research on International Development* (CERDI) Working Paper Series