MONETARY POLICY AND BALANCE OF PAYMENTS IN NIGERIA:
A CO-INTEGRATION APPROACH (1986-2012)

ONWE GODWIN E.
Department of Economics
Ebonyi State University, Abakaliki
godyonwe@yahoo.com

ABSTRACT
This study examines monetary policy and balance of payments in Nigeria ranging from 1986-2012. A cointegration approach to econometric analysis was employed in investigating the effects of monetary policy variables on Nigeria’s balance of payments. The results of the cointegration estimation show a positive relationship between the dependent variable (Balance of Payments) and the independent variables (Money Supply, Exchange Rate, Interest Rate and GDP). Specifically, Money Supply and Interest Rate had significant relationship with Balance of Payments, whereas Exchange Rate was not statistically significant. Based on the results, it was therefore recommended that the government should promote the exportation of Nigerian products especially the Non-oil products, as this will bring in more foreign exchange into the country, boost productive activities and improve the balance of payments position of the country. Also, the Central Bank of Nigeria should ensure that the monetary policies adopted in the country are complemented with effective fiscal policies to foster economic growth and development in the Nigerian economy.

KEYWORDS: Money supply, Balance of Payments, Monetary policy.

1.1 Background to the Study
Monetary Policy is a key component of any pro-growth economic system and much so in developing economies such as the Nigerian Economy, Taylor (2004). In general terms, monetary policy refers to a combination of measures designed to regulate the value, supply and cost of money in an economy in consonance with the expected level of economic activity, Nnanna (2001). For most economies, Nigerian economy inclusive, the objectives of monetary policy includes price stability, maintenance of Balance of Payments equilibrium, promotion of employment and output growth. Gbosi (2002), posits that monetary policy aims at controlling money supply so as to counteract all undesirable trends in the economy, these undesirable trends may include; unemployment, inflation, sluggish economic growth or disequilibrium in the Balance of Payments. Monetary policy may either be expansionary or restrictive. An expansionary monetary policy is designed to stimulate the growth of aggregate demand through increase in the rate of money supply thereby making credit more available and interest rates lower. An expansionary monetary policy is more appropriate when aggregate demand is low in relation to the capacity of the economy to produce goods and services. On the contrary, if the quantity of money is reduced or restricted, money income will rise slowly so that consumers spend less and funds for investment are difficult to acquire thereby decreasing aggregate investment (restrictive monetary policy). Thus, to regulate monetary policy in the Nigerian economy, the Central Bank of Nigeria (CBN) employs various instruments which include; Open Market Operation (OMO), Reserve Requirement (RR) and Discount Rate (DR), CBN (1994). The success of monetary policy depends on the operating economic environment, institutional framework adopted, and the choice and mix of the instrument used. However, the current monetary policy framework focuses on the maintenance of price stability and Balance of Payments equilibrium, while the promotion of economic growth and employment generation are secondary goals of the policy.

The most popular instrument of monetary policy then was the issuance of credit rationing guidelines which primarily set the rates of exchange for the component and aggregate commercial bank loans and advances to the sector (Iyoha, 1995). The sectorial allocation of bank credit in the CBN guidelines was to stimulate the productive sector and thereby stem inflationary pressure. The fixing of interest rates at relatively low level was done mainly to promote investment and growth. Occasionally, special deposits were imposed to reduce the amount of free reserve and credit-creating capacity of the
banks. Minimum cash ratios were stipulated for the banks in the mid-1970s on the basis of their total deposit liabilities. But since such cash ratios were usually lower than those voluntarily maintained by the banks, they proved less effective as a restraint on their credit operations (Adeanye, 1986).

1.2 Statement of the Problem
Nigeria has in the recent times been experiencing persistent instability on her overall balance of payment and this has provoked serious concern and question on the potential causes of this imbalance. Nigeria, like any other country, aims at maintaining a stable equilibrium in the balance of payments as one of the objectives of macroeconomic policy, Soludo (2003). Organizations such as the International Monetary Fund (IMF), and the World Bank, have directed a great deal of attention to stable balance of payments situations in a given economy as the ideal situation. Owing to the nature of Nigeria’s export and import, there existed a persistent Balance of Payments deficit in the economy. Invariably, Nigeria has paid more to foreign countries than she receives. Thus, the attendant result affects the economy, leading to gross depletion of Nigeria’s Foreign Reserves. It has also attracted reduction in the country’s productive capacities and persistent inflationary pressures. Sequel to the above, articulated efforts have been made by monetary authorities especially, Central Bank of Nigeria (CBN), on how to drastically reduce the Balance of Payment s deficits in the economy. This is usually done through the formulation and implementation of appropriate monetary policy measures.

Over the years, different adjustment mechanisms to balance of payment disequilibrium have been developed, namely, the monetary approach, the Elasticity’s Approach and the Absorptions Approach (Du Plessis et al 1998:235). According to Salvatore (1998:473), the balance of payments is a monetary phenomenon and the approach flows from the classical price-specie flow mechanism. This is based on the notion that money plays an important role in causing any disturbance in the balance of payments account as well as serving as an adjustment mechanism to correct the disturbance (NISER,2007).

Although the monetary policy approach to the balance of payment has been commended by many for explaining the balance of payments, it has been criticized by some scholars as an approach that ignores other parts of international trade in determining the balance of payments (Iyoha,2001). The weak position in the country’s current account was due to the deterioration in the services and income account which outweighed the surplus recorded in the merchandise trade and involved net transfer account, Gbosi (2001). In recent years, there have persistent deficit in the country’s balance of payments. After all these measure at correcting balance of payments deficits yielded non significant response of balance of payment to the monetary policy instrument that informed the need to investigate the effects of monetary policy variables on Nigeria balance of payments.

1.3 Research Questions
1. To What extent does money supply affect the development in balance of payments in Nigerian?
2. What is the significant level of development in exchange rate determine adjustment in balance of payment in Nigeria?
3. To what extent do variations in interest rate influence the development in balance of payment in Nigeria?

1.4 Objectives of the Study
1. Examine the extent to which money supply effect balance of payment position in Nigerian.
2. Empirically investigate the extent to which innovation in exchange rate impact on development in balance of payment in Nigeria.
3. Examine the level of impact that variation in interest rates exacts on balance of payments in Nigerian economy.

2.1 Theoretical Literature
Exchange rate is the price of one currency in terms of another. It is the amount of foreign currency that may be bought for one unit of the domestic currency or the cost in domestic currency of purchasing one unit of the foreign currency (Soderstine, 1998). It is the rate at which one currency exchanges for the other, and it is used to characterize the international monetary system (Iyoha, 1996). Anifowose (1994) describes foreign exchange as a monetary asset used on a daily basis to settle international transactions and to finance deficits in a country’s balance of payments. He emphasizes that it is an important component of a country’s stock of external reserve. Other components include holding of monetary gold and special drawing rights (SDRs). He considers foreign exchange management as a conscious effort to control and
use available foreign resources optimally while ensuring to build up external reserves in other to avoid external shocks attributable to dwindling of foreign exchange receipts.

Obaseki (1991) observes that foreign exchange can be acquired by a country through exports of goods and services, direct investment inflow or external loans, aids and grants which can be used in settling international obligations.

When there is disequilibrium in the foreign exchange market as a result of inadequate supply of foreign services, this may exert pressure on foreign exchange reserves, and if the foreign reserves are not adequate, this may deteriorate into balance of payments problems. Therefore, there is need to manage a nation's foreign exchange resources so as to reduce the adverse effects of foreign exchange fluctuations. In the literature, there are two broad methods of exchange rate management namely fixed and flexible exchange rate regimes. Exchange rate regimes refer to different systems of managing the exchange of a nation's currency in terms of other currencies. According to Obadan (1996), fixed exchange rates are to promote orderliness in foreign exchange markets and certainly in international trade transactions. On the other hand, a flexible exchange rate system is one which the exchange rate at any time is determined by the interaction of the market forces of demand and supply for foreign exchange. Ojo (1990) opines that international experience has shown that no country leaves its exchange rate determination completely to market forces alone as some level of intervention is applied from time to time as situation demands. Obadan and Nwobike (1991) opine that some countries with a weak balance of payments position adopt multiple exchange rate systems as an alternative to devaluation, which is viewed as too costly from a political or social perspective. They emphasize that a rationalized and properly administered dual exchange rate system can be very helpful to developing countries for ensuring the satisfaction of basic needs, ensuring fixed and balance of payments viability and general resource mobilization. Khan and Lizondon (1987) observe that countries experiencing balance of payments problems should embark on devaluation or gradual depreciation of her currency to effect a change on the payments problems, since devaluation which is the reduction of the value of one's country is expected to have significant impact on international capital movements. Obaseki (1991) observes that foreign exchange resources are derived and expended in the course of effecting economic transactions between the residents of one country and the rest of the world.

**Balance of Payments Equation**

To express our balance of payments function, we look at various approaches used to analyze the effects of exchange rate volatility on the balance of payments. These approaches include the elasticity approach, the absorption approach and the monetary approach. Among these three approaches, the monetary approach describes the current state of art in the analysis of exchange rate fluctuations/effects on balance of payment (Ozumba, 1978). We now consider these approaches.

**Concept of Balance of Payment (BOP)**

All international transactions of a country are recorded in a country’s balance of payments statistics. In order to know what is happening to international payments, government keeps track of the actual transaction among countries. The record of such transactions is called the balance of payments accounts. Udabah (2002) defines balance of payments of a country as a statement or records of all the transactions which take place between its residents (including individuals, business and governmental units) and the residents of all foreign nations. These transactions include merchandise export and import, tourism services, interest and dividends received or paid abroad and so forth. The above definition corroborates with Ojo (2005) who conceptualizes balance of payment as a summary record of all the international economic and financial transactions of a country during a specified period of time. The time period is usually one year but there is nothing sacrosanct about this. We could find the balance of payment for a three year period or even five year period if the need arises.

Furthermore, Hyman (2005) is of the view that one useful way to look at the balance of payments is to consider it as a report which summarizes the transaction of a country which create payment obligations to foreigners and the transactions which provide the means of settling these obligations. Whichever angle one can view it, balance of payments of a country is an annual record of its monetary transactions with other countries of the world.
In its effort to achieve a stable macroeconomic policy, the Central Bank of Nigeria adopts and employs monetary policy instruments. As identified by Iyoha (2002), the instrument of discretionary monetary policy includes:

Open Market Operation: - This involves the sales or purchase of government securities (Treasury bills) to and from deposit money banks and non-banking institutions with the view to regulate the costs and availability of credit. Discount Rate: - This is the rate at which the Central Bank of Nigeria lends to deposit money banks. The interest rate charged by the Central Bank of Nigeria is known as discount rate. By varying discount rate, the CBN can influence credit availability as lender of last resort to the deposit money banks. Its direct impact is on credit cost that has direct impacts on banks.

Reserve Requirement: - The reserve requirement sets minimum balance on the liquidity of deposit money banks, viz-a-viz their balances. It has two uses, to ensure the solvency of the banking system and control the expansion of credit creation as an objective of monetary policy. Moral Suasion - This is a process by which the Central Bank of Nigeria makes known to the deposit money banks officials through informal (oral or written) discussions on the direction in which they wish monetary policy to proceed and the contribution which is expected of the deposit money banks. Direct Control of Banking System: - It involves the imposition of quantitative ceiling on the overall and/or selective distribution of credit by the Central Bank of Nigeria. The tools are selective, not general, it is also direct. Direct Regulation of Interest Rate: - This is generally used in Less Developing Countries (LDCs) and not in More Developed Countries (MDCs). In MDCs, interest rate is determined by market forces to a large extent. However, in LDCs, interest rate is regulated or administered. In particular, interest rate is forced within, which both the deposits and the lending rates are expected to be maintained by the deposit money banks.

2.2. Empirical Literature

Onyeiwu (2012) employ ordinary least square method to investigate the effect of monetary policy instrument on balance of payments between 1981-2008 to analyze data, the result shows that monetary policy by money supply averts a positive impact on GDP growth and balance of payment but negative impact on rate of inflation. He recommended that monetary policy should facilitate a favorable investment climate through appropriate interest rates, exchange rate and liquidity management mechanism.

Ditimi, Wosa and Olaiya (2011) apprise the effect of monetary policy instrument on balance of payments in Nigeria over the period of 1986-2009. The study adopted ordinary least square technique. The study showed that monetary policy have impressed the implementation of various policy initiatives and has therefore experienced sustained expansion over the years. They noted that the implication of this finding is that monetary policy has significant influence in maintaining price stability within Nigeria economy. The study concluded that for monetary policy to output performance, there is the need to reduce the excessive expenditure of the government and align fiscal policy along with monetary policy measure.

Unaimikogho and Enoima (2011) evaluate the effect of monetary policy instrument on balance of payments in Nigeria with a simulation equation model 1986-1997 using ordinary least square estimation technique of data analysis, the study found that both policies contribute significantly to balance of payment. They concluded that monetary variable is more effective and dependable than fiscal variable in affecting changes in economic activates.

Nneka (2013) examined the effect of monetary policy instrument on balance of payment for time frame 1980-2009. She noted that main focus of monetary policy in relation to the balance of payment has always been the stimulation of output, employment and the promotion of domestic and external stability. Ordinary least square estimation were used to study the models for significance, magnitudes, direction and relationship. The study revealed that money supply positively affect balance of payment output index while company lending rate, company income tax rate, inflation rate, exchange rate has a negative impact to performance of the balance of payment over the years. The recommended that expansionary policies are vital for the growth of balance of payment in Nigeria.

Bijan Aghevli and Mohsin Khan (1977) point out that in utilizing the reserve flow equation, on can use basically two methods. For a comprehensive list of references which have applied either of the two methods. One method is to estimate the reserve flow equation directly, and then check the signs and values of the estimated coefficients. For a comprehensive list of references which have estimated either the “reserve flow equation” or the “exchange market pressure equation” and have discussed signs and values of the coefficients in the context of the monetary approach to balance of payments. For a comprehensive list of references which have estimated either the “reserve flow equation” or then “exchange market pressure equation” and have not only discussed signs and values of the coefficients in the context of the monetary approach to balance of payments but also contrasted them with those as expected by the
Keynesian approach. For a comprehensive list of references which have estimated either the “reserve flow equation” or the results using quarterly data are not as strong as those using annual data. The coefficient for \(g_{p}\) is negative, but not significant and the coefficient for \(g_{m}\) is negative and significant, but well below one. Given the short-run nature of this data, the weaker results are not surprising. Bija Aghevi and Mohsin Khan (1977) use cross-sectional data to estimate both a demand for money and reserve flow equation for 39 developing countries. After checking the signs and values of coefficients for money demand they are substituted into a reserve flow equation. Then, the simulated and actual values of the change in reserves are compared.

The demand for real money balances is specified as a function of real income and the rate of inflation, where \(IP\) is defined as \((1/p)(dp/dt)\). In those countries where interest rates are variables, they are not very meaningful because they tend to be constant over substantial time periods. Results reject homogeneity in prices. The coefficient of the rate of growth in prices is significantly less than unity. What confidence should be placed in this result is uncertain. The coefficient for the rate of growth in inflation also of change in inflation. The size of the income elasticity of demand for money is too large. Aghevil and Khan argue that this is to be expected for developing economies since the public holds most of its saving in money from owing to the absence of alternative financial assets. In so far as savings increase more than proportionately with economic growth, the estimated income elasticity will exceed unity.

\[3.1\] Research Design

The design adopted for this study is the expost-factor method also called causal comparative research. This becomes necessary especially as the independent variables cannot be manipulated directly (Orji, 1996). The variables to be included in the study model include Balance of Payments (BoP) as the dependent variable and money supply, interest rate, Gross domestic product and exchange rates as explanatory variables with a view to determining the nature and extent of the relationship that exist between the dependent variable and the set of explanatory variables.

This research work will employ the multiple regression analysis based on the classical linear regression modeling (CLRM) otherwise referred to as ordinary least squares (OLS) technique. The preference for this technique is predicted on the optimal properties which it possesses such as randomness, zero mean value of the error terms, minimum variance, unbiasedness, etc (Wonnacott and Wonnacott, 1969; Koutsoyiannis, 2003; Gujarati, 2003).

\[3.2\] Model Specification

The model to be specified and estimated aims at determining whether monetary variables are central to the condition of the balance of payments in Nigeria. Model specification involves the expression of a relationship into precise mathematical forms in order to estimate empirically a meaningful relationship between the phenomena being studied. As stated in Koutsoyiannis (2003), “Economic theory may or may not indicate the precise mathematical form of a relationship or the number of equations to be included in a model”. Against this background this study will employ the standard model of the monetary approach to the balance of payments (MABP) by structurally expressing the relationship as follows:

\[
BOP = f(M_s, INTR, EXCHR, GDP)
\]

In its stochastic form, the model is specified as follows:

\[
BOP = b_0 + b_1M_s + b_2INTR + b_3EXCHR + b_4GDP + U_t
\]

While the log-linear function of the model is specified in the manner:

\[
\text{Log}BOP = loga_0 + a_1\text{log}M_s + a_2\text{log}INTR + a_3\text{log}EXCHR + a_4\text{log}GDP + u_t
\]

Where:

- \(BOP\) = Balance of payment at time \(t\)
- \(M_s\) = Money Supply
- \(INTR\) = Interest rate
- \(EXCHR\) = Exchange rate
- \(GDP\) = Gross Domestic Product
- \(U_t\) = Stochastic error term
- \(b_0\) = constant term
- \(b_1, b_2, b_3, \text{and} b_4 = \text{Coefficients to be estimated}\)

A priori expectation: \((b_1, b_3, b_4 > 0; b_2 < 0)\)
3.3 Estimation Procedure
At this level of research, using time series data, the researcher estimates the model with ordinary least square method. This method is preferred to others as it is best linear unbiased estimator, minimum variance, zero mean value of the random terms, etc (Koutsoyiannis 2003).
In the preliminary test, the following tests shall be conducted. They include:
- Unit root test
- Granger Causality test
- Co-integration test

3.4 Sources of Data
The data for this research was being gleaned between 1986-2012 from the following sources.
- Central bank of Nigeria (CBN) economic and financial review for various years.
- Central bank of Nigeria (CBN) statistical bulletin for various years.
- Central bank of Nigeria (CBN) Annual report and statement of Account for various years.
- Federal office of statistics (FOS) publications for various years.
- International Bank for reconstruction and Development (World Bank) word tables for various years.
- Official publications and reports as well as authoritative and non-official journals and periodicals.

4.1: OLS Regression Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>2593854.</td>
<td>2300639.</td>
<td>1.127449</td>
<td>0.2717</td>
</tr>
<tr>
<td>M2</td>
<td>2.637107</td>
<td>0.217018</td>
<td>12.15157</td>
<td>0.0000</td>
</tr>
<tr>
<td>GDP</td>
<td>-2.737145</td>
<td>0.650288</td>
<td>-4.209128</td>
<td>0.0004</td>
</tr>
<tr>
<td>EXCR</td>
<td>39531.06</td>
<td>15305.19</td>
<td>2.582854</td>
<td>0.0170</td>
</tr>
<tr>
<td>INT</td>
<td>-152578.3</td>
<td>126068.7</td>
<td>-1.210280</td>
<td>0.2390</td>
</tr>
</tbody>
</table>

| Source: | R^2 = 0.961813, F-Statistics =138.5293 and Durbin-Watson Statistics = 1.897688, t- Critical value at 5% = α /\_2 = 2.074 with reference to n-k, where n is the number of observation = 27 and k is the number of parameters = 5: 27 - 5 = 22. F- Critical = k-1 and n-k value. Where k = 5-1 = 4 and k-n = 24: (4, 22) F_{0.05} = 2.82. |
initial expectation because theoretically, the sign of the coefficients are expected to be positive (i.e. directional relationship with that of Nigerian Balance of payment (BOP). The implication is that an economy with a good Broad money supply (M2) that satisfied and sufficient to her economic sector activities and other globalization affair in her stock exchange market, real sector out, services and technology will experience increase in her Nigerian Balance of payment (BOP) as a trade transactions through which balance of payment become favorable to the domestic developing country like Nigeria. This could be as a result of positive increase form Trade liberalization policy adopted by the country, Net Flow of Capital (NFC) and Total inflow of capital (TIC) growth rate in Nigeria. If this hold, then Nigerian economy will always and equally experienced higher aggregate output contribution from the productive sector since Broad money supply (M2) and Exchange Rate (EXC) as credit to real economic sectors is made avertable, which in turn will results to positive economic growth. Thus, the variable (M2 and EXC) were statistically significant to the study at 5 percent significance level.

The coefficient of Interest Rate (INT) and Gross domestic product (GDP) shows that there exists a negative relationship with the Nigerian Balance of payment (BOP). This implies that a percent change (increase) in Interest Rate (INT) and Gross domestic product (GDP) (i.e. once the economic domestic cost of capital percent and productive sector) that will determine the level of international transactions by the Nigerian economies units as well as the turnover on proffer investment in the Nigeria stock market decrease, then, this will brought about change (decrease) in the Nigerian Balance of payment (BOP) by (-2.737145, -152578.3) percent respectively.

However, the regression results reveal that about 96% of the systematic variation in the dependent variable (BOP) is explained by the four independent variables i.e. Gross domestic product (GDP), Broad money supply (M2), Exchange Rate (EXC), and Interest Rate (INT). While the variables not capture in the model accounted about 4%, which was accesses by the error term. Based on this, we conclude that the mode had a good fit and could be used for forecasting. The F value is 138.5293 significant at the 5% level, showing that there is a linear relationship between the GDP and the four independent variables. On the basis of a-priori expectation, all the coefficient of the variables used had their right sign. In other words, they were correct and positively signed in line with the initial assumption. The implication is that a unit increase in any of the independent variables used, will led to an increase in the GDP respectively.

4.2 Co-integration Test result
There is a long run relationship between the DGDP and the explanatory variables; DM2, DEXC, DINT, and DBOP was the null hypothesis to be tested in this test. Firstly, the summary of the Johansen Co-integration Test result is shown below. The model with lag 1 was chosen with the linear deterministic test assumption.

In table 4.3 Under the Johansen Co-integration Test, there are five co-integrated vectors. In Johansen’s Method, the eigenvalue statistic is used to determine whether co-integrated variables exist. Viewing from the Max-Eigen statistics; here all the variables used in their absolute value terms (i.e. 108.6833 D(BOP), 59.46379 D(EXCR), 31.76256 D(INT), 16.46609 D(M2) and 6.081582D (GDP) were greater than their 5% critical values (i.e. 69.81889, 47.85613, 29.79707, 15.49471 and 3.841466) respectively. Also, their eigenvalues are significantly greater than zero except. In other words, the null hypothesis of no co-integration among the variables is rejected since at least all the variables in the five equations at 5% were statistically significant. The test result shows the existence of a long-run equilibrium relationship among the variables.

4.3 Evaluation of Working Hypothesis
The working hypotheses of the study are stated as follows:

Hypotheses I

H0: Variation in the Broad money supply (M2) does not significantly affect Nigerian Balance of payment (BOP).

In this section we look at how changes (increase level) of Broad money supply (M2) affect, significantly (increase) the Nigerian Balance of payment (BOP). Viewing the ordinary least squared result which was used to tested the hypothesis, it was observed that M2 indeed past the individual test of significance at 5% significance and has their right sign. Thus the individual test for M2 t-value are (12.15157) greater than the 5% -critical value of (2.074). In other words, the VARIATION (increase) level of M2 significantly affects the 12.15157 by 12 percent in the course of this study examination. Therefore, we reject the null
hypothesis one of this study and accept that variation in the Broad money supply (M2) does significantly affect Nigerian Balance of payment (BOP).

**Hypotheses II**

H\(_0\): Innovation in exchange rate does not significantly affect Nigerian Balance of payment (BOP).

Having employed all necessary statistical and diagnostic tests, the hypothesis can be evaluated from the result that has been obtained. Hence the researcher has indeed explained the result in order to show if it has actually satisfied the hypothesis that was stated in chapter one of this study. From the analyses in this study, we observed that some of the independent variables were statistically significant, as well as theoretically (a-priori assumptions) satisfied indicating that other things be quall, they have significant effect and significantly affect Nigerian Balance of payment (BOP) satisfied.

However, the above hypothesis two of this study employed table 2 (i.e. OLS results) and 3 (i.e. co-integration results) to test the theoretically (a-priori assumptions) satisfaction as stated above. Thus, table 1, shows that exchange rate (EXCR) has positive relationship from the result. This means that as EXCR increase in Nigeria, then BOP increase. While the results from the table 3, it is reported in normalized co-integrating adjusted coefficients that the sign borne by the coefficient of exchange rate (EXCR) estimated was also positive and indeed past the individual test of significance at 5% significance and has their right sign. Thus, we reject this hypothesis two and accept the alternative hypothesis.

**Hypotheses III**

H\(_0\): Development in the interest rate does not significantly affect Nigerian Balance of payment (BOP).

If we employed the Summary Statistics of the entire model used in this study (i.e. OLS, and Co-integration test) results, the null hypothesis three of this study must be accepted. Reason been that interest rate does not in any of the model significant to the study, for the real exchange rate to affect economic activities is applicable to Nigerian economy.

### 5.1 SUMMARY OF FINDINGS

This study empirically analyses the effect of monetary policy variables on Nigeria’s balance of payments, it also provides answers to the nature of the relationship between balance of payment and monetary policy using Nigerian data. In order to gain a better understanding of this relationship, some theoretical aspect of the topic were evaluated. This was through an in depth analysis of the theory of monetary policy and balance of payments. We also formulated a balance of payment model in order to know if there exists a statistical relationship between the two variables, using ordinary least square technique we estimated the model. From the result obtained, we discovered that there exist a positive and a statistically insignificant relationship between monetary policy and balance of payment. The result further shows a negative and statistically significant relationship between openness of the economy and balance of payment, while they exist a positive and statistically significant relationship between monetary policy and balance of payment.

### 5.2 RECOMMENDATIONS

1. The Central Bank of Nigeria (CBN) should intensify the process of regular monitoring of the operation of deposit money banks to ensure compliance with prudent guidelines and promote transparency in the banking operations.
2. The government should protect infant industries through the following ways: by raising high tariff on those goods that are produced outside the country, encourage import substitution, support local industries and manufacturing sector by giving them incentives such as, Tax holiday etc;
3. The government should embark on efficient and effective expenditure switching policy or devaluation of Nigeria Currency (Naira), as devaluation of the country’s currency will make exports cheaper and imports more expensive, thus, leading to a favourable balance of payments position in the country.
4. It should be noted that despite the efforts of the Central Bank of Nigeria in trying to use monetary policy in ensuring balance of payments stability in Nigeria, it has not made the desired impact with regards to the stabilization of the balance of payments position in the country.
5. For monetary policy to be effective in ensuring stability in the balance of payments position of the economy, it should be complemented with an effective fiscal policy.
6. Our external sector problem has to be tackled simultaneously form two angles namely: boosting supply of goods and other services to other economies and managing demand. In this regard, debt service ratio has to be looked at so that it does not become so high as to erode the stability of domestic economy. Also, frivolous imports should be cut down to free more resources for meaningful investments.
7. Appropriate monitoring machinery should be set up at the levels of the Central Bank, National Planning Commission, Federal Office of Statistics, Federal Ministry of Industries and the Custom Department to ensure that foreign exchange and available credit are properly allocated and not abused.

8. For policy makers when looking for policy instruments to correct the disequilibrium in balance of payment, authorities should give equal attention to other policy levels instead of relying solely on monetary tools to attain stability in the country’s balance of payments account. For further studies it is recommended that a much larger sample size than the one adopted for this research should be used. In addition other non-monetary variables such as domestic credit, and Government expenditure should be included to achieve a comprehensive picture of variables that significantly affect balance of payments.

5.3 CONCLUSION
In conclusion, this work examines effect of monetary policy variables on Nigeria’s balance of payments from 1986 - 2012. Balance of payments position of any country is one of the indicators of economic growth and as such countries try to make sure that they realize favourable balance for payments position. The research presents monetary policy as a key component of any pro-growth economic strategy. In Nigeria, the design and implementation of monetary policy is the responsibility of the Central Bank of Nigeria (CBN). In line with the above, monetary policy as an intervention strategy by the CBN is aimed primarily at maintenance of price stability and balance of payments (BOP) equilibrium whereas the promotion of economic growth and full employment are secondary. Therefore, it is the responsibility of the government to initiate policies that will guide against political tussles and instability. Based on this, the following recommendations were made:

REFERENCES