

Impact of Monetary Policy on Inflation in Nigeria and Kenya: An Autoregressive Distributed Lag (ARDL) Approach

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Abstract

This study examined the impact of monetary policy on inflation in Nigeria and Kenya motivated by persistent rise in inflation despite implementation of various monetary policy measures. Annual time series data covering 1990 to 2022 were obtained from the World Development Indicators (WDI). The study employed the Autoregressive Distributed Lag (ARDL) approach to examine both long-run and short-run relationships among the variables, while the Vector Autoregression (VAR) Granger causality test was used to determine the direction of causal relationships. Monetary policy variables such as money supply, lending interest rate, exchange rate and monetary sector credit to the private sector were used as explanatory variables. The results revealed the existence of a long-run relationship among the variables in both countries, the estimated long-run coefficients revealed mixed but largely significant impact on inflation except lending interest in Nigeria which was insignificant. Short-run dynamics revealed that monetary policy variables exert both immediate and lagged effects on inflation in both countries with stronger effects arising from past inflation and lending interest rates, particularly in Nigeria, while the error correction mechanism indicates faster adjustment speed in Kenya relative to Nigeria. Granger causality results further showed a bidirectional relationship between inflation and lending rates in Nigeria, while Kenya exhibits predominantly unidirectional causal linkages among the variables. Overall, the findings suggest that monetary policy significantly influences inflation in both economies, though with varying degrees of effectiveness. The study concludes that enhancing monetary policy effectiveness requires strengthened monetary policies transmission channels, stabilizing exchange rate fluctuations, implementing inflation targeted lending rate, improved policy coordination, and complementary structural reforms to achieve sustained price stability.

Keywords: Central Bank, Monetary Policy, Inflation, ARDL, VAR Granger Causality, Nigeria, Kenya

1. Introduction

Inflation is one the most persistent economic problems confronting developing economies, particularly in Africa. Due to it undesirable effect, government across the world are concern with the use of policy through it monetary

authority to achieve price stability. The monetary authority (central bank) of every country plays pivotal roles in the growth and development of the country's economy. Across the world, central banks are responsible for overseeing the

monetary system of the nation along with wide range of other responsibilities, from overseeing monetary policy to implementing specific goals such as currency stability, low inflation and full employment. Central banks pursuit of price stability and financial sector soundness is not the only requirement to sustain the growth and development of the economy. Joseph (2003), observed that while the maintenance of price stability has increasingly become the main mandate of most central banks, those in the developing countries are charged with the responsibility to promote economic development, in addition to the pursuit of the macroeconomic stabilization objective. In order to achieve economic objectives of price stability, maintenance of favorable balance of payments, economic growth and sustainable developments, central banks were established and are called with different names across countries of the world.

Ajayi (1999), observed that central banks are called differently by different countries. In Nigeria, it is known as the Central Bank of Nigeria (CBN) and was established in 1959 while in Kenya, it is known as the Central Bank of Kenya (CBK) and was established in 1966.

The objects of the CBN include: to ensure monetary and price stability; issue legal tender currency in Nigeria; maintain external reserves to safeguard the international value of the legal tender currency; promote a sound financial system in Nigeria; and act as Banker and provide economic and financial advice to the Federal Government (CBN, 2021). On the other hand, according to CBK (2023), the mandate of the central bank of Kenya is to formulate and implement monetary policy that promote price stability, foster liquidity, solvency and stability of the banking sector, issue currency notes and coins, and provide banking services to the

government, commercial banks and other financial institutions.

In addition to the core mandate of the central bank and in order to facilitate the attainment of price stability, the bank based on legal and statutory provisions, support the economic policy of the government and ensure the country's economic development and also embark on formulation of monetary policies.

Monetary policy is one of the key drivers of economic growth and development through its impact on economic variables. Folawewo and Osinubi (2006), sees monetary policy as 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. Friedman (1969) defines monetary policy as the action taken by the monetary authorities usually the central bank to affect monetary and other financial conditions through influencing the availability and cost of credit in pursuit of the broad objectives of sustainable growth of output, price stability and a healthy balance of payments position. The discretionary control of the money stock to Friedman (1969) involves the expansion or contraction of money and influencing interest rate to make money cheaper or more expensive depending on the prevailing economic conditions and policy thrust.

According to Imoughele and Ismaila (2016), monetary policy is one of the macroeconomic instruments which monetary authority of a country employ in the management of their economy to attain fundamental objectives of price stability, maintenance of balance of payments equilibrium, promotion of employment, output growth and sustainable development. The other supplementary objectives of monetary policy because of the weaving global financial crisis which engulfed developed and emerging economies of the world include

smoothening of the business cycle, preventing financial crisis and stabilizing long term interest rates and the real exchange rate. These objectives are necessary for the attainment of internal and external balance of value of money and control of inflation.

Since the establishment of the central banks across the world, the banks have been formulating and implementing several monetary policies aimed at achieving the objectives of price stability, maintenance of balance of payments equilibrium, promotion of employment, output growth and sustainable development but its impact in curtailing price instability and inflation is not so clear, particularly in Nigeria and Kenya. As observed by Nwoko, Ihemeje and Anumadu (2016), the problems surrounding the region economic growth such as high unemployment rate, low investment, high rate of inflation and unstable foreign exchange rate still persists.

Nigeria and Kenya have adopted different monetary measures since the establishment of their monetary authority, the central bank of Nigeria and the central bank of Kenya. In Nigeria there have been various regimes of monetary policy, sometimes monetary policy is tight (rigid), at other times it is loose (flexible) mostly used to stabilize prices and enhance the real sector performance. The monetary policy regime has changed from exchange rate targeting to the direct monetary policy targeting and to indirect monetary policy targeting. In term of exchange rate, the country has adopted different exchange rate regime such as the fixed exchange rate regime, dual exchange rate regime, system foreign exchange management, interbank foreign exchange management and floating exchange rate management among others. Particularly, in Nigeria, between 1959-1973, the conduct of monetary policy was largely dictated by the prevailing economic

conditions in Britain. The instrument of monetary policy used at that time was the exchange rate, which was fixed at par between the Nigerian pound and the British pound, this period is popularly known as the Exchange Rate Targeting Regime (CBN, 2016). The period 1974-Date, is seen as the regime of monetary targeting. Nnanna (2001), noted that from 1970, Nigeria economy witnessed a major structural change that affected the conduct of monetary policy as oil dominated the export basket. Due to increased revenue accruing to government from oil, the imbalance in the balance of payments and low external reserves became things of the past, Nigeria's external reserves rose rapidly by over 1 000 percent in 1975 from about N100 million in the late sixties to approximately N3.4 billion in 1975. The need to finance post-war developments also led to a considerable growth in public expenditure, thus intensifying inflationary pressures. Under this circumstance, the monetary authorities adopted a new monetary policy framework which involved the use of market (indirect) and non-market (direct) instruments. This development marked the beginning of monetary targeting in Nigeria. Consequently, the major focus of monetary policy was centered on controlling the monetary aggregates, a policy stance which was largely based on the belief that inflation is essentially a monetary phenomenon. The period 1974-1993 is seen as the regimes of direct control measures, the major objective of monetary policy during this period was to promote rapid and sustainable economic growth. Consequently, the monetary authority imposed quantitative interest rate and credit ceilings on the deposit money of banks, and prescribed sectoral credit allocation to the various sectors of the economy. Overall, the "preferred" sectors, such as agriculture, manufacturing and construction, were singled out for the most

avored treatment, in terms of generous credit allocation and a below-market lending rate. The most important instrument of monetary control the CBN relied upon was the setting of targets for aggregate credit to the domestic economy and the prescription of low interest rates. With these instruments, the monetary authority hoped to direct the flow of loanable funds with a view to promoting rapid development through the provision of finance to the preferred sectors of the economy (Nnanna 2001). Omotor (2007), observed that the period of the 'Control Regime' experienced an impaired effectiveness of monetary policy and cited lack of instrument autonomy of the Central Bank as the Ministry of Finance influenced by short-term political considerations largely dictated monetary policy. The period 1993-date is seen as the regime of indirect control measures, it started with the removal of selective credit ceilings for banks beginning following the promulgation of the CBN Decree 24 and the Banks and Other Financial Institutions Decree (BOFID) 25 of 1991. The focus of monetary policy during this period shifted significantly from growth and developmental objectives to price stability. The operational framework for indirect monetary policy management involved the use of market (indirect) instruments to regulate the growth of major monetary aggregates. The instruments used involved the use of Open Market Operations (OMO) which is conducted wholly on Nigerian Treasury Bills (TBs), including Repurchase Agreements (REPOS). The OMO is complemented with the use of reserve requirements such as the Cash Reserve Ratio (CRR) and the Liquidity Ratio (LR). Other measures include the discount window operations particularly, the Minimum Rediscount Rate (MRR) and moral suasion. The Minimum Rediscount Rate (MRR) is used by the CBN as a nominal anchor to influence the level and

direction of other interest rates. Changes in the rate indicate whether the monetary authorities wished to adopt a policy of monetary tightening or otherwise. Under this framework, only the operating variables, the monetary base or its components are targeted, while the market is left to determine the interest rates and allocate credit (Nnanna, 2001 and Omotor, 2007). This aligned with the observation of Ikhida (1996), on developing countries, that after several unsuccessful decades of emphasis on the role of government interventions in promoting growth, developing countries are now devoting more efforts to having market signals guide the allocation of resources. Thus, monetary authorities have been shifting from direct control of monetary aggregates/instruments which places emphasis on the imposition of limits on the price or quantity of credit to the indirect methods aimed at achieving macro economies objectives through the market forces.

Similarly, Kenya has undergone a number of reforms since its independence, shifting from direct monetary policy to indirect monetary policy in the 1990s (Nyorekwa and Odhiambo, 2014). Kinyua (2001), classified monetary policy measures in Kenya into two distinct periods, that is, the period between 1966 and 1992, when Kenya was pursuing a somewhat fixed exchange rate and the period after 1993 to date when the country adopted a floating exchange rate. During the fixed exchange rate period which also encompasses the formative years of the bank, the bank underpin its monetary policy strategy with controls on interest rates and the volume of credit expansion by banking institutions as its operational targets, and money supply growth as its intermediate target, interest rates were controlled, exchange rates fixed. Other measures included the imposition of a minimum cash ratio of 5 percent on commercial banks in 1971, in addition to the liquidity ratio requirement of 12.5

percent put in place in 1969. Moral suasion was also used as an instrument, thereby subjecting commercial banks to reduce their lending to the import sector and foreign-owned firms. The main monetary tools were credit controls and the imposition of ceilings: particularly on commercial banks. The period 1993 to date is seen as the regime of indirect monetary policy measures. Measures adopted within the period include complete liberalization of the exchange rate when the exchange rate was allowed to become market-determined, restrictions on outward investments and inward investments were removed marking the complete removal of the quantitative controls on the capital accounts. Other measures include Open Market Operation (OMO), cash ratio requirement, foreign market operations and rediscount facilities. The primary objective of monetary policy was price stability with the ultimate aim of promoting the long-term goal of economic growth.

Laudau (1991), mentioned that Kenya has been engaged in far-reaching financial sector reforms aimed at improving monetary control and improving the efficiency of financial intermediation. These reforms has seen Kenya moving from direct to indirect instruments of monetary control for three reasons. First, it was recognized that the liberalization of interest rates was a necessary prerequisite for the successful use of market operations to control money and credit aggregates. Hence, the authorities undertook a gradual relaxation of interest rate controls, focusing the removal of controls on Treasury bill yields. Second, since government securities markets were to a significant degree segmented from other financial markets, the immediate and exclusive reliance on open market operations in government securities for purposes of monetary control was not desirable. Instead, it was necessary to

broaden and deepen the market for government securities to remove the segmentation and thus improve the transmission of policy effects from the monetary to the real sector. Third, Kenya introduced an innovative transitional arrangement in the form of a market based enforcement mechanism for credit ceilings to improve control of money and credit, until open market operations could be used in sufficient volume (Laudau, 1991).

Maintenance of price stability as observed by Josphe (2003), is one of the main mandate of monetary policy. Price stability refers to a condition of relatively low change in the general price level over time. In other words, the degree of fluctuation or volatility is relatively low, suggesting the absence of inflation or deflation. Price stability is important to economic agents because inflation, a condition of a general rise in prices, is normally regarded as “theft of value” (Ajayi, 2012). According to Nzotta (2004) as mentioned by Akintola, Soetan, Ogundipe, Fasola, Adesanya and Olurin (2021), price instability is a reflection of rising inflation and constitutes a threat on the economic progress of a nation. When there is price instability, the economy is either experiencing inflation or deflation. Inflation and deflation are economic phenomenon which poses negative consequences for the economy. Basically, inflation is defined as general or broadly-based increase in the prices of goods and services over an extended period (Akintola et al 2021). This is simply seen as a period of a persistent increase in the average level of price and service in an economy. This consequently leads to a decline in the value of money and thus its purchasing power. Deflation is often defined as the opposite of inflation, namely as a situation in which the overall price level falls over an extended period. Inflation has the adverse effect of distorting macroeconomic conditions with the potential to derail an economy from the

path of sustainable economic growth and development (Bawa, Abdullahi and Adamu 2016). Okotori and Gbalam (2020) sees inflation as a function of monetary variables such as money supply, exchange rate, monetary policy rate, monthly treasury bill, liquidity ratio and reserve

requirement. Despite implementation of monetary policy measures in Nigeria and Kenya, there seem to be instability in prices leading to inflation which is often on the increase. Figure 1.1 below shows the trend statistics of annual inflation rate in Nigeria and Kenya from 1990 to 2022.

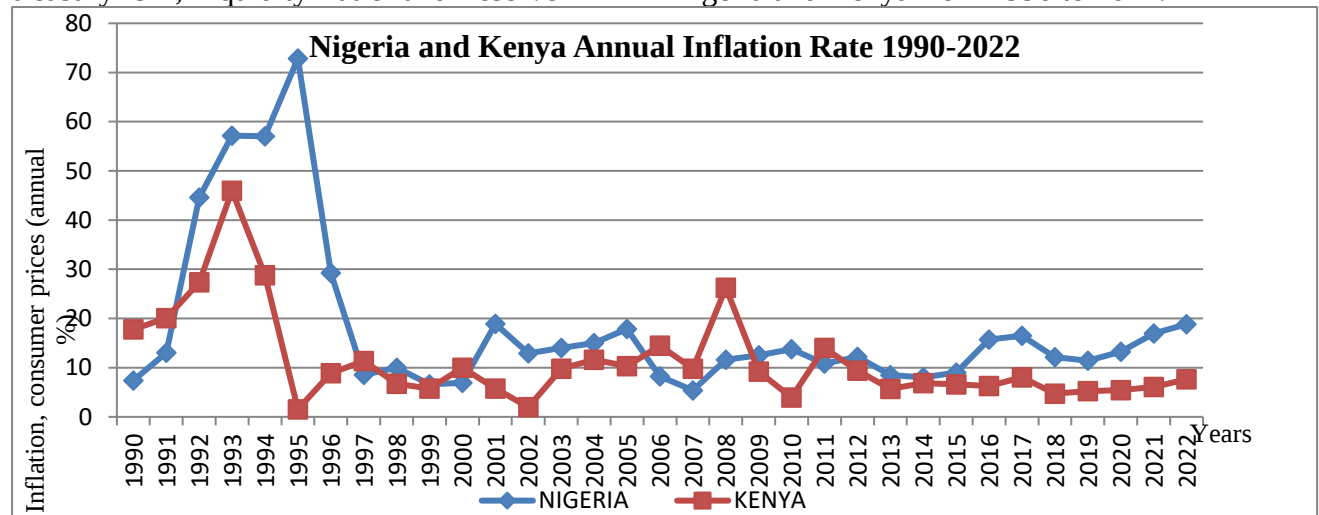


Figure 1.1 Trend of Annual Inflation Rate in Nigeria and Kenya

Source: World Development Indicators (2024)

Figure 1.1 shows the trend of annual inflation rate (expressed in percentage) in Nigeria and Kenya for the period 1990 to 2022. In 1990 the annual inflation rate of Nigeria stood at 7.36% while that of Kenya stood at 17.78%, both countries keep experiencing rising inflation rate with that of Nigeria reaching the peak of 72.84% in 1995 and Kenya reaching the peak of 45.98% in 1993. This according to Bawa, Abdullahi and Adamu (2016), was due to excess money supply, scarce foreign exchange and severe shortages in commodity supply, as well as continual labour and political unrest following the annulment of the June 1993 elections for Nigeria while that of Kenya was attributed to the devaluation of the Kenya shilling, excessive money supply in 1992 and early 1993, decontrol of prices and poor weather conditions (Kinyua, 2001).

The high inflation witnessed in Kenya between 1990 to 1993 was largely due to the collapse of fiscal and monetary policy in the face of the first multiparty elections in 1992 after Kenya regained her multiparty democracy, increase in money supply growth, excessive accommodation of distressed banks and limited authority of the CBK on monetary policy management (Kinyua, 2001). The period also marked the end of direct monetary policy measures and the beginning of indirect monetary policy measures in the two countries (Nnanna, 2001, Omotor, 2007 and Kinyua, 2001).

After 1995, the inflation rate in Nigeria declined from 72.84% to reach 8.53% in 1997 where it fluctuates within 10% the following years and stood at 6.93% in 2000 where it increase again while after, 1993 the inflation rate in Kenya declined from 45.98% down to least level of 1.55% in 1995 where it fluctuates within 11% and stood at 1.96% in 2002. These could be attributed to the recovery from the annulment of the June 1993 elections for Nigeria, commencement of democratic

governance and changes in monetary policy such as reduction in money supply among others across the two countries.

By 2005 the annual inflation rate in Nigeria increased to 17.86% while that of Kenya stood 10.31%, both countries witnessed reduction in inflation rate the following years, by 2008 the inflation rate increase to 11.58% in Nigeria and 26.24% in Kenya.

With the applications of monetary and fiscal policies intervention such as stoppage of aggressive liquidity mop-up, reduction in cash reserve and liquidity ratios among others, the rate declined the following years to 3.96% in 2010 for Kenya and later rise to 14.02% in 2011 where it declined but fluctuate within maximum of 8% from 2011 to 2022. Nigeria on the other hand, witnessed increase in the rate up to 13.74% in 2010 and later declined to 8.05% in 2014 where it keep increasing but fluctuates within the maximum of 18.85% within 2014 to 2022. In Nigeria, the recent fluctuations and rise in the inflation rate from 2015 may be attributed to liquidity impact of election and postelection spending, border closure, COVID 19 pandemic, impact of oil price in the international market and impact of insecurity and insurgency in some parts of the country which put immense pressure on the domestic price level. On the other hand, that of Kenya may be attributed to weak global growth, impact of oil price in the international market and impact of COVID 19 pandemic among others.

Nigeria and Kenya have adopted various monetary policy measures moving from the regime of direct to indirect monetary policy measures through their respective central banks over the years to achieve price stability. However, despite the increasing emphasis on variation of monetary policy variables, inflation still remains a persistent macroeconomic challenge and a major threat to the industrial growth of Nigeria, Kenya and among countries within the African region

as observed by Nwoko, Ihemeje and Anumadu (2016). Following the adoption and implementation of several monetary policy measures by Nigeria and Kenya with its requisite objective, there seem to be continuous instability in prices leading to inflation which is often on the increase.

This raises concerns on the efficiency of monetary policy in achieving price stability; hence, it became necessary to investigate the impact of monetary policy on inflation.

Based on the above, this study seek to assess the impact of specific monetary policy measures such as money supply (M_2), exchange rate (EXCHR), lending interest rate (LENDR) and monetary sector credit to private sector (MSCRPS) among others on inflation in Nigeria and Kenya.

In line with the objective of monetary policy, variation of monetary policy variables such as money supply (M_2), exchange rate (EXCHR), lending interest rate (LENDR) and monetary sector credit to private sector (MSCRPS) is expected to control inflation and ensure price stability. It is based on the above background that this study seeks to assess the impact of monetary policy on inflation with particular interest to Nigeria and Kenya covering the period 1990 to 2022. Other specific objectives includes: to determine if there is a long run relationship between monetary policy and inflation in Nigeria and Kenya, furthermore, to examine the causal relationship between monetary policy and inflation in Nigeria and Kenya. The study will advance knowledge as it undertakes a comparative analysis of two African economies which enrich existing literatures by providing country specific and cross insights into the effectiveness of monetary policy in developing economies, validates methodological approaches, and recommends actionable policy insights to achieve price stability in developing economies.

2. Conceptual Literature Reviews

2.1 Monetary Policy:

Monetary policy is the process by which the government, through the central bank or monetary authority of a country, controls the supply of money, availability of money and cost of money or rate of interest, in order to attain a set of objectives oriented towards the growth and stability of the economy, monetary policy rests on the relationship between the rates of interest in an economy and the total supply of money (Hameed and Ume 2011). Folawewo and Osinubi (2006), sees monetary policy as 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. Friedman (1969) defines monetary policy as the action taken by the monetary authorities usually the central bank to affect monetary and other financial conditions through influence over the availability and cost of credit in pursuit of the broad objectives of sustainable growth of output, price stability and a healthy balance of payments position. The discretionary control of the money stock to him involves the expansion or contraction of money and influencing interest rate to make money cheaper or more expensive depending on the prevailing economic conditions and thrust of policy.

According to Imoughele and Ismaila (2016), Monetary policy is one of the macroeconomic instruments with which monetary authority of a country employ in the management of their economy to attain fundamental objectives of price stability, maintenance of balance of payments equilibrium, promotion of employment, output growth and sustainable development. To Abata, Kehinde and Bolarinwa (2012), monetary policy is essentially a programme of action undertaken by the monetary authorities generally the central bank, to control and regulate the supply of money with the

public and the flow of credit with a view to achieving predetermined macroeconomic goals. It comprises government actions designed to influence the behavior of the monetary sector.

Thus, monetary policy involves the proper management of money in circulation in an economy by the monetary authority in order to maintain economic stability which is necessary for economic growth. It is concerned with the discretionary control of money supply by the monetary authorities usually the central bank in order to achieve stated or desired economic goals.

2.2 Inflation:

According to Jhingan (2009), “Inflation is a persistent and appreciable general rise in price level”. He noted that it is not every rise in the price level that is termed inflation, for a rise to be considered inflationary; it must be constant, persistent and sustained. Inflation refers to the sustained increase in the general price level of goods and services over time (Jumayev, 2024).

Inflation, a condition of a general rise in prices, is normally regarded as “theft of value” (Ajayi, 2012). According to Nzotta (2004) as mentioned by Akintola, Soetan, Ogundipe, Fasola, Adesanya, Olurin (2021), price instability is a reflection of rising inflation and constitutes a threat on the economic progress of a nation. When there is price instability, the economy is either experiencing inflation or deflation. Inflation and deflation are economic phenomenon which poses negative consequences for the economy. Basically, inflation is defined as general or broadly-based increase in the prices of goods and services over an extended period (Akintola et al 2021). This is simply seen as a period of a persistent increase in the average level of price and service in an economy. This consequently leads to a decline in the value of money and thus its purchasing power. Deflation is often defined as the opposite of inflation, namely as a situation in which

the overall price level falls over an extended period. Inflation has the adverse effect of distorting macroeconomic conditions with the potential to derail an economy from the path of sustainable economic growth and development (Bawa, Abdullahi and Adamu 2016). Okotori and Gbalam (2020) sees inflation as a function of monetary variables such as money supply, exchange rate, monetary policy rate, monthly treasury bill, liquidity ratio and reserve requirement.

Inflation may stem from so many factors, Afolabi (1998), noted that inflation may be due to demand pull, cost push, money supply, deficit financing among others. Ajayi (2012) and Jumayev (2024), identified methods of measurement of inflation to include consumer price index (CPI), producer price index (PPI), GDP deflator, wholesale price index (WPI), core inflation and personal consumption expenditure (PCE) price index. However, the most commonly used measure of inflation is the consumer price index (CPI).

2.3 Instruments/Tools of Monetary Policy

Monetary policy is the deliberate use of monetary instruments (direct and indirect) at the disposal of monetary authorities such as central banks in order to achieve macroeconomic stability. Instruments or tools of monetary policy are essentially monetary variables which the central bank controls in order to affect macroeconomic goals which it does not control. Afolabi (1998), see tools of monetary policy as control mechanisms at the disposal of central bank in the discharge of its obligations. Okorafor (2010), see monetary instruments as variables that are under the control of the monetary authorities and have effect on the proximate targets. These targets are essentially the goals of monetary policy.

Basically the instruments of monetary policy are grouped into two. According to

Peter (2019), the instruments of monetary policy can be categorized into two namely:

1. Direct or qualitative instruments.
2. Indirect of quantitative instruments.

1. Direct or Qualitative Instruments:

The direct tools of monetary policy includes: moral suasion, selective credit control, direct credit control and prudential guidelines.

Moral Suasion: Moral suasion simply means the employment of friendly persuasive statement, public pronouncement or outright appeal by the monetary authority to influence the lending policies, other policies and activities of commercial banks in order to achieve stated monetary policy objective. According to CBN (2016), Moral suasion is the use of the influence of the central bank upon deposit money banks to follow its suggestions and recommendation which are believed to be in the interest of the whole economy.

Selective Credit Control: Nnanna (2001), noted that this instrument is used to distinguish sectors of the economy into preferred and less preferred sectors. This is usually designed to influence the direction of credits in the economy so as to ensure that credits goes to those sectors designed as “preferred”. This tool is very useful where a country operates development plans, when plans are drawn up these credit controls will be integrated in the budget. In the course of the government’s program to revitalize agricultural production which is the most favored sector, credits to the favored sector is at lower interest rate while the least favored sectors pay the highest rate of interest (Ibeabuchi, 2007).

Monetary sector credit to private sector: refers to financial resources provided by banks and other financial institutions to private business and household for investment, consumption or working capital. It does not include credit to government and public enterprises (Levine, 1997). Monetary sector credit to

private sector is a form of selective credit control.

Direct Credit Control: The central bank can direct deposit money banks on the maximum percentage or amount of loans (credit ceilings) to different economic sectors or activities, interest rate caps, liquid asset ratio and issue credit guarantee to preferred loans. In this way the available savings is allocated and investment directed in particular directions (Ibeabuchi, 2007).

Prudential Guidelines: The Central Bank may in writing require the deposit money banks to exercise particular care in their operations in order that specified outcomes are realized. Key elements of prudential guidelines remove some discretion from bank management and replace it with rules in decision making (Ibeabuchi, 2007). Central bank through its various circulars, provide certain guides to financial institutions within the economy in order to achieve specified monetary policy objectives.

2. Indirect or Quantitative Instruments

The indirect tools of monetary policy includes: Open Market Operations, reserve requirement, special deposits, liquidity ratio, interest rate, and exchange rate among others. Discussion is centered on interest/lending interest rate, exchange rate and money supply in line with the variables of the study.

Interest Rate/Lending Interest Rate: Interest rate often known as bank rate, lending interest rate, minimum rediscount (MRR) rate and as monetary policy rate (MPR), it is simply the rate at which central bank lend to or discount bills held by deposit money banks and other institutions. The MRR sets the floor for the interest rate regime in the money market (the nominal anchor rate) and thereby affects the supply of credit, the supply of savings (which affects the supply of reserves and monetary aggregate) and the supply of investment (which affects full

employment and GDP). For banks and depository institutions, the monetary policy rate is the interest rate accessed on short-term loans acquired from central banks. The bank rate or monetary policy rate can be interpreted as the cost of borrowing from the central bank. The lending interest serves as the nominal anchor rate that gives direction to the money market, thus affecting the supply of money, price stability, monetary aggregate and full employment as well as the GDP (Magaji, Micheal and Anthony, 2018).

Exchange Rate: Exchange rate is the price of one currency in terms of another currency at any point in time. Exchange rate is the price of one currency expressed in terms of another currency. The exchange rate is also regarded as the value of one country's currency in relation to another currency. It is a vital macroeconomic indicator used in determining the overall performance of economies. It remains a key price variable in any economy and performs the dual role of maintaining international competitiveness and serves as a nominal anchor for domestic prices (CBN, 2021). According to Magaji, Micheal and Anthony (2018) there are two common concepts of exchange rate; namely nominal exchange rate and real exchange rate. The nominal exchange rate (NER) is a monetary concept which measures the relative price of two countries' moneys or currencies, e.g., naira in relation to the U.S. dollar (e.g N128.00: US\$ 1.00) and vice versa. The monetary concept informs on how much the price level of international goods has risen/fallen relative to domestic prices as a result of changes in the exchange rate. Real exchange rate (RER), on the other hand, is the concept that measures the relative price of two goods – tradable goods (exports and imports) in relation to non-tradable goods (goods and services produced and consumed locally).

The systems of exchange rate determination are known as exchange rate regimes, CBN (2021), noted that, there are basically two extreme cases of exchange rate regimes, namely, fixed and floating exchange rate systems. Under the fixed exchange rate system, the exchange rate is determined by administrative fiat/decreed of government or monetary authorities like central banks. Foreign exchange is disbursed mainly through allocation or a rationing system usually associated with exchange controls while under the floating exchange rate regime, the exchange rate is determined by the forces of demand and supply of foreign exchange. In this circumstance, monetary authorities rely on the foreign exchange market to determine the exchange rate to achieve stated macroeconomics objectives which include sustainable economic growth and favorable balance of payment.

The balance of payments can be in deficit or in surplus and each of these affect the monetary base, hence the money supply in one direction or the other. By selling or buying foreign exchange, the central bank ensures that the exchange rate is at levels that do not affect domestic money supply in undesired direction, through the balance of payments and the real exchange rate. The real exchange rate when misaligned affects the current account balance because of its impact on external competitiveness (Ibeabuchi, 2007).

Money supply: Money supply is the sum total of all currency and other liquid assets in a country's economy on the date measured. Money supply includes all cash in circulation and all bank deposits that the account holder can easily convert to cash. According to Omodero (2019), Money supply is a basic macroeconomic element that influences economic growth in an economy by ensuring effective running of economic activities in both public and private sectors through liquidity availability. Money supply is seen as the

total amount of money in an economy at a particular time, it consist of all the financial assets that people and business can use to make payment or hold as savings.

It is a monetary policy tool that is highly essential in boosting economic growth of a nation. Nwoko, Ihemeje & Anumadu, (2016) noted that monetary policy measures are designed to regulate the value, supply and cost of money in an economy. Increasing the supply of money in an economy is term expansionary monetary policy while reducing the supply of money is seen as contractionary monetary policy. The monetarists believe that money supply is a tool that gives boost to economic growth based on unexpected increase in money stock while the Keynesians argue that money supply has a limited influence on economic growth, money supply only affects economic growth through its effects on interest rate. Bello, Okaro and Okonkwo (2024), observed that most government tries to control money supply because they believe its rate of growth influence the rate of inflation and economic growth.

CBN (2016), identified components or measures of money supply as narrow money (M_1) and Broad money (M_2), narrow money (M_1) refers to currency in circulation (coins and notes) plus demand deposits. Simply expressed as: $M_1 = C + DD$. While Broad money (M_2) refers to narrow money plus time deposit (near money assets eg certificates of deposit, treasury bills) plus saving deposit (fixed deposits, money market instruments). Broad money (M_2) is simply expressed as $M_2 = M_1 + TD + SD$.

Though, some countries like the United State of America expressed money supply beyond M_2 to M_3 which is M_2 plus large time deposits, large denomination term repurchase agreement, shares in money market, mutual funds owned by institutional investors and some Eurodollar

deposit, M_2 is the most widely used expression of money supply.

2.4 The Goals of Monetary Policy

Monetary policy is used by central bank for the purpose of achieving certain national goals or objectives. These goals which are in line with basic macroeconomic objectives included low unemployment, high output of growth rate, low inflation rate and stable exchange rate (CBN, 2016). These objectives are simply referred to as goals or ultimate goals of monetary policy. Price stability and sustainable economic growth have been identified by scholars as the major goals of monetary policy. According to Awolabi & Adebite (2014), one of the major objectives of monetary policy in Nigeria is price stability. On the other hand, Nwoko, Ihemeje & Anumadu, (2016) mentioned stabilization of economic growth as the major objectives of monetary policy. CBN (2016), noted that of all the goals of monetary policy, price stability has become the most prominent in recent times. This is the reason why most central banks have as their core or primary mandate, the maintenance of price stability.

In order to achieve these goals, the central banks make use of monetary policy instruments which are essentially monetary variables which the central bank controls in order to affect monetary policy goals. Generally, the instruments of monetary policy according to CBN (2016), are directed at targeted variables which are broadly defined as those whose value the central bank wants to change. The target can be ultimate (final goals as mentioned above), intermediate (which central bank seek to influence, such as money supply or interest rate) or operating one (which the central bank can influence directly using monetary policy instruments such as money base or discount rate. A target can also be used to indicate a desirable value of goal (such as inflation) or of an

intermediate variable (such as money supply and market interest rate)

CBN (2016), noted that what the central bank does is to use its policy instruments to hit its operating targets with the intention of influencing the intermediate targets in order to achieve its goals. The operational targets includes short term interest rate, reserve aggregates (monetary base reserve, non-borrowed reserve), the intermediate targets includes monetary aggregate (money supply), interest rate (short and long term) while the ultimate goals includes low unemployment rate, low inflation rate, high growth rate and favorable exchange rate. In the process the central bank can adopt either expansionary or contractionary policy stance depending on macroeconomic conditions. For instance if an economy exhibits strong signs of rising general price level (inflationary tendency), the central bank may reduce the level of money supply using the instruments of monetary policy, when this happen, the central bank may be said to have adopted contractionary monetary policy stance. On the other hand, if the economy exhibits deflationary tendency (sustained fall in the general price level), the central bank may raise the level of money supply using the appropriate instruments of monetary policy. In this case the central bank may be said to have adopted expansionary monetary policy stance. Thus, monetary policy instruments could be classified as expansionary or contractionary monetary policy instruments.

Theoretical Literature Reviews

Classical Monetary Theory:

The classical monetary theory also known as the Quantity theory of money is the first and renowned theory of money and monetary policy. The classical school according to Onyeiwu (2012), evolved through concerted efforts and contributions of economists like Jean Baptist say, Adam Smith, David Ricardo, Pigou and others

who shared the same beliefs. However, according to Afolabi (1998), the work of Sir Irving Fisher popularized the Quantity Equation approach to the theory of money with his popular Fisherian equation: $MV=PT$

Where:

M=Money stock or Money supply

V= Velocity or turnover of money

P=Average price or price level

T= Real volume of all market transactions and is better replaced by Q i.e Quantity of goods involved.

Enock & Nicholas (2018), observed that Irving Fisher Quantity Theory of Money lays the foundation for the link between monetary policy (money) and economic variables.

In the theory, velocity of money and output are assumed as constant, thus any increase in the quantity of money will only eventually increase prices proportionally. According to Nwoko, Ihemeje and Anumadu (2016), in the expression of the Fisherian equation, M denotes the supply of money which the Federal Government has some control; V denotes the velocity of circulation which is the average number of times a currency is spent on final goods and services over the course of a year; P denotes the price level GDP. Hence PT represents current nominal GDP. The equation of exchange is an identity which states that the current market value of all final goods and services (nominal GDP) must equal the supply of money multiplied by the average number of times a currency is used in transaction in a given period. Thus, the quantity theory of money says that the level of prices varies directly with quantity of money (Ahuja, 2011). Hence, one could see money as a veil, it's simply affects the price level and nothing else. A change in the quantity of money produces an exact proportionate change in the price level. Doubling money supplies will simultaneously double the level GNP (Afolabi, 1998).

According to Jhingan (2009), the quantity theory of money states that the quantity of money is the main determinant of the price level or the value of money. To Afolabi (1998), the far reaching implication of the Fisherian equation (Classical monetary theory) is that only "money matters", for instance, the Cambridge version of the theory associated with Walras, Marshall, Wicksell and Pigou believes that the result will be less than that certain and that doubling of money supply will not necessary lead to a doubling of prices.

According to Ahuja (2011), the Cambridge equation expressed as $M=kPY$

Where

K =Fraction of income

M =Quantity of money

P =Price level

Y =Value of goods and services.

The "k" in the equation is related to velocity of circulation of money "V" in Fisher's transactions approach. It is the reciprocal of V in the Fisherian equation which value may be less than one in which case doubling of money stock will have a less than doubling effect on the GNP. According to Afolabi (1998), the volitional element "k" is in fact introduced as demand for money or fraction of national income that individuals want to hold in liquid form. Increase in money supply will therefore not lead to a one to one increase in price since "k" can be less than one. In effect, increase in money supply will not be fully transmitted into the economy to affect the level of prices and the level of the GDP in totality.

Despite the views of the Cambridge, as stated by Afolabi (1998), the far reaching implication of the Fisherian equation (Classical monetary theory) is that only "money matters". Money has total effects on GNP and that as only money matters, only money has effects on the GNP. That is GNP could only be affected by money stock alone. In other words, for the government or the CBN to achieve

macroeconomic objectives of price stability, full employment, exchange rate stability, favorable balance of payments, economic growth and development, all its need to do is to regulate the supply of money.

Keynesian Monetary Theory

The Keynesian theory was named after British economist, John Maynard Keynes, the leader of the Keynesian school of thoughts. Keynes does not agree with the older quantity theorists that there is a direct and proportional relationship between quantity of money and prices, rather to him, the effect of a change in the quantity of money on prices is indirect and non-proportional (Jhingan, 2009). According to Afolabi (1998), the Keynesian view on the importance of money in an economy was in fact the only alternative to the old quantity theory of money.

Keynes disagreed with the general belief of the classical that the economy will always be in equilibrium through the corrective and coordinating mechanism of the price system.

The Keynesians observed that in modern economy, demand and supply decisions are disjointed and independent not only to time but also as to persons. This will disrupt the quantity theory which does not create room for savings and time lag of money.

According to Afolabi (1998), the Keynesians view money as an asset, like any other asset to be held for its own sake and not just a temporary abode of purchasing power or a numeraire. This is in contrast with the earlier quantity theory which believed that money is just a veil on real economy activity, that money is not held for its own sake but temporarily for the sake of facilitating economic transactions. In other words, the Keynesians believe that money has no utility and could be demanded and held for its own sake because of the convenience, confidence and liquidity it confers.

Ahuja (2011), opined that the Keynesian's monetary theory explains the effect of variation in money supply on the level of economic activity through its effect on the rate of interest which determines investment in the economy. According to Khabo (2005), the Keynesians argued that "money does not matter", hence, is unable to impact on economic growth. They proposed that the link between the monetary sector and the real sector of the economy is very weak and therefore suggested that there is an indirect link through interest rate.

It is interesting to know that one importance contribution of the Keynesians to monetary theories is their views on how money routes its way to affect economic activities, what is known as the money transmission mechanism. While the quantity theorists believe that only money matters, extreme Keynesians believe that money does not matter (Afolabi, 1998).

Afolabi (1998), noted that it cannot be said with conclusiveness that the Keynesians position is that money does not matter at all. What the Keynesians generally seem to be saying is that money does not have direct impact on the economy as the classical believed and that the impact of money supply on the economy depends on the ability of money supply to influence the rate of interest, for the rate of interest to influence demand for investment fund and for investment to influence national income. In other words, the Keynesians view on monetary policy is that for money to have impact on the economy, three things must happen as follows:

1. A change in money supply must influence or lead to a change in interest rate.
2. The change in interest rate must lead to a change in the level of investment.
3. The change in the level of investment must have significant effect on national income.

The Keynesians argued that money supply alone is not sufficient enough to continue to impact on the economy as continue supply of money will be trapped in the already liquid economy and will be hoarded as part of speculative balance. At this point of liquidity trap, monetary policies ceased to be effective and calls for government intervention. To the Keynesians, interest rate is the only one of the many factors that would influence investment. The Keynesians opined that money supply is useless and that the only way to improve investment, increase national income, reduces unemployment and achieve macroeconomic objectives of price stability, full employment, exchange rate stability, favorable balance of payments, economic growth and development among others is through autonomous investment by the government and increase in government expenditures. Thus, the Keynesians advocated for fiscal policies, increased government expenditures and lower taxes to stimulate demand and pull the global economy toward stability.

New Classical Monetary Theory (The Monetarist)

The new classical monetary theory could be seen as a revived version of the old quantity theory of money. According to Afolabi (1998), Professor Milton Friedman led the group of economist who revived and refurbished the old quantity theory of money as a counter debate to the Keynesian view which then was throwing the old quantity theory into oblivion. These sets of economist were called the new or modern quantity theorist because their beliefs followed substantially the trend of the old quantity theory. They are also called monetarist because of their undaunted belief in the supreme efficiency of monetary policies.

Inam and Ime (2017), opined that monetarist theory was a restatement of the quantity theory of money and that it is

associated with Milton Friedman. Similarly, Nwoko, Ihemeje and Anumadu (2016), recorded that the monetarist school of thought led by Milton Friedman is a modern variant of classical macroeconomics.

The main argument of the monetarist according to Afolabi (1998), is that money is the most important regulatory instrument in an economy (though not the only one as in the old quantity theory) and that money has direct impact on the economy, not through the interest rate mechanism as the Keynesians believe. The monetarist argued that when money supply increases, it will eventually decompose itself as increase in the cash balance of various individuals and economy agents in the society. People will then find that they hold excess liquidity and will have to spend the excess to restore them to the desired level. To Inam and Ime (2017), Friedman asserts that “the quantity of money theory is a theory of the demand for money and not a theory of output, or of money income, or of the price level”.

According to Chipote and Makhetha-Kosi (2014), the monetarists supported their argument of the effectiveness of monetary policy in impacting on economic growth and development using the equation of exchange proposed by Irvin Fisher. They converted the equation of exchange of the old quantity of money theory, which is stated as follows:

$$MV = PY$$

.....
..... (1)

Where M denotes the supply of money over which the central bank has some control over, P denotes the price level, Y denotes the level of output and V denotes velocity of circulation. The monetarists assume that velocity is constant, and when V is constant equation (1) indicates a one-to-one relationship between changes in the stock of money and changes in the value of

national income. As a result, equation (1) will be transformed into equation

$$M = kPY \dots\dots\dots (2)$$

Where k represents a constant

As represented in equation (2), changes in output can only be brought through changes in money supply. Therefore the direct link between the monetary sector and the real sector of the economy comes from the argument of a constant velocity. This explains the basis for the monetarist's argument that changes in monetary policy will impact economic growth and development.

Nevertheless monetarists do also acknowledge that the economy may not always be operating at the full employment level of real GDP. Monetarists therefore believe that in the short-run, expansionary monetary policies may increase the level of real GDP by increasing aggregate demand. However, in the long-run when the economy is operating at the full employment level they consent that the classical quantity theory remains a good approximation of the link between the supply of money, the price level, and the real GDP. Thus, the monetarists place emphasis on money supply as the key factor affecting the wellbeing of the economy. According to Ahuja (2011), the monetarists argued that money has significant effect on price level or inflation in the economy in the long run and have real effects on output and employment in the short run. Monetarists believe that "money matter" therefore there is a direct link between monetary sector and the real sector of the economy (Khabo, 2005).

Empirical Literature Reviews

Inflation, a key economic indicator, refers to the sustained increase in the general price level of goods and services over time (Jumayev, 2024). According to Ajayi (2012), inflation, a condition of a general rise in prices, is normally regarded as "theft

of value" making price stability important to economic agent.

Price stability refers to a condition of relatively low change in the general price level over time. In other words, the degree of fluctuation or volatility is relatively low, suggesting the absence of inflation or deflation. It is a condition in which a change in the general price level is very minimal such that it does not exert significant influence on the welfare of economic agents.

Monetary policy and inflation are closely linked, the way a country manages her money supply and interest rate also affect the price level in the economy. Jospheh (2003), observes maintenance of price stability as one of the main mandate of monetary policy. Ajayi (2012), noted that the mission statement of the central bank of Nigeria is "to ensure monetary, price and financial system stability as a catalyst for inclusive growth and sustainable economic development." Ajayi (2012), further noted that a general rise in price level is undesirable for various reasons and that maintaining a low and stable price level (Price stability) has been globally considered as the core objective of monetary policy. It is against this background that most central banks are tasked with the responsibility of ensuring monetary and price stability. According to Sulaimon (2015) as mentioned by Akintola et al (2021), the Central Bank of Nigeria (CBN) is saddled with the responsibility of ensuring price stability. The central bank executes this function through the formulation and implementation of monetary policy measures. The central bank implements policies that enhance economic growth through an appropriate change in the level of money supply using appropriate policy instruments. The need to regulate money supply is based on the knowledge that there is a stable relationship between the quantity of money supply and economic activity, and that if its

supply is not limited to what is required to support productive activities; it will result in undesirable effects such as high prices or inflation. Emeka (2009) as contained in Nenbee and Madume (2011), opines that the pursuit of price stability invariably implies the indirect pursuit of other objectives such as economic growth, which can only take place under condition of price stability and allocative efficiency of the financial markets, since inflation is generally considered as purely a monetary phenomenon, with significant cost to the economy. The primary goal of monetary policy to him is to ensure that money supply is at a level that is consistent with the growth rate

Ajayi (2012), noted that inflation is undesirable and is normally regarded as “theft of value” making price stability important to economic agent. He therefore, recognizes price stability as a desirable goal of monetary policy because it facilitates transparency in macroeconomic management, promotes an improved standard of living, reduces inflation premium, and eliminates unnecessary hedging activities and promote financial stability amongst others. Similarly, Omotor (2007), mentioned that directing monetary policy solely at achieving stable prices is essential for economic growth and development.

Scholars have established mix results on the relationship between monetary policy and inflation/price stability. Nenbee and Madume (2011), in their study, the impact of monetary policy on Nigeria's macroeconomic stability (1970 - 2009), adopted the Co-integration and Error Correction Modeling (ECM) techniques to analyze its data. The analysis revealed that only 47 percent of the total variations in the model are caused by the monetary policy variables-Money Supply (MOS), Minimum Rediscount Rate (MRR) and Treasury Bills (TRB) at the long-run. The coefficient of the ECM is rightly signed

and impacts on inflation in Nigeria while the current and past (lag 2) MOS is wrongly signed as well as not impacting inflation. Again, past (lag 2) MRR impacts on inflation while current and past (lag 1) TRB do not, implying that monetary policy tools showed a mix result in terms of their impact on inflation in Nigeria.

Onyeiwu (2012), examines the impact of monetary policy on the Nigerian economy using Ordinary Least Squares Method (OLS) to analyses data between 1981 and 2008 and found that monetary policy presented by money supply exerts a positive impact on GDP growth and balance of payment but negative impact on rate of inflation. The monetary policy variables used for the study are liquidity ratio, money supply and cash reserve ratio. Liquidity ratio and cash reserved ratio used in the study are observed to be static variables and relate mostly to the banking sector alone which may not give a true reflection of the economy.

Mutwiri and Jagongo (2017), in a study titled “Monetary Policy Tools and Inflation in Kenya”, seek to establish the relationship of monetary policy tools and inflation in Kenya. Using correlation coefficient to analyses time series data on secondary data on Price Index for inflation, 91-day Treasury bill rate, exchange rate, money supply (M_3) and repo rate for a period of five year (2008- 2012) to examine the relationships between monetary policy tools and inflation, the study established that inflation and money supply were positively correlated with each other.

Ahmed and Murtala (2014), investigated monetary policy and price stability in Nigeria from 1990 to 2013 using Ordinary Least Square (OLS) in the data analysis. The findings of the study revealed that there is a relationship between the explained variable (inflation rate) and the explanatory variables (i.e money supply, interest rate and liquidity ratio). Durbin

Watson statistics is used to examine the degree of autocorrelation among the explanatory variables used in the research. Babatunde and Kehinde (2016) in their study examined impact of monetary policy on price stability in Nigeria from 1970 to 2014. Data obtained were analyzed using Ordinary Least Square (OLS) regression model. Consumer Price Index (CPI) was used as a proxy for general price level which is the explained variable while exchange rate and money supply were used as explanatory variable. The result of the findings revealed that exchange rate and money supply actually influenced price stability in Nigeria both in the short-run and long-run.

Thus, most studies establish a relationship between monetary policy and inflation, Ahmed and Murtala (2014), Babatunde and Kehinde (2016), Mutwiri and Jagongo (2017), (Iheonu, Ihedimma and Eze (2017), Judijanto, Rosalia, Siddiqi, Firayani, and Noviya (2025), Agbonlahor (2014), found positive relationship between monetary policy and inflation. On the other hand, Onyeiwu (2012), found that money supply exerts a negative impact on inflation, Judijanto, Rosalia, Siddiqi, Firayani, and Noviya (2025), interest rates have a negative relationship with inflation, meaning an increase in interest rates can help reduce inflationary pressures. Nenbee and Madume (2011), found that monetary policy tool show mix result in term of their impact on inflation.

3. Methodology

This research investigated the impact of monetary policy on inflation in Nigeria and Kenya. The study employ the Autoregressive Distributed Lag (ARDL) approach to analyzed the secondary date obtained from world development indicators covering the period 1990 to 2022. The non-stationary properties of the series were analyzed using the Augmented Dickey Fuller (ADF) and Philip Perron

(PP) unit root tests. The choice of ARDL method for this study is due to its advantage over other methods of time series data analysis like vector autoregressive (VAR) and vector error correction (VECM) model. This is because the issue of endogeneity is less of a problem in ARDL method because it is free of residual correlation as it allows variables to have different optimal lags length which is totally impossible with conventional methods. According to Olawumi (2023) the advantage of the ARDL method is that, it can be applied to a model whether the independent variables are stationary at $I(0)$ or $I(1)$. Similarly, according to Magaji, Micheal and Anthony (2018), ARDL does not require stationarity of the data as far as none of the variables of interest does not exceed $I(1)$. In order words, ARDL can be applied irrespective of whether the underlying regressors are stationary at $I(0)$ or $I(1)$ or a mixture of both. Secondly, it has a small sample size property. Thirdly, ARDL provides unbiased estimates of the long run model as well as valid t- statistics even when some of the regressors are endogenous. Thus, ARDL provides estimates and results that are consistent and not methodology biased. Furthermore, Granger causality test using Vector Autoregressive Model was used to determine the causal relationship between the variables.

3.1 Model Specification

The research adopted and modifies the model used by Onyeiwu (2012) which examined the impact monetary policy on economic growth of Nigeria using the empirical model given in equation 5.1 stated below.

$$INF = f(LR, M_2, CR,)$$

.....
..... [5.1]

Where:

INF - Inflation rate

LR - Liquidity Ratio
M₂ - Broad Money Supply
CR - Cash ratio

This study modifies the empirical model given in equation 5.1 by incorporating lending interest rate, exchange rate and monetary sector credit to private sector and excluding liquidity ratio and cash reserve

$$INF = f(M_2, LENDR, EXCHR, MSCRPS)$$

[5.2]

where INF represent inflation rate, M_2 is money supply, $LENDR$ is lending interest rate, $EXCHR$ is exchange rate and $MSCRPS$ is monetary sector credit to private sector.

$$INF_n = f(M_{2n}, LENDR_n, EXCHR_n, MSCRPS_n) \dots \text{Nigeria}$$

[5.2.1]

$$INF_k = f(M_{2k}, LENDR_k, EXCHR_k, MSCRPS_k) \dots \text{Kenya}$$

[5.2.2]

where INF_n represent inflation rate in Nigeria, M_{2n} is money supply in Nigeria, $LENDR_n$ is lending interest rate in Nigeria, $EXCHR_n$ is exchange rate in Nigeria and $MSCRPS_n$ is monetary sector credit to private sector in Nigeria while INF_k represent inflation rate in Kenya, M_{2k} is money supply in Kenya, $LENDR_k$ is lending interest rate in Kenya, $EXCHR_k$ is

$$INF_{nt} = \alpha_0 + \alpha_1 M_{2nt} + \alpha_2 LENDR_{nt} + \alpha_3 EXCHR_{nt} + \alpha_4 MSCRPS_{nt} + \varepsilon_{nt} \dots$$

[5.3.1]

$$INF_{kt} = \beta_0 + \beta_1 M_{2kt} + \beta_2 LENDR_{kt} + \beta_3 EXCHR_{kt} + \beta_4 MSCRPS_{kt} + \mu_{kt} \dots$$

[5.3.2]

Where: INF_{nt} represent inflation rate in Nigeria at time t , M_{2nt} is money supply in Nigeria at time t , $LENDR_{nt}$ is lending

ratio in the model. The justification for excluding liquidity ratio and cash reserve ratio from the model is based on the observation that liquidity ratio and cash reserve ratio are more of static variables and relate mostly to the banking sector alone. Hence the mathematical model for this objective is stated as follows:

Since the study is on Nigeria and Kenya, model 5.2 is further modifies to captures country specific effects as given in model 5.2.1 and 5.2.2 stated below.

exchange rate in Kenya and $MSCRPS_k$ is monetary sector credit to private sector in Kenya.

Equation 5.2.1 and 5.2.2 above are the mathematical models which do not capture the intercept parameter, coefficients of slope parameters and the stochastic error term. Therefore, the equations are transformed to econometrics models given in equation 5.3.1 and 5.3.2 for Nigeria and Kenya respectively by including the intercept parameter, slope parameters and the stochastic error term.

interest rate in Nigeria at time t , $EXCHR_{nt}$ is exchange rate in Nigeria at time t , $MSCRPS_{nt}$ is monetary sector credit to

private sector in Nigeria at time t , α_0 is an intercept parameter for Nigeria, $\alpha_1, \alpha_2, \alpha_3, \alpha_4$ are coefficients of slope parameters to be estimated for Nigeria and ε_{nt} is the stochastic error term for Nigeria at time t while INF_{kt} represent inflation rate in Kenya at time t , M_{2kt} is money supply in Kenya at time t , $LENDR_{kt}$ is lending interest rate in Kenya at time t , $EXCHR_{kt}$ is exchange rate in Kenya at time t , $MSCRPS_{kt}$ is monetary sector

$$INF_{nt} = \alpha_0 + \alpha_1 M_{2nt} + \alpha_2 LENDR_{nt} + \alpha_3 \ln EXCHR_{nt} + \alpha_4 MSCRPS_{nt} + \varepsilon_{nt}$$

[5.3.3]

$$INF_{kt} = \beta_0 + \beta_1 M_{2kt} + \beta_2 LENDR_{kt} + \beta_3 \ln EXCHR_{kt} + \beta_4 MSCRPS_{kt} + \mu_{kt}$$

[5.3.4]

Where $\ln$ stands for the natural log

credit to private sector in Kenya at time t , β_0 is an intercept parameter for Kenya, $\beta_1, \beta_2, \beta_3, \beta_4$ are coefficients of slope parameters to be estimated for Kenya and μ_{kt} is the stochastic error term for Kenya at time t .

The econometric model specified in equation 5.3.1 and 5.3.2 shall be transformed into a mixed form ARDL model given in equation 5.3.3 and 5.3.4 in order to correct potential functional form misspecification that may arise from the estimation of the initial linear model and to improve its statistical properties.

In line with the ARDL estimation procedures, the ARDL model are presented as follows starting with the bounds test model is given as follows:

$$\Delta INF_{nt} = \alpha_0 + \sum_{i=1}^k \phi_{1i} \Delta INF_{nt-i} + \sum_{i=0}^k \phi_{2i} \Delta M_{2nt-i} + \sum_{i=0}^k \phi_{3i} \Delta LENDR_{nt-i} + \sum_{i=0}^k \phi_{4i} \Delta \ln EXCHR_{nt-i} + \sum_{i=0}^k \phi_{5i} \Delta MSCRPS_{nt-i} + \alpha_1 INF_{nt} + \alpha_2 M_{2nt} + \alpha_3 LENDR_{nt} + \alpha_4 \ln EXCHR_{nt} + \alpha_5 MSCRPS_{nt} + \varepsilon_{nt...Nigeria}$$

[5.5]

$$\Delta INF_{kt} = \beta_0 + \sum_{i=1}^k \chi_{1i} \Delta INF_{kt-i} + \sum_{i=0}^k \chi_{2i} \Delta M_{2kt-i} + \sum_{i=0}^k \chi_{3i} \Delta LENDR_{kt-i} + \sum_{i=0}^k \chi_{4i} \Delta \ln EXCHR_{kt-i} + \sum_{i=0}^k \chi_{5i} \Delta MSCRPS_{kt-i} + \beta_1 INF_{kt} + \beta_2 M_{2kt} + \beta_3 LENDR_{kt} + \beta_4 \ln EXCHR_{kt} + \beta_5 MSCRPS_{kt} + \mu_{kt...Kenya}$$

[5.6]

The ARDL long run model is given as follows

$$In INF_{nt} = \alpha_0 + \sum_{i=1}^k \alpha_{1i} In INF_{nt-i} + \sum_{i=0}^k \alpha_{2i} In M_{2nt-i} + \sum_{i=0}^k \alpha_{3i} In LENDR_{nt-i} + \sum_{i=0}^k \alpha_{4i} In \ln EXCHR_{nt-i} + \sum_{i=0}^k \alpha_{5i} In MSCRPS_{nt-i} + \varepsilon_{nt...Nigeria}$$

[5.7]

$$InINF_{kt} = \beta_0 + \sum_{i=1}^k \beta_{1i} InINF_{kt-i} + \sum_{i=0}^k \beta_{2i} InM_{2kt-i} + \sum_{i=0}^k \beta_{3i} InLENDR_{kt-i} + \sum_{i=0}^k \beta_{4i} InEXCHR_{kt-i} + \sum_{i=0}^k \beta_{5i} InMSCRPS_{kt-i} + \mu_{kt} \dots Kenya \dots \dots \dots$$

[5.8]

ARDL short run an error correction model is given as follows

$$\Delta INF_{nt} = \alpha_0 + \sum_{i=1}^k \alpha_{1i} \Delta INF_{nt-i} + \sum_{i=0}^k \alpha_{2i} \Delta M_{2nt-i} + \sum_{i=0}^k \alpha_{3i} \Delta LENDR_{nt-i} + \sum_{i=0}^k \alpha_{4i} \Delta EXCHR_{nt-i} + \sum_{i=0}^k \alpha_{5i} \Delta MSCRPS_{nt-i} + \delta ECT_{nt-1} + \varepsilon_{nt} \dots Nigeria$$

[5.9]

$$\Delta INF_{kt} = \beta_0 + \sum_{i=1}^k \beta_{1i} \Delta INF_{kt-i} + \sum_{i=0}^k \beta_{2i} \Delta M_{2kt-i} + \sum_{i=0}^k \beta_{3i} \Delta LENDR_{kt-i} + \sum_{i=0}^k \beta_{4i} \Delta EXCHR_{kt-i} + \sum_{i=0}^k \beta_{5i} \Delta MSCRPS_{kt-i} + \phi ECT_{kt-1} + \mu_{kt} \dots Kenya \dots \dots \dots$$

[5.10]

4. Results and Discussion

4.1 Unit Root

Unit root test is a statistical test used to determine whether a time series variable is stationary on non-stationary. According to Gujarati and Porter (2009), regressing of a non-stationary time series on one or more non stationary time series may produce a spurious regression result. Hence, when dealing with time series data it is vital to test for stationarity of the series in order to avoid spurious regression. Thus, the study employed two conventional unit roots which include the Augmented Dickey Fuller (ADF) unit root test and Philip Perron (PP) unit root test to test for the stationarity of the time series data before

estimation. The hypothesis to be tested is stated as follows:

H₀: The series has a unit root (non-stationary)

H₁: The series has not unit root (stationary)

The decision rule is to reject the null hypothesis if the p-value < 0.05 (at 5% significance) or if the ADF/PP statistic < critical value (statistic is more negative than critical value at given level of significance)

Table 6.1 below present the Augmented Dickey Fuller (ADF) unit root and Philip Perron (PP) unit root test result.

Table 4.1 Unit Root Test Results

Nigeria	ADF Trend Intercept		Statistic: and				Kenya	ADF Trend Intercept		Statistic: and			
	At Lev	First Diff	1% level	5% level	10% level	Re mark		At Lev	First Diff	1% level	5% level	10% level	Re mark
IN	2.59	9.56	4.33	3.5	3.2		INF	3.4	6.37	4.2	3.56	3.2	
FN	5	2	9	88	29	I(1)	K	68	7	97	8	18	I(1)

Pro b.	0.28 5	0.00 0**					Prob .	0.0 60	0.00 01**				
	-		-	-	-			-	-	-	-	-	
M2 N	3.67 1		4.27 3	3.5 58	3.2 12	I(0)	M2K Prob	2.9 20	6.64 2	4.2 97	3.56 8	3.2 18	I(1)
Pro b.	0.03 93*						.	0.1 70	0.00 0**				
LE	-		-	-	-			-	-	-	-	-	
ND RN	5.86 9		4.31 0	3.5 74	3.2 22	I(0)	LEN DRK	2.3 96	5.57 1	4.2 85	3.56 3	3.2 15	I(1)
Pro b.	0.00 02*						Prob .	0.3 75	0.00 04**				
IE													
XC	-	-	-	-	-		IEX	-	-	-	-	-	
HR N	3.01 5	5.33 7	4.28 5	3.5 63	3.2 15	I(1)	CHR K	2.2 45	5.02 7	4.2 85	3.56 3	3.2 15	I(1)
Pro b.	0.14 8	0.00 08**					Prob .	0.4 46	0.00 16**				
MS													
CR	-		-	-	-		MSC	-	-	-	-	-	
PS N	3.81 2		4.28 5	3.5 63	3.2 15	I(0)	RPS K	2.7 41	6.26 4	4.2 85	3.56 3	3.2 15	I(1)
Pro b.	0.02 94*						Prob .	0.2 28	0.00 01**				
Nig eria		PP Statistic: Trend and Intercept					Ken ya		PP Statistic: Trend and Intercept				
	-	-	-	-	-			-	-	-	-	-	
IN FN	2.85 2	4.49 7	4.28 5	3.5 63	3.2 15	I(1)	INF K	3.5 53	13.6 84	4.2 85	3.56 3	3.2 15	I(1)
Pro b.	0.19 1	0.00 6**					Prob .	0.0 51	0.00 0**				
	-	-	-	-	-			-	-	-	-	-	
M2 N	3.51 9	11.2 57	4.28 5	3.5 63	3.2 15	I(1)	M2K Prob	2.8 80	6.84 7	4.2 85	3.56 3	3.2 15	I(1)
Pro b.	0.05 4	0.00 0**					.	0.1 82	0.00 0**				
LE	-		-	-	-			-	-	-	-	-	
ND RN	4.01 6		4.27 3	3.5 58	3.2 12	I(0)	LEN DRK	2.4 67	5.57 7	4.2 85	3.56 3	3.2 15	I(1)
Pro b.	0.01 82*						Prob .	0.3 41	0.00 04**				
IE													
XC	-	-	-	-	-		IEX	-		-	-	-	
HR N	2.36 3	5.44 4	4.28 5	3.5 63	3.2 15	I(1)	CHR K	4.8 91		4.2 73	3.55 8	3.2 12	I(0)
								0.0					
Pro b.	0.39 1	0.00 06**					Prob .	0.22 *					

MS								MSC	-	-	-	-	-		
CR	-	-	-	-	-			RPS	2.7	6.26	4.2	3.56	3.2		
PS	2.16	6.36	4.28	3.5	3.2			K	43	4	85	3	15	I(1)	
N	2	0	5	63	15	I(1)		Prob	0.2	0.00					
Pro	0.49	0.00						.	27	01**					
b.	3	01**													

Note: * variable integrated at level, ** variable integrated at first difference

Source: Authors Computation using EViews version 9

The unit root results obtained from both Augmented Dickey Fuller (ADF) and Philips-Perron (PP) test as presented above reveal that the variables for both Nigeria and Kenya exhibited a mixture of stationarity at level $I(0)$, and at first difference $I(1)$. This mixed order of integration satisfies the necessary conditions for the application of the Autoregressive Distributed Lag (ARDL) technique in the research analysis.

4.2 Optimum Lag Length Selection

Optimum lag length selection deals with the selection of the number of past values of the dependent and independent variables that best explain the dependent variable. The use of too many lags affects the degree of freedom and causes multicollinearity while too few lags may lead to model misspecification and serial correlation.

Table 4.2 Optimum Lag Length Selection Result

Nigeria						
Lag	LogL	LR	FPE	AIC	SC	HQ
0	-447.297	NA	3240344	29.1805	29.41175	29.26
1	-355.054	148.78	43369.23	24.8422	26.22989*	25.29
2	-322.201	42.39025*	29955.53*	24.33555*	26.87973	25.16489*
Kenya						
Lag	LogL	LR	FPE	AIC	SC	HQ
0	-381.268	NA	45763.9	24.9205	25.15181	25
1	-272.734	175.055	214.1241	19.5312	20.91894*	19.98358*
2	-243.151	38.17208*	182.6238*	19.23551*	21.77968	20.06

* indicates lag order selected by the criterion,

Source: Authors Computation using EViews version 9

The results from Table 6.2 above indicates that the optimum lag length for Nigeria is lag two (2) while lag one (1) is the optimum lag length for Kenya as revealed by the Akaike information criterion (AIC) having the least figure.

4.3 Autoregressive Distributed Lag (ARDL) Bounds Test

The study conduct bounds test to ascertain if a long run relationship exist among the variables. The null hypothesis of no long run relationship (no cointegration) is tested

against the alternate hypothesis; the decision rule is to reject the null hypothesis if the F-statistic is greater than the upper bound or accept the null hypothesis if the F-statistic is lower than the lower bound and the result is inconclusive if the F-statistic falls between the lower and upper bounds (Pesaran, Shin and Smith, 2001). In line with the sample size of the study, the critical values were adopted from Narayan (2005).

Table 4.3 Autoregressive Distributed Lag (ARDL) Bounds Test Result

Model Equation: $INF_n = f(M_{2n}, LENDR_n, LEXCHR_n, MSCRPS_n)$ N; 33, K;4

Nigeria $INF_k = f(M_{2k}, LENDR_k, LEXCHR_k, MSCRPS_k)$				Kenya			
F-statistic		4.9254		F-statistic		16.5368	
Critical Values	I0	I1		Critical Values	I0	I1	
Bounds	Bound	Bound		Bound	Bound	Bound	
1%	4.590		6.368	1%	4.590		6.368
5%	3.276		4.630	5%	3.276		4.630
10%	2.696		3.898	10%	2.696		3.898

Source: Authors Computation using Eviews version 9

The results of the bounds test presented in Table 6.3 reveal that the F-statistic for both Nigeria and Kenya are not lower than the lower bounds, hence, we failed to accept the null hypothesis. Thus, we reject the null hypothesis in favor of the alternative hypothesis of a long run relationship among the variables. The alternative hypothesis is accepted at all levels of significance for Kenya while for Nigeria it is accepted at 5% and 10% level of significance indicating the presence of cointegration relationship among the variables but Kenya exhibit stronger

cointegration than Nigeria. The establishment of long run relationship among the variables is in line with the findings of Iheonu, Ihedimma and Eze (2017).

4.4 Autoregressive Distributed Lag (ARDL) Long Run Estimation

Having established a long run relationship among the variables as revealed by the bound test, the study proceeded to estimate the long run coefficients of the model to determine the persistent impact of monetary policy on inflation.

Table 4.4 Autoregressive Distributed Lag (ARDL) Long Run Estimation Result

Nigeria					Kenya				
Variable	Coefficient	Std. Error	t-Statistic	Prob.	Variable	Coefficient	Std. Error	t-Statistic	Prob.
M2N	-0.4607	0.1904	-2.4196	0.0419	M2K	-0.8339	0.1646	-5.0663	0.0015
LENDRN	-0.6294	1.0368	-0.6070	0.5606	LENDRK	-0.6769	0.1043	-6.4900	0.0003
LEXCHRN	16.6952	2.8064	5.9489	0.0003	LEXCHK	55.8505	5.4653	10.2191	0.0000
MSCRPSN	2.7859	1.1339	2.4570	0.0395	MSCRPSK	1.0562	0.1833	5.7620	0.0007
C	80.1430	31.2343	2.5659	0.0333	C	250.6056	22.1722	11.3027	0.0000

Source: Authors Computation Using Eviews

The ARDL long run results in table 6.4 above shows mixture of positive and negative coefficient of the independent variables for both countries. The coefficient of money supply (broad money growth annual %) for both countries is negative indicating that in the long run an increase in money supply reduces inflation with significant impacts. This finding aligns with Onyeiwu (2012) but contradict that of Mutwiri and Jagongo (2017). Increase in lending interest rate reduces inflation in both countries in the long run but the impact is insignificant in Nigeria suggesting difference in monetary policy effectiveness. Increase in exchange rate (Official exchange rate (LCU per US\$, period average) in the long run reduces inflation significantly both countries. Monetary sector credit to private sector (%)

GDP) exerts positive relation with inflation in Nigeria and Kenya in the long run, the impact is significant in both countries in line with Judijanto, Rosalia, Siddiqi, Firayani, and Noviya (2025). Though, the coefficient of money supply variable exhibited contrary to a priori economic theories, its suggests that monetary authorities in both countries respond to inflationary pressures by tightening liquidity conditions. Thus, the comparative long-run analysis shows that monetary policy variables play crucial roles in shaping inflation dynamics in both Nigeria and Kenya.

4.5 ARDL Short Run and Error Correction Estimation

Table 6.5 below presents the result of the ARDL short run and error correction estimation.

Table 4.5 ARDL Short Run and Error Correction Estimation Result

Nigeria					Kenya				
Variable	Coefficient	Std. Error	t-Statistic	Prob.	Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INFN(-1))	0.3313	0.1189	2.7864	0.0237	D(INFK(-1))	0.9689	0.1285	7.5401	0.0001
D(INFN(-2))	0.3638	0.1087	3.3458	0.0010	D(M2K)	-	0.0835	7.1249	0.0002
D(M2N)	-	0.0457	0.1031	0.9204	D(M2K(-1))	0.8768	0.1229	7.1334	0.0002
D(M2N(-1))	0.3577	0.0581	6.1586	0.0003	D(M2K(-2))	0.4682	0.1016	4.6070	0.0025
D(M2N(-2))	0.2458	0.0600	4.0982	0.0004	D(LENDRK)	3.3268	0.4070	8.1741	0.0001
D(LENDRN)	-	0.6313	5.7869	0.0004	D(LENDRK(-1))	1.1065	0.4413	2.5074	0.0405
D(LENDRN(-1))	-	0.4926	6.2183	0.0003	D(LENDRK(-2))	2.5412	0.4066	6.2502	0.0004
D(LENDRN(-2))	-	0.4728	0.1821	0.8600	D(LEXCHRNK)	21.1832	8.1093	2.6122	0.0348

D(LEXCH RN)	-	2.735	1.635	0.1	D(LEXCHR NK(-1))	23.895	8.035	2.973	0.0
D(LEXCH RN(-1))	4.4731	6	2	407	D(LEXCHR NK(-2))	1	2	8	207
D(LEXCH RN(-2))	10.609	2.889	3.671	0.0	D(MSCRPS K)	67.030	10.53	6.365	0.0
D(MSCRPS SN)	2	6	5	063	D(MSCRPS K(-1))	6	11	0	004
CointEq(- 1)	19.930	3.665	5.437	0.0	D(MSCRPS K(-2))	0.308	6.951	0.0	
	4	2	8	006		2.1418	1	2	002
								-	
		0.543	1.529	0.1			0.411	6.357	0.0
	0.8315	6	6	647		2.6163	6	2	004
		0.140	6.929	0.0			0.238	1.883	0.1
	-	6	8	001		0.4484	1	0	017
	0.9740							-	
							0.180	13.04	0.0
					CointEq(-1)	2.3563	7	19	000

Source: Authors Computation using Eviews version 9

The result of the short run and error correction estimation revealed a mix of significant and insignificant dynamics. Lag of inflation exerts positive significant impact on inflation indicating persistence inflation in both countries. Current money supply change negatively affects inflation in both countries but the impact is insignificant in Nigeria whereas its lagged terms are positive and significant an indication that money supply shocks may reduce inflation at first but will eventually increase inflationary pressures over time. Coefficients of lending interest rate are negative and significant in Nigeria indicating that lending interest reduces inflation except the lag 2 that has insignificant negative coefficient while the coefficient for Kenya are positive and

significant indicating that lending interest rate increases inflation. Lags of exchange rate for both countries are positive and significant indicating that exchange rate movement affect inflation. Monetary sector credit to private sector exhibited mix response in Kenya with current and 2 lag positively affect inflation while the 1 lag affects inflation negatively.

The negative and highly significant error correction terms in both countries confirms the existence of a long-run equilibrium relationship among the variables. The coefficient implies that approximately 97% of deviations from long-run equilibrium are corrected within one period in Nigeria While in Kenya; about 235% of deviations from long-run equilibrium are corrected within one period

Table 4.6 ARDL Diagnostic Checks Results

Nigeria			Kenya		
Tests	F- Statistics	Probabil ity	Tests	F- Statistics	Probabil ity
Serial Correlation LM Test	2.8959	0.1829	Serial Correlation LM Test	0.7913	0.5028
Heteroskedasticity Test	0.3650	0.9678	Heteroskedasticity Test	0.6587	0.7848
Normality Test	0.9007	0.6374	Normality Test	0.5555	0.7575
Ramsey RESET	3.4755	0.0994	Ramsey RESET	1.9745	0.2096

Result of diagnostic checks on the estimated model reveal the absent of serial correlation, heteroscedasticity and normality problem in the model. Further, the Ramsey Reset and CUSUM and Cusum of squares (CUSUMSQ) tests confirmed that the model is rightly specified, stable and suitable for policy inference.

4.7 Vector Auto Regression (VAR)

Granger Causality Test

Table 4.7 Vector Auto Regression (VAR) Granger Causality Test Result

Nigeria:							
Null Hypothesis			Chi-square	Prob.	Decision	Direction of Causality	Relationship
LENDRN does not Granger-cause INFN; INFN does not Granger-cause LENDRN			16.2744; 12.2938	0.0003; 0.0021	Reject H_0	LENDRN $\rightarrow$ INFN; INFN $\rightarrow$ LENDRN	Bidirectional
INFN does not Granger-cause LEXCHRN			10.4862	0.0053	Reject H_0	INFN $\rightarrow$ LEXCHRN	Unidirectional
LEXCHRN does not Granger-cause LENDRN			11.0023	0.0041	Reject H_0	LEXCHRN $\rightarrow$ LENDRN	Unidirectional
M2N does not Granger-cause MSCRPSN			10.7888	0.0045	Reject H_0	M2N $\rightarrow$ MSCRPSN	Unidirectional
KENYA							
Null Hypothesis			Chi-square	Prob.	Decision	Direction of Causality	Relationship
LEXCHRNK does not Granger-cause INFK			18.0338	0.0001	Reject H_0	LEXCHRNK $\rightarrow$ INFK	Unidirectional
LENDRK does not Granger-cause INFK			7.567	0.0227	Reject H_0	LENDRK $\rightarrow$ INFK	Unidirectional
M2K does not Granger-cause LENDRK			15.4529	0.0004	Reject H_0	M2K $\rightarrow$ LENDRK	Unidirectional
LEXCHRNK does not Granger-cause LENDRK			9.8359	0.0073	Reject H_0	LEXCHRNK $\rightarrow$ LENDRK	Unidirectional

The result reveal bidirectional causality between lending interest rate and inflation in Nigeria and unidirectional causality between inflation and exchange rate, exchange rate and lending rate, money supply and monetary sector credit to private sector, Kenya in contrast exhibited strictly unidirectional causality among the

Granger causality test is used to determine whether past values of one variable help predict another variable in time series analysis. In this section, The Granger Causality/Block Exogeneity Wald Test was conducted within the Vector Autoregression (VAR) framework to determine the direction of causal relationships among the variables.

significant variables; exchange rate and lending rate causes inflation, money supply and exchange rate causes lending interest rate.

5. Conclusion

This study examined the impact of monetary policy on inflation dynamics in

Nigeria and Kenya using the ARDL framework. The results revealed evidence of a long-run relationship among monetary policy variables and inflation in both Nigeria and Kenya.

In the short run, inflation persistence and lending rates play a more prominent role, particularly in Nigeria. Inflation is persistent in both Nigeria and Kenya, with lagged inflation significantly affecting current inflation. Exchange rate movements are a key short-run driver of inflation in both countries, while money supply shows mixed and delayed effects. Lending rates reduce inflation in Nigeria but increase it in Kenya, indicating differences in monetary policy effectiveness. Credit to the private sector is more influential in Kenya than Nigeria. The error correction terms are negative and significant, confirming long-run equilibrium with Kenya adjusting faster than Nigeria.

Furthermore, the causality analysis reveals that Nigeria exhibits a feedback-driven system, having bidirectional causality between inflation and lending rate aside other unidirectional causality while Kenya demonstrates strictly unidirectional and more structured transmission mechanism. In all, findings suggest that inflation in both Nigeria and Kenya is largely driven by monetary and external sector conditions. Thus, the study concludes that that monetary policy and exchange rate dynamics play a significant role in determining inflation outcomes in Nigeria and Kenya, though the transmission mechanism differ across the two economies.

Policy Recommendations

Based on the findings, the study proffered the following recommendations:

1. Central bank of Nigeria and the central bank of Kenya Central banks should

strengthen and improve the effectiveness her monetary policy transmission channels, particularly the interest rate and credit channels, to ensure that policy changes have a more meaningful impact on inflation.

2. Monetary authority should adopt and implement inflation targeted lending rate to control inflation.

3. Government should adopt prudent and well-coordinated exchange rate policies aimed at stabilizing exchange rate fluctuations and curbing imported inflation.

4. Governments should implement structural reforms and policies aimed at strengthening and improving institutional quality in the economies to support monetary policy direction.

5. Government should establish and strengthen monetary and fiscal policy collaborations to control inflation. Regular policy dialogue and joint macroeconomic planning will ensure that fiscal expansion does not undermine monetary policy objectives of inflation control and exchange rate stability.

6. Nigeria should learn lessons from Kenya's relatively stronger monetary policy effectiveness to improved and better her economy.

Thus, the effective implementation of these recommendations would enhance the efficiency of monetary policy in controlling inflation and repositioning the two economies on the path of sustainable economic growth and development.

Acknowledgement

This research work is not funded by any organization; it was supported solely through personal savings. The author declares that there are no conflicts of interest in the course of the research.

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