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DOES MONETARY POLICY PREDICT ECONOMIC DEVELOPMENT IN NIGERIA?

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Abstract

This paper examines if Monetary Policies could predict economic development among developing economies using Nigeria as a case study. This study adopted both the content analysis and the descriptive research approach. Data were gathered from the statistical bulletins/releases of relevant government agencies such as Central Bank of Nigeria and Federal Office of Statistics.Analyses of data were done using the Linear Regression. The linear regression result showed that there is a positive and significant relationship between monetary policy and Gross Domestic Product (GDP), External Reserves and Capital Expenditure. The paper recommends among other things that developing economies should implement monetary policies that could ensue that enough funds are available for diversification of the economic base. Nigeria should pursue a deliberate monetary policy that will encourage a virile productive sector that will support favourable and rapid growth in GDP, external reserve and capital expenditure.The monetary authorities should also pursue policies that encourage availability of funds to support other factors of production needed to engendersustainable economic development.

Keywords: Monetary policy, Economic Development,Developing Economy, GDP, External Reserve, Capital Expenditure

i. INTRODUCTION

Background of the Study

For most economies, the objectives of monetary policy include price stability, maintenance of balance of payments equilibrium, promotion of employment and output growth, sustainable development. These objectives are necessary for the attainment of internal and external balance and the promotion of long run economic growth. The importance of price stability derives from the harmful effect of price volatility which undermines the objectives. This is indeed a general consensus that domestic price fluctuations undermine the role of monetary values as a store of value and frustrate investments and growth. Monetary policy is nothing but a deliberate attempt to control the money supply and credit conditions for the purpose of achieving certain broad economic objectives.

In general, most money authorities or central banks have confirmed the long run inverse relationship between inflation, growth and productivity. When decomposed into its components, that is growth due to capital accumulation, productivity growth and the growth rate of the labor force, the negative association between inflation and growth has been traced to the strong negative relationship between it and capital accumulation as well as productivity growth respectively. The importance of these empirical findings is that stable prices are essential for growth. The success of monetary policy depends on the operating economic environment, the institutional framework adopted, and the implementation of monetary policy is the responsibility of the central bank of Nigeria (CBN). The 1958 act established by central bank of Nigeria gives it the following specific functions (which have endured the 2007 CBN Act).Issuance of legal tender currency, maintenance of Nigeria's external reserve, safeguarding the international value of the currency, promoting monetary stability and a sound and efficient financial system and acting as banker and financial adviser to the federal government

However, the current monetary policy framework focuses on the maintenance of price stability and growth. The performance of monetary policy depends on some legal framework upon which it operates. The legal frameworks are quantitative general or indirect and second, qualitative selective or direct. The effect effects the level of aggregate demand through the supply of money, cost of money and availability of credit. Out of the two types of instruments, the first category include bank are variations, open market operation, and required reserve ratio. They are meant to regulate the overall level of credit in the economy through commercial bank. The selective credit control aims at controlling specific types of credit. This includes changing margin, requirement and regulation of consumer's credit (M.L Jhingan, 2003). Monetary policies have proven to be the most visible instrument for achieving medium term stabilization objectives (CBN guideline 2002). Indeed, monetary policy formulation and implementation emerged as a critical government responsibility so that the economy does not go astray.

Generally, the primary objectives of monetary policy is concerned with application of expansionary monetary policy measures during economic recession and contractionary monetary policy controls money supply because it is believed that its rate of growth has an effect on inflation. This basic aim of monetary policies is not to aggregate themselves but the aggregate in the real sectors of the economy such as, level of capital price stabilization and economic development. Policies are designed in order to change the trend of some monetary variables in particular direction so as to induce the desired behavioral change in the monetary policy. The central bank's role is to conduct appropriate monetary policy that is consistent with the main economic objectives that will help the growth of gross domestic product(GDP) sustainable inflation are stable balance of payment position. This is done by putting in place the direct or indirect monetary approach so as to control monetary trends. Monetary policy influences the macroeconomic objectives because it is believed that there occurs a relationship between the real variables. Monetary policy affects all aspect of our economic and financial decision whether to build a house, start up a business, whether to send one's child to school or to make the child learn trade. Monetary policy tries to influence the implementation of the economy as reflected in key macro-economic indicators like inflation, GDP and employment. It works by affecting aggregate demand across the economy, that is, individuals' and firms' willingness and stability to spend on goods and services. In doing this, monetary policy has two fundamental goals to promote maximum sustainable output and employment and to maintain sustainable price level in the economy.

However, the job of stabilizing output in the short run and promoting price stability in the long run involves several steps first, the central banks to estimate how the economy is doing now and how it is likely to do in the medium term, then, it compares this estimates to its goals for the output and the price level, if there is a gap between the estimates and the goals, the CBN have to decide on how to forcefully and swiftly to act to close the gap. So to get a reasonable estimate of the current and medium term economic conditions, the central bank tries to find out what the most relevant economic developments such as government spending, economic conditions abroad, financial conditions at home and the use of new technologies. It is against this background that this study is set to determine monetary policy implementation and its effect in Nigeria economy from 1994-2013.

Statement of Problem

Government all over the world formulate guidelines geared towards the enhancement and development of policy variable designed to ensure the achievement and maintenance of price level stability, balance of payment equilibrium, high and stable rate of economic growth, full employment and equitable distribution of income, these are the instruments of central bank in controlling the activities and operations of commercial banks in other to achieve the macroeconomic objective. In fact, commercial banks are reluctant in their responsibility to comply with the rules and regulations set by the central bank such as Open Market Operation (OMO), Required Reserve Ratio (RRR) bank rate, liquidity ratio, selective credit control and moral suasion. The guidelines helped in setting of the interest rates charged by the commercial banks, sales or purchases of securities to control the money supply, and changes in the required reserve ratios of banks and financial institutions. The CBN guideline on monetary policy works through the effect of the cost and availability of loans to real activity, and through this on inflation, and on international capital movement and thus on exchange rate. Central bank of Nigeria and the federal government's formulation and implementation of the monetary policy more or less finds its ultimate translation to the economy in real terms.

Objectives of the Study

The broad objective of the study is to examine the Impact of Central Bank of Nigerian Monetary Policy Implementation on Nigeria economy. Other specific objectives of the study are:

1. To assess the effect of Money Supply on Gross Domestic Product (GDP).
2. To determine the impact of Money Supply on Nigerian External Reserves.
3. To appraise the effect of Money Supply on Capital Expenditure.

Research Questions

The following research questions are developed to achieve the study objectives:

3. What is the impact of Money Supply on Gross Domestic Product (GDP)?
4. To what extent does money supply affects external reserve?
5. What is the impact of money supply on Capital Expenditure?

Statement of Hypotheses

The controversy bothering whether or not monetary policy measures actual impact on the Nigerian economy is based on the statement of the problems and objectives

1. Money Supply does not significantly impact GDP
2. Money supply does not significantly affect External reserve
3. Money supply does not significantly impact Capital Expenditure.

ii. Review of Related Literature

Conceptual Framework

Definition of Monetary Policy

Monetary policy is defined by the central bank of Nigeria (CBN) as combination of measures designed to regulate value supply and cost of money in an economy, in consonance with the level of economic activities. Odufalu (1994) defined monetary policy as the combination of measures taken by monetary authorities(e.g. the CBN and the ministry of finance) to influence directly or indirectly both the supply of money and credit to the economy and the structure of interest rate for economic growth, price stability and balance of payment equilibrium. He added that the CBN is empowered by the decree of 1991 act, to formulate and implement monetary policy in Nigeria, in consultation with the ministry of finance subject to the approval of the president.

Falegan (1995) defines monetary policy as financial measures which deal with the discretionary control of money supply and credit by monetary authorities in order to achieve some desired objectives. According to Okoro (2004) monetary policy generally refers to a combination of measures designed to regulate the value, supply and cost of money in an economy in line with the expected level of economic activity.Ugbaja (2002) sees monetary policy as the use of money instruments to control the volume of money in circulation as well as the level of'economic activities. He added that it is the deliberate effort by the monetary authorities to control the money supply and credit condition for the purpose of achieving certain broad economic objectives. In general, monetary policy is a major economic stabilization weapon which involves measures designed to control and regulates the volume, cost availability, direction of money and credit in an economy to achieve some specific macroeconomic policy objectives. From the definitions above, it could be agreed that the aims of monetary policy are basically to control inflation, maintain a healthy balance of payment, position in order to safeguard the external value of the national currency and promote an adequate and sustainable level of economic development.

Objectives of Monetary Policy

In many parts of the world today, the objectives of monetary policy have transcended the traditional function of maintaining a stable exchange rate and avoiding business cycles. Explicitly, governments seek to use monetary policy as aid in the growth of output, income and employment, maintenance of stable domestic price levels and the strengthening of balance of payments. Nigeria monetary policy since independence has been geared towards the following objectives:

1) Maintaining domestic wages and price stability.

2) Creating full employment opportunities
3) Stabilizing the naira exchange rate

Paldo (1975) explains that maintenance of relative price stability aims at controlling the level of money supply to guard against inflation. Since the supply of money is directly related to the price level, it behooves the governments to control the supply of money and forestall the devastating effect of inflation or deflation using monetary policy. The economic growth is measured in the direction of the gross domestic product (GDP), thus Falegan (1995) asserts that an expansionary monetary policy resulting in an increase in money supply will expand output and aggregate demand.

The objective of achieving full employment is predicted on the fact that an expansion of money supply leads directly to increase in expenditure on goods and services. This increase will be met by employing more labor. However, Falegan (1995) remarks that the motion of full employment does not mean absence of unemployed labor in the economy. Monetary policy also aims at achieving an equilibrium in the balance of payment position by discouraging importation and foreign borrowing. Pawley (1993) submits that exchange rate stability can be achieved through effective monetary policy by restrictive measures aimed at reducing the volume of money in circulation as well as inflationary level. This will give the domestic currency relative advantage over foreign currencies. Furthermore, he states that promotion of free market economy can also be achieved through deregulation of interest rate and other monetary control measures, this will move the economy towards liberalization and this means that the institutional regulations in both money and capital market should be removed to allow market forces to determine the position of the economy at any given period.

The Monetary Authorities

The monetary authorities in Nigeria currently comprise of the central bank of Nigeria (CBN) and the ministry of finance both of which are agencies of the federal government (Chukwu, 2000) says that while the central banks exercise primary responsibility for articulating, implementing and appraising monetary policy, the banks authority is exercised subject to appropriate consultation with the government which has legal power to override the bank's proposal or actions. Hence the government rather than the central bank has overall responsibility for the economy, there will be times when the priorities of the government may not be entirely consistent with the thrust of monetary policy as viewed by the central bank. In current Nigeria settings, the success of monetary policy hinges crucially on the extent to which the budget is initiated. This is due to the critical role of the government in the economy and for this reason; the government has continued to be the largest source of liquidity growth in the system. The monetary policy in Nigeria is best understood from the stance of the mandate set for the banks.

Instrument of Monetary Policy

In 1993 when open market operation (OMO) was introduced, the CBN relied exclusively on varying combinations of direct instruments of monetary control from time to time. These instruments are credit ceilings, sectoral credit allocation, interest rate control, imposition of special deposits moral suasion movement of government deposits, stabilization securities and exchange controls. As the financial market deepens over time as a consequence of the economy –wide macroeconomic reforms that commenced mid 1980's, the CBN stated the process of shifting from the use of direct instruments to market based instruments.The most significant move in the new direction came in June 1993 when the bank introduced (OMO). The market-based tools includes in addition to OMO, reserve requirements which specifies the proportion of a bank's total deposits liabilities that should be kept with the central bank and discount window operations under which the central banks performs the role of lender of last resort to the deposit money banks. Open market operation may be undertaken through outright transactions through repurchase transactions. Repurchase transactions are temporary and are usually reserved a the expiration of the contract, where a party purchases securities and gives out cash with agreement to sell securities back at a later date with some financial consideration repo agreement is in place. On the other hand, if securities have been sold to a party and cash taken with agreement to purch. se the securities at a later date with some interest, a reversed repo transaction is deemed to be in place, currently OMO is the major instrument of monetary policy at CBN, other supporting instruments are discount window operation, moral suasion, forex sales and the standing facility introduced in December 2006.

Monetary policy instruments used indirect control regime have evolved over the years with the monetary authority time-turning than as directed by treads in the economy especially the overall money aggregates. Such major instruments are:

1. Bank Interest Rate

This is the rate at which the banks lend money to the public. Since the bank rate is to the commercial banks, the cost of borrowing from the CBN, he higher the rate, the lesser the ability of the banks to borrow a larger amount from the CBN, as a result the market forces of demand and supply will have to set in. According to Ojo (1999) the use of bank rate as an instrument of monetary policy is based on two assumptions:

That the bank rate can influence all other rates in the economy and that the demand for money is interest elastic.Therefore, when the bank rate is high, the commercial banks are discouraged from borrowing huge sums of money from CBN. Conversely, the bank rate is reduced when the CBN wants to increase and lending capacity and the volume of money in circulation.

2. Moral Suasion

This involves the use of appeals of persuasion by the monetary authority on banks asking them to operate in a particular discretion for the achievement of specified government objectives. Subject to persuasion are usually discussed through formal meetings of committees or seminars. According, to Ojo(1999) the CBN intensified the use of moral suasion in 1993 by holding more dialogue with banks, other financial institutions and agencies on monetary policy measures in order to enhance performance. Included also here is the discount window operations which are transactions carried out at the window in the form of short term, largely overnight loans, collaterized by the borrowing institutions holdings of the government debt instruments and the CBN securities and other eligible first class securities approved by CBN.

3. Discount (Rediscount) Policy

It refers to the condition under which and how much the CBN lends to commercial banks in forming its rate as a lender of last resort. It primarily involves changes in the discount rate (for minimum rediscount ration MRR) and affects the volume of loans to the banks. And to monetary base and expand the money supply, a fall in discount rate reduces the monetary base and shrinks the money supply. The CBN facility at which discount loans or discounts are made to banks is called the "Discount window" the MPR is also used to influence the level and direction of other rates determines whether the commercial bank is adopting a policy of monetary ease or monetary restraint. The MRR is currently fixed at 18.5 percent.

3. Open Market Operation (OMO)

This involves the sale and purchase of government securities such as Nigerian treasury bills, treasury certificate and development stock by the monetary authority. CBN in 2002 introduced another monetary instrument known as CBN certificate to compliment the use of government security. The CBN certificate is different from other instrument in the sense that, it cannot be discounted for, this is to enhance the efficiency of monetary policy actions, given instability the only available treasury. According to Pawley (1993), when the monetary authority perceive inflation, it will sell securities to banks so as to reduce their liquidity and lending capacity. Ultimately, the volume of money in circulation falls and vice versa.

Central Bank of Nigeria requires the banking institutions to always maintain a stipulated proportion of their assets or reserves in cash. The purpose of which is to ensure adequate liquidity for the banks at all times. Ugbaja (2000) submits that when the CBN wants to reduce the money supply and liquidity of banks, it will increase the reserve ratio which the effect is reduction in the ability of banks to lend out money to borrowers and vice versa. For example, if the maximum deposits that could be created by the banking system from any additional deposit is equal to the reciprocal of the reserve ratio multiplied by that change in deposit. However; it is the state of the economy that will determine the direction to which the monetary authorities would move the reserve ratio.

4. Reserve Requirements

Cash and liquid assets are the requirement imposed by the CBN that commercial banks must hold at a certain amount or reserves. It is the minimum amount of reserve (or eligible liquid asset) that commercial banks must hold in proportion to total deposit liabilities. For each category of the deposit liabilities, a rise in the cash ratio or liquid ration reduces the amount of deposit that can be supported by a given level of monetary base and will lead to contraction of the money supply. Conversely, a fall in the ratio leads to an expansion of the money supply because more multiple deposit creation can take place. The reserve required is currently by the CBN fixed at 12.5 percent for cash reserve ratio. However, for those in the bank that shows evidence that 20 percent outstanding loan is to real sector, the cash reserve r itio has been reduced.

5. CBN-Certificates

This was issued for three liquidity first time in ear 2001 to mop up the excess liquidity generated by the rapid monetization of the windfall going from the crude oil receipts, it will be issued as the need arises to traditional monetary policy tool t contain growth in liquidity to desired level (CBN Guideline, 2002)

6. National Savings Certificate

This is medium for long term securities intended to broaden and offer alternative investment options for both banks and the public. It is used to supplement effort at managing on a more sustainable basis, the persistence excess liquidity on the economy while facilitating savings and investment growth.

Impact of Money Supply on Gross Domestic Products (GDP)

A critical study of the statistical records of the ultimate policy goals of Nigeria economy position revealed that;

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a. Broad money (M2); broad money supply(M2) grew by 0.7 percent at the end of the first half of 2013 relative to the level at end-December, 2012. When annualized, M2 grew by 1.4 percent compared with the growth of 2.7 percent at the end of corresponding half of 2012. The growth in money supply reflected, wholly, the 4.7 percent increase in domestic credit(net), which more than, offset the effect of the decline in net foreign assets of the banking system.

b. Narrow money (M1); Narrow money (M1), fell by 6.5 percent to ₦6,939.6billion, compared with the decline of 2.5 percent at the end of the corresponding half of 2012. The development was due to the respective decline of 13.3 percent and 5.0 percent in the currency and demand deposit components.

c. Quasi money(QM); Quasi money grew by 7.3 percent to ₦8,653.6billion at the end of the review period compared with 5.4 percent growth recorded in the first half of 2012. The growth in the QM was attributed to the growth in all the components of QM, particularly the strong growth of 9.4 percent in foreign currency deposits (FCD) with commercial banks. The strong growth in (FCD) during the period may be indicative of possible currency situation taking in the economy FCD as a ratio of QM rose from 3.0 percent in June 2012 to 33.8 percent in December 2012 and further to 34.5 percent at the end of June 2013. As a ratio of broad money (M2), FCD stood at 19.1 percent at the end of June 2013, compared with 15.3 and 17.6 percent at end -June and end-December 2012 respectively.

d. Currency in circulation (CIC); Currency in circulation at end-December 2012 was ₦1,631,72billion representing an increase of 4.2 percent above the level in 2011. Relation to the level at end-December 2012, currency in circulation fell by 12.6 percent to ₦1,425.5billion at the end of the first half of 2013. When compared with the level at the end of corresponding period of 2012, it fell by 4.5 percent. Further analysis showed that currency outside bank (COB) fell by 13.3 percent, compared with the decline of 12.6 percent at the end of the corresponding half of 2012. Thus, COB to M2 ratio (COB/M2) stood at 7.2 percent, down from 8.1 percent at the end of the corresponding period of 2012. The lower COB/M2 ratio and the ratio of CIC to nominal GDP, which measures the moneys of the economy, continued its downward trend, from 4.3 percent in 2011 to 4.0 percent in 2012. The lower COB/M2 ratio and the decline in the CIC/GDP ratio reflected increased confidence in the use of non-cash or e-payment means of payment in the country.

Relevance of Monetary policy on Capital Expenditure

Government expenditures are used to provide public goods and services to the populace though which economic growth is induced. Public expenditures are classified into two broad themes namely; recurrent and capital expenditures. Recurrent expenditures are goods, which include all consumption items that occur in a year, they are payments for non-repayable transactions such as salaries, wages and allowances. Capital expenditure relates to payment for the use of non-financial assets used in production process which contribute to long-term development. Example of capital expenditure, include spending on health, education, roads, electricity, agriculture. Public expenditure affects private sector productivity through the accumulation of infrastructure and human capital. Therefore, the structure of expenditure has implications for economic growth. There is also a growing recognition that as a prerequisite to the pursuit of sustainable fiscal policies, the quality of government expenditure needs to be improved (Premchand, 2001). This improvement involves largely higher expenditure on productive sectors like education, health and agriculture while reducing unproductive expenditure including a reduction in the wage bill. However, as Roubini and Sachs (1989) noted "in periods of restrictive policies…capital expenditure are the first to be reduced (often drastically)" therefore, the use of expenditure restraint to achieve the goals of fiscal adjustment requires that expenditure be reduced in a way that does not compromise growth since some components of government expenditure are more productive than others. In other words, the achievement of sustainable fiscal reduction is not aided by arbitrary cost cutting of expenditure. Growth enhancing sectors must be protected from across the board spending cuts so that fiscal adjustment will not be an illusion (Easterly, 1999). The long-term consequences of government spending depend, therefore, heavily on the balance between capital and recurrent expenditure in relation to current revenue of government and on the quality of individual spending decisions.

Challenges of monetary policy implementation and its effect in Nigeria.

Monetary policy implementation in Nigeria faces enormous challenges which include:

1. quality of data: one of the major challenges is the paucity of high quality data, non-availability of high frequency data and untimely data on some key macroeconomics aggregates like quarterly data on gross domestic product (gdp) and others required for policy inputs purpose. inefficient ict network system between the cbn and dbms is also another hindrance to availability of real time quality data.
2. conflicting government policies: some government policies conflict with each other and hence hinder the objectives of monetary policy. there are situations where government will set single digit inflation rate for the economy and double digit output growth rate, or expect low level of lending rates for the rest of the economy while governments is borrowing at high interest rate.

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3. conflicting multiple objectives of monetary policy: the achievement of multiple objective of monetary policy in nigeria namely, price stability, high output growth, sustainable positive external balance and low employment are all challenges. there is the difficulty of achieving a good mix and balance on which of the objective should be given more attention at a particular time. this is due to the fact that it is difficult to achieve all the objectives of monetary policy simultaneously as there is bound to be conflict.
4. expansionary fiscal operation of the three tiers of government: some of the activities of fiscal operations like regular monetization of parts of excess crude oil earnings, government borrowing, bunched implementation of fiscal budget and other government's fiscal operation finance action which was not originally planned for implementation.
5. liquidity surfeit in the system: excess credit /money creation by the dmb's and the monetization of oil receipts for the revenue shared to the three tiers of government as well as other expansionary fiscal operation led to liquidity surfeit. liquidity surfeit is a major challenge because it exerts pressure on the monetary authorities to ensure that the liquidity in the system is consistent with desired level of macroeconomic stability is set out to achieve.
6. developing fiscal system: some characteristics of our financial system like predominantly cash-based payment system impair the transmission mechanisms of the monetary policy instruments.
7. time inconsistency: time inconsistency arises from long and variable lags, it takes monetary policy actions to impact on the macroeconomics objective targeted for example, impacts on output is short term while impact on inflation is long term. political authorities seek to exploit short-term growth gains at expense of long term inflation malaise. the time lag between when monetary policy actions are taken and the period before the affects the real economy and other conflicting action within the interval is also a daunting challenge.
8. balancing the goal of financial stability and macroeconomic stability: the monetary policy actions of cbn faces the challenge of balancing the achievement of the goal of financial stability and macroeconomic stability as they complement each other as none of them could be subordinated. however, prevailing economic condition would aid which one is given more priority at a particular time. there is also another issue of aligning monetary operations to policy stance.
9. structural rigidities and bottlenecks: structural rigidities and bottlenecks like infrastructural deficiencies in habits responsiveness of the economy to monetary policy actions.

10. oligopolistic banking sector: the prevalence of oligopolistic banking sector where a few banks control the liquidity and dictates the pace of markets activities is also a challenge as it has inhibited the deepening of the interbank market activities.
11. market segmentation: money and foreign exchange markets, the market arbitraging prevalent in the nigeria economy is also another challenge in monetary policy.
12. mono cultural economy: the high dependent of the economy on oil receipts makes it vulnerable to external shock and thus affects monetary policy objectives adversely.

Empirical Review

Some studies which have been carried out on some related topic to this study are:
Yaaba (2012) studied "Is Monetary Policy Responsive to External Reserves? ": An empirical evidence from Nigeria. The study was applied Autoregressive Distribution Lag (ARDL) approach to an extended version of the Taylor type rule to estimate the monetary policy reaction to external reserves. The study reveals that the central bank of Nigeria reacts to changes in the level of external reserves and exchange rate in addition to output gap, thereby rendering the cogent conventional Taylor rule inadequate to assess the monetary policy reaction function of the Central Bank of Nigeria. The global economy has witnessed extraordinary reserves, following the Asian financial arises of the 1990's.

External reserves of the whole world increased sharply from US $1.2 trillion in 1995 to over US $10.0 trillion in January 2012. Developing countries increased their share from 30.0 percent in 1990 to 67.0 percent in 2011. Nigeria is included in the trend as external reserves grew from US $5.5billion in 1999 to US $34.68billion in March 2012, representing over 530 percent increase within the period. The study of Autoregression Distributed Lag justifies the modification of the rule to incorporate other variables in addition to inflation and output to capture the reaction of monetary policy to developments in the economy. The study also validates the interest rate smoothing, showing that the Central Bank of Nigeria is concerned with costs associated with interest rate variability.Reacting to this phenomenal increase in Nigeria's reserves, that places Nigeria in such a strategic position, there is the need to examine, if the monetary authority considers this colossal changes in the level of reserves, in its monetary policy decision making. In other words, does the Central Bank of Nigeria respond or react to changes in the level of external reserves? This study is, therefore, an attempt to examine the link between external reserves and monetary policy with emphasis on the reactionary tendencies, to not only change in the general price level and output, but also to changes in external reserves accumulation. This will, to a large extent, assist policy makers and players in the financial market, predicts the possible future path of monetary policy, using developments in both the domestic economy and in the economy of Nigeria's major trading partner.

Theoretical Framework

Monetary Policy Rules: Taylor's Framework

Taylor (1993) in Yaaba (2012) deduced a rule-based framework based on the observed behaviour of the Fed as its inflation and growth of risks. He argues that the rule can be derived from the quantity theory of money, assuming a constant velocity of money. The simple original framework of the Taylor rule is marred by many shortcomings.Prominent among them are: first, considering the changing role of central banks, variables other than the inflation and output gaps are as important for monetary policy decision making.Secondly, Ball (1999) in Yaaba(2012) argues that the optimal monetary policy rule in an open economy is a function of not only short term interest rate, but also exchange rate. This is because of the popular exchange rate channel of monetary policy transmission.

Third, the rule is developed countries may not necessarily fit the emerging and developing countries.

An Extended Monetary Policy Reaction Function

Considering the inherent weakness of the analyzed Taylor rule and following the recent work of Prakash and Willi (2011) in Baba N. Yaaba seminar says that, this study adopts a simple variant of the reaction function to examine the response of monetary policy in Nigeria to the level of external reserves, besides inflation and output changes. The extension of the monetary policy reaction function for Nigeria therefore can take the form below:

$$IR_t = B_0 + BilogR_t + B_2IF_1 + B_3Y_t + U_t$$

Where;

IR_t = is the short term interest rate

R_t = represents the external reserves

IF_t = is inflation

y_t= is the output gap

In estimating the monetary policy reaction function, the log level of external reserves is considered as against the deviation of the level of external reserves from any target used in some studies. This is, because, there is still no consensus as to what constitutes an optimum level of external reserves, hence, optimum reserves is country specific depending on the macroeconomic and political objectives of the country. Similarly, some internationally accepted ratios, such as the IMF rule of thumb and the WAMZ convergence criteria of 3 months of imports cover, the Greenspan-Guidotti's rule of converting short-term external debts as well as the Shcherbakov approach of 5-20 percent of broad money supply (M_2) are also not highly relevant here, because of their myopic emphasis. They lay emphasis on either, the current account or capital account. More so, the Greenspan-Guidotti's rule concentrates only on the external drain, without regard to internal influences (Obstfeld, 2010). The available alternatives of using the ratio of external reserves to GDP or to broad money has been criticized, due to the stock-flow inconsistency and the impact on money supply or non-uniformity of computing M_2 across countries, respectively. This is especially when the data set in a quarterly basis. The external reserves, if assumed to minimize the likely output costs in case of breakout of financial crises, when capital flows are volatile. It will also be used to maintain stability in exchange rate, so as to enhance economic growth, as well as creates employment. Central Banks, particularly in emerging and developing countries do not rely safely on policy rates, as they occasionally intervene in the money markets to influence the short term interest rate.

Monetary Policy under the Bank Consolidation Regime

It appeared that by 2004, the banking sub sector of Nigeria's financial services sector had matured to the point of being a global player. However, the fundamental of the sector's operations needed a structural reform. The existence of many comparatively small-and medium-sized operating banking institutions was perceived as inadequate for the global banking structure was no longer found adequate for global operations.As a result, the erstwhile structure to give away to a new operational system, such as universal banking, e-banking, e-business and e-commerce which had become a fruitful outcome of the nascent information and communication technology ICT) developments in Nigeria economy. These elements of financial innovation were needed in the banking industry. The resulting mergers and acquisitions in the banking services sub-sector, primarily to satisfy the new enhance minimum capital requirement were meant to pursue these economies of scale for greater profitability,, efficiency and effectiveness in the bank's services delivery in a globalized economy to the advantage of the CBN's monetary policy programming and effectiveness. The liberalization of the monetary and financial markets which had taken root from the deregulation regime needed strengthening for the effectiveness monetary policy operations of the CBN.

During the banking consolidation regime, the CBN seemed to require a strong money and financial market system for an effective monetary system, in an environment of a rapidly changing global financial structure. The conduct of monetary policy during this regime was characterized by the use of interest rate as the principal; policy input,

supported with open market operations (OMOs) stabilization monetary measures for liquidity optimization and exchange rate in the management of the securitized and collaterized finances. The minimum rediscount rate (MRR) which had been the anchor for interest rate as a policy input, was replaces in December 2006 with the more market-based monetary policy Rate (MPR)
A radical departure from the previous regime in the conduct of monetary policy during the post-bank consolidation regime is embodied in the operation of the monetary policy committee (MPC) which has been established by the central bank of Nigeria Act 2007 and chaired by the governor of the CBN. The MPC has the responsibility of setting it MPR and other monetary policy inputs after its periodic assessment of the country's macroeconomics situational report on monetary and economic conditions over its operational period in relation to the immediate proceeding period. In 2007, for example, the MPC met five times and took decisions on the level of MPR, which was changed three times in the year. MPC's decisions are also made public after each meeting of the committee.

The variability of the MPR and hence, all the interest rate structure is the hallmark of the conduct of monetary policy during the post bank consolidation regime, which is characterized by a market-driven liberalized economy. The major additional regular monetary policy inputs remain credit supply and allocation of banks, liquidity rational exchange market. The open market operations(OMO) of the CBN, which is determined at the foreign exchange rate which has become a veritable instrument of monetary policy since the early 1990s, became a more regular instrument for the liquidity management of the deposit banking institutions, especially when excess liquidity of the banking system is reported. In this regard, CBN' discount windows, as well as the re-purchase agreement enable the CBN to influence the liquidity management of the institutions in the financial market, through the deposit money banks.

The interest rates at the discount windows and for the repurchase facilities provide some mechanism through which the interest rate structure in the financial markets is influenced by the CBN booth as a result of its own innovation and in response to the development of liquidity management. For example, direct purchase by the CBN often occurs when there is need to stabilize liquidity in the financial system. This is especially so when the excels liquidity affect the government fiscal operations occurs, such as when there is disbursement of funds to the three tiers of government or where there is surplus revenue-sharing to government from excess crude oil revenue. In each of such cases, there is the tendency for the financial system to e awash with excess liquidity, thereby promoting the CBN to carry out "mopping up" operations in the financial system using stabilization securities. Such monetary challenges, not withstanding, financial deepening and intermediation efficiency improved during this era for example M2/GDP rose to 38.1% in 2008 from 22.0% in 2004.

Very significant innovation has been put in place, especially during this post-bank consolidation era in the area of monetary policy framework. In 2006, for example CBN's "standing facilities was introduced to stabilize money market rates and optimized the liquidity management of financial market operations" the "facilities" involves the deposit and lending rates which provide the rates corridors within which players dealing with securities in the financial markets are expected to operate. A very singular monetary policy innovation during this era was the replacement of minimum rediscount rate (MRR) with the monetary policy (MPR).

Monetary targeting has become an anchor of the monetary policy framework since the deregulation era, tough it was not firmly established until the post-bank consolidation regime from 2006. The monetary targeting framework hardly worked as the targets were never attained. Besides, in 2009, there was evidence that some deposit money banks' loan portfolios suffered non-performance characteristic, arising largely from inadequate supervision by the monetary authorities and information asymmetry in the bank's financial intermediation process in adverse selection and moral hazard effects. Non-fulfillment of loan contracts by large scale borrowers become a major challenge to some of the banking institutions which there are also the principal players as lenders in the credit market.

The phenomenon of non–performing loans among nine banks posed a big challenge to the CBN in 2009 in its pursuit of a suitable monetary policy and a stable financial system. The CBN has nevertheless been able to contain the challenge through its "bailout" initiative. For instance, in an interview with the Financial times of London (December 2009), the financial CBN Governor was quoted to have expressed his resolution to continue the fight to ensure that the Nigeria financial service sector particularly the banking sub-sector, would be adequately strengthened for greater efficiency and effectiveness within the private sector, without necessarily resorting to nationalization of the financial institutions. The bailout initiative in 2009 is essentially a credit option.

Moreover, from the high-lighted monetary policy episodes, so far, we have learned at least four lessons for Nigeria's monetary policy transmission mechanism. First, the central bank of Nigeria has applied the traditional monetary policy inputs in its l monetary policy experience transmission mechanism channels were implicitly known to have been in operation in one form or the other without any empirical analysis being carried out to establish the existential functional relationship. Thirdly, the CBN has functionally focused its monetary policy on the growth of output and hence the real economy, even though the financial markets have not robustly played their expected role in complementing the real sector of the economy. Finally, the fiscal operations of government have negatively impacted CBN's monetary policy by undermining, in most cases, monetary policy stance of the CBN.

Monetary Policy under the Banking Reform Regime

Conceptually, economic reforms are undertaken to ensure that every part of the economy functions efficiently in order to ensure the achievements of macroeconomics goals of price stability, full employment, high economic growth, and internal and external balances. Thus, banking reform in Nigeria is an integral part of the country-wide reform program undertaken to reposition the economy to achieve the objective of becoming one of the 20 target economies by the year 2020. As part of the vision, the banking sector is expected to effectively play its actual role in intermediation and for the banks to be among the global players in the international financial markets.

The recent experience from the global financial crises has further underscored the imperatives of countries to embark on banking reforms on a regular basis. As you all know, the world economy was hit by an unprecedented financial and economic crises in 2007, 2009 that resulted in a global recession. This crises lead to the collapse of many world renowned financial institutions and even caused the entire nation to bankrupt. In Nigeria, the economy faltered and was hit by the second round effect of the crises as the stock market collapsed by 70 percent in 2008-2009 and many Nigerian banks sustained huge losses, particularly as a result of their exposure to the capital market and downstream oil and gas sector. Therefore, the CBN has to rescue (8) eight of the banks through capital and liquidity injections, as well as removal of their top executives and consequent prosecution of those who committed some infractions. This action becomes necessary to restore confidence and sanity in the banking system.

A holistic investigation into what went wrong in Nigeria leading up to the banking crises in 2008 found eight interrelated factors responsible. There were macroeconomic instability caused by large and sudden capital inflows, major failure in corporate governance at banks, lack of investor and consumer sophistication, inadequate disclosure and transparency about the financial position of banks, critical gaps in the regulatory framework and regulations, even supervision and enforcement, unstructured governance and management processes at the CBN and weaknesses in the business environment, acted together they brought the entire Nigerian financial system to the brink of collapse. The Nigerian economy has huge potential for growth, to realize the potential, it is imperative that we learn lessons from the crises and take steps not to only fix the problems but to also introduce measures to establish financial stability, a healthy evolution of the financial sector and ensure the banking sector contributes to the development of the real economy.

The current banking reforms have yielded the following result among others"

1. The reform have brought about a new mindset to the industry as banks are putting in place best practices in the areas of corporate governance and risk management. Transparency and public disclosure of transactions have remarkably improved.
2. A number of banks have returned to the profit-making path and improved their balance sheets as the recent results of the financial statements have shown
3. The reform has culminated the spread between the lending and deposit to 9.7 percent as at the end of December 2011, from 12.2 percent in 2010. This has been contributed to the existing macroeconomic stability in the economy with inflation moderating to 10.3percent as at end-December 2011.
4. There is greater co-operation between the monetary authority and the banks through regular meetings and collaboration on policy issues.
5. Increased widespread use of e-payment services among Nigerians
6. The reforms have brought greater confidence in the banking system with the removal of distress banks and the adoption of a strict code of corporate governance
7. Nigerian banks are now key players in the global financial market with many of them falling within the top 20 banks in Africa and top 1000 banks in the world
8. Banks are gradually resuming lending to the private sector with the additional liquidity of more than 1.7trillion injected into the banking system through the issuance of AMCON bonds and significant progress in re-directing credit to the power sector and SME's at single digit interest rate. This initiative have saved and helped create thousands of jobs in the economy.

iii Research Methodology

Research Design

Since the study is on monetary policy implementation and its effect in Nigeria economy, we used a conceptual and descriptive design approach. The research design is non-experimental. Non- experimental design is ideal for a study of this nature as it is concerned with assessment of the impact of money supply on GDP. It will also involve the content analysis of the annual reports and accounts of Central bank of Nigeria, National Bureau of statistics to enable to enable interference to be drawn.

Population/Sample Size

This study will Centre on Nigeria economy with particular emphasis on its money supply and their management strategies and specific effect on Gross Domestic Product GDP, External Reserves and Capital Expenditure. The study covers a 20 year period spanning 1994-2013. The population of this work will comprise all the money supply, GDP, External reserves and Capital expenditure statistic material s of this period. The researcher choose to study 20 years 1994-2013 as this period constitute a reasonable period that presents pre-monetary policy implementation and post-monetary policy implementation in Nigeria economy. For the purpose of this study the population will be the same as the sample.

Sources of Data

The sources of this data for the research shall be secondary sources. These secondary data will be sourced from Central bank of Nigeria, National Bureau of statistics, federal Ministry of Finance, Office of the Accountant-General of the federation and internet. However, the quantitative data analysis shall be sourced from the annual reports and other publication of Central bank of Nigeria and National Bureau of Statistic libraries.

Technique for Data Analysis

The hypothesis of this study will be tested using the correlation and simple linear regression techniques to determine the relationship between Money supply and some economic variables such as GDP, External Reserves and Capital expenditure.

Model Specification

Linear regression: To analyze the respective relationship defined in preceding sections, simple linear regression analysis will be performed based on the following general models as applied in previous studies. These models will be used to test the hypothesis based on the general linear function model as follows;

$Y = a + bx$ .... (1)

This model is modified a little bit as follows for the different hypothesis.

Hypothesis One:

Ho: There is no significant and positive relationship between money supply and Gross Domestic Product (GDP).

H1: There is significant and positive relationship between money supply and Gross Domestic Product (GDP)

Where

$GDPt= Bo + B1MSt-1$ ....(2)

GDP= gross domestic product

BO= a constant

B1= coefficient of the independent variable

MSt−1= Money Supply

t= No. of years

This model will be used to determine the relationship between the gross domestic product and money supply.

Hypothesis Two:

Ho: External reserve has not been significantly and positively affected by the money supply.

H1: External reserve has been significantly and positively affected by the money supply.

$EXTERt=Bo + B1MSt-1$ ....(3)

Where;

EXTERt= Nigeria's External Reserve

Bo= a constant

B1= coefficient of the independent variable

MSt−1= money supply

This model will be used to determine the relationship between the country's external reserve and money supply.

Hypothesis Three:

Ho: There is no significant and positive relationship between money supply and capital expenditure.

H1: There is significant and positive relationship between money supply and capital expenditure

Where

CAPEXPt=capital expenditure

Bo= a constant

B1= coefficient of the independent variable

MSt−1= Money supply

This model will be used to determine the relationship between a country's money supply and capital expenditure.

Definition of Independent Variables

1. Gross Domestic Product (GDP): The gross domestic product is the aggregate value of goods and services produced in a country in a given period irrespective of the national that produced it. It equals the total income of everyone in the economy and the total expenditure on the economy's output of goods and services. it is also the market value of

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final domestic production during a given year. Economic growth, therefore, is simple the increase in the gross domestic product in a given year.

2. External Reserve (EXTRES): The international monetary fund (1993) defined external reserve as the assets that are readily available to and controlled by monetary authorities for direct financing of payments imbalances through intervention in the exchange markets to affect the currency exchange rate and/or for other purposes.

3. Capital Expenditure (CAPEXP): These are the investments which the governments of any country makes in order to execute projects/infrastructure that will grow its real sector that could engender economic growth and development. Those expenses made in the procurement assets in the form of expenditure.

Data Analysis and discussion of findings

This section presents, analyze and interprets the data that are extracted from Central Bank of Nigeria, and National Bureau of Statistics, Federal Ministry of Finance and Office of Accountant-General of the Federation. The data to be presented for analysis are Secondary data. They were sourced from journals and internet. However, the quantitative data for analysis shall be sourced from Central Bank of Nigeria/National Bureau of Statistics, Ministry of Finance/Office of the Accountant General of the Federation.

Discussion of Analysis

Appendix 2 shows the result of regression analysis to determine the impact of money supply and Gross Domestic Product (GDP) in Nigeria. The correlation Coefficient of (0.98) indicates that there is a high positive correlation between the volume of Money Supply and Gross Domestic Product (GDP) in Nigeria. The R^2 value of (0.96) indicates that 96% of the variations in Gross Domestic Product is explained by the stock of Money Supply accumulated and that a unit of naira increase in Money Supply will increase the (GDP) in Nigeria. The result further showed that Money Supply has a very strong positive and significant relationship at 1% significant level with the Gross Domestic Product (GDP). However, the analysis of variance reveals that money supply has a positive relationship with Gross Domestic Product (GDP) in Nigeria. From the result, the Gross Domestic Product (GDP) can be forecast using the following equation.

$$GDP = 2{,}604{,}530.331 + 2.54x$$

Appendix 3, shows the result of the regression analysis conducted to determine the impact of money supply on external reserve. The correlation coefficient of (0.89) indicates that there is a high positive correlation between money supply and external reserves. The R^2 value of (0.79) indicates that 79% of the variations in external reserves in Nigeria, is explained by the amount generated from Money supply and that a unit of naira increase in the amount generated through money supply will increase its external reserve. The results further showed that money supply have strong positive and significant relationship at 1% significant level with the external reserve in Nigeria. However, the analysis of variance reveals that the amount generated through money supply is significant and in fact has a positive relationship with its external reserves. From the result, the external reserve of Nigeria can be forecast using the following equation:

$$External\ Reserves = 762{,}781.62 + 0.46x$$

Appendix 5presents the result of the regression analysis conducted to determine the relationship between money supply and capital expenditure in Nigeria. The correlation coefficient of (0.85) indicates that there is a high positive correlation between money supply and the capital expenditure. The R^2 value of (0.73) indicates that 73% of the variations in capital expenditure in Nigeria, is explained by the amount generated from money supply and that a unit of naira increase in the amount generated through money supply will correspondingly increase the capital expenditure in Nigeria. The results further showed that money supply has very strong positive and significant relationship at 1% significant level with the capital expenditure of Nigeria. However, the analysis of variance reveals that the amount generated through money supply has positive relationship with the capital expenditure of Nigeria can be forecast using the equation;

$$CapitalExpenditure = 26\text{[illegible]}.872.47 + 0.093x$$

iv Conclusion and Recommendations

This paper has appraised if the monetary policies of the Central Bank of Nigeria predicates economic growth and development. The study used the monetary the money supply as a proxy and independent variable of monetary policy. Gross Domestic Product(GDP), External Reserves and Capital Expenditure were used as proxies for the dependent variable of economic development. The paper reveals that the monetary policy as defined by monetary supply have both positive and significant relationship with all the variables studied(GDP, External Reserve and Capital Expenditure). It therefore recommends a fair monetary policy that could support the diversification and growth of the real sector.

APPENDIX 1 Research Variables

YEAR	MONEY SUPPLY (₦MILLION)	GROSS DOMESTIC PRODUCT (₦MILLION)	EXTERNAL RESERVES (₦MILLION)	CAPITAL EXPENDITURE (₦MILLION)
1994	266,944.9	899,863.2	197,174.28	70,918.30
1995	318,763.5	1,933,211.6	35,260.91	121,138.30
1996	370,333.5	2,702,719.1	74,498.31	158,678.30
1997	429,731.3	2,801,972.6	158,066.22	269,651.70
1998	525,637.8	2,708,430.9	155,555.45	309,015.60
1999	699,733.7	3,194,023.6	502,824.61	498,027.60
2000	1,036,079.5	4,537,640.0	958,369.61	239,450.90
2001	1,315,869.1	4,685,912.2	1,149,333.05	438,696.50
2002	1,599,494.6	5,403,006.8	929,184.20	321,378.19
2003	1,985,191.8	6,947,819.9	966,005.88	241,688.60
2004	2,263,587.9	11,411,066.91	2,221,128.74	351,250.00
2005	2,814,846.1	14,610,881.45	3,704,585.14	519,470.00
2006	4,027,902.7	18,564,594.73	5,420,164.41	552,358.80
2007	5,809,826.7	20,657,317.67	6,420,031.74	759,323.00
2008	9,166,835.3	24,296,329.29	6,242,493.70	1,123,458.00
2009	10,780,627.1	24,794,238.66	6,241,745.59	1,152,796.50
2010	11,525,530.34	33,984,754.13	4,796,185.66	883,870.00
2011	13,303,494.5	37,409,860,61	6,654,636.79	918,548.90
2012	15,483,847.5	40,544,099,94	6,813,447.56	874,800.0
2013	15,668,925.29	42,396,765.71	6,861,375.56	831,201.90

Source: Central Bank of Nigeria statistical bulletin

APPENDIX 2 : Regression Result of the Impact of Money Supply on Gross Domestic Product

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.982918541
R Square	0.966128858
Adjusted R Square	0.964247128
Standard Error	2687255.622
Observations	20

ANOVA

	Df	*SS*	*MS*	*F*	*Significance F*
Regression	1	3.70762E+15	3.70762E+15	513.4258	1.10527E-14
Residual	18	1.29984E+14	7.22134E+12		

Total	19	3.83761E+15

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	%
Intercept	2604530.331	819299.4436	3.178972415	0.005197	883246.0748	4325815	883246.0748	4325814.58
X Variable 1	2.539347706	0.112068436	22.6589019	1.11E-14	2.303900659	2.774795	2.303900659	2.774794754

APPENDIX 3 : Regression Result of the Impact of Money Supply on External Reserve

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.893269151
R Square	0.797929777
Adjusted R Square	0.786703653
Standard Error	1294750.001
Observations	20

ANOVA

	Df	SS	MS	F	Significance F
Regression	1	1.19153E+14	1.19153E+14	71.07794	1.15203E-07
Residual	18	3.01748E+13	1.67638E+12		
Total	19	1.49328E+14			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	762781.6167	394747.6921	1.932326982	0.069213	-66552.50875	1592116	-66552.50875	1592115.742
X Variable 1	0.455226652	0.053995834	8.430773626	1.15E-07	0.341785615	0.568668	0.341785615	0.568667689

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APPENDIX 4: Hypothesis III: what is the relationship between money supply and capital expenditure in Nigeria?

YEAR	DEPENDENT VARIABLE CAPITAL EXPENDITURE (₦MILLION)	INDEPENDENT VARIABLE MONEY SUPPLY (₦MILLION)
1994	70,918.30	266,944.9
1995	121,138.30	318,763.5
1996	158,678.30	370,333.5
1997	269,651.70	429,731.3
1998	309,015.60	525,637.8
1999	498,027.60	699,733.7
2000	239,450.90	1,036,079.5
2001	438,696.50	1,315,869.1
2002	321,378.19	1,599,494.6
2003	241,688.60	1,985,191.8
2004	351,250.00	2,263,587.9
2005	519,470.00	2,814,846.1
2006	552,358.80	4,027,902.7
2007	759,323.00	5,809,826.7
2008	1,123,458.00	9,166,835.3
2009	1,152,796.50	10,780,627.1
2010	883,870.00	11,525,530.34
2011	918,548.90	13,303,494.5
2012	874,800.0	15,483,847.5
2013	831,201.90	15,668,925.29

APPENDIX 5: Regression Result of the Impact of Money Supply on Capital Expenditure

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.859108905
R Square	0.738068111
Adjusted R Square	0.72351634
Standard Error	177446.2056
Observations	20

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	1.59703E+12	1.59703E+12	50.72016	1.23169E-06

Residual	18	5.66769E+11	31487155883
Total	19	2.1638E+12	

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	269872.4684	54100.39012	4.988364553	9.52E-05	156211.7666	383533.2	156211.7666	383533.1702
X Variable 1	0.052702514	0.007400159	7.121808414	1.23E-06	0.037155357	0.06825	0.037155357	0.068249671