OPEN ACCESS

Saudi Journal of Economics and Finance
Abbreviated Key Title: Saudi J Econ Fin
ISSN 2523-9414 (Print) |ISSN 2523-6563 (Online)
Scholars Middle East Publishers, Dubai, United Arab Emirates
Journal homepage: http://saudijournals.com

Original Research Article

Monetary Policy Measures and Inflation Targeting in Nigeria

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DOI: https://doi.org/10.36348/sjef.2026.v10i05.002 | **Received:** 04.03.2026 | **Accepted:** 30.04.2026 | **Published:** 13.05.2026

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Abstract

This study examined how well monetary policy tools worked in helping Nigeria to achieving its inflation targets from 1981-2023. To achieve this, the study collected data on inflation rate, monetary policy rate, broad money supply, exchange rate, lending interest rate and real gross domestic product from reports by Nigeria's central bank and the World Bank. An Autoregressive Distributed Lag - ARDL technique was used as the main tool of analysis. The findings from this method showed that there is a long-term relationship between the different factors studied. In the long run, the monetary policy rate, money supply, and lending interest rate had a negative but not strong connection with inflation rate. On the other hand, exchange rate and real gross domestic product showed a positive but not strong relationship with inflation rate. In the short term, the monetary policy rate, money supply, and exchange rates had a positive and strong link with inflation. Meanwhile, lending interest rate and real gross domestic product had a negative and strong link with inflation rate. Based on the findings, this study concluded that in Nigeria, inflation is highly sensitive to monetary expansion, interest rate adjustments, and exchange rate movements, but the effects are inflation-enhancing rather than stabilizing highlighting the need for a more coordinated and structurally grounded monetary policy framework rather than relying on MPR adjustments alone. From a policy standpoint, the study recommended amongst others that broad money supply growth must be carefully controlled to avoid liquidity-driven inflation. The central bank should continue to use lending rate adjustments as an effective short-run inflation control tool**,** but with caution to avoid credit starvation in the economy. Inflation targeting should be complemented with policies that expand real output (RGDP)**,** since growth itself helps reduce inflationary pressures.

Keywords: Monetary Policy, Inflation, Broad Money Supply, MPR, Lending Interest Rate and Exchange Rate.

I. INTRODUCTION

Monetary policy plays a central role in macroeconomic management, especially when it comes to keeping prices stable. Stable prices help the economy grow, encourage investment, help distribute income fairly, and reduce poverty. In Nigeria, inflation has been high and unpredictable for a long time. This ongoing inflation has made people worry about whether monetary policy is working well to control price changes. In Nigeria, monetary policy affects inflation through several connected ways, including interest rates, money supply, exchange rates, and credit.

The interest rate path is the most direct way monetary policy influences inflation. When the Central Bank of Nigeria (CBN) increases the Monetary Policy Rate (MPR), banks raise the rates they charge for loans, making it more expensive to borrow money. This reduces how much people and businesses spend, lowering overall demand and helping to reduce inflation. On the other hand, if the policy rate is lowered, borrowing becomes cheaper, encouraging spending and investment, which can increase inflation. Studies show that the interest rate channel is the strongest way monetary policy affects inflation in Nigeria, although its effectiveness is limited by problems in the financial markets and high risks in lending (Mbutor, 2009; Ajayi, 2007).

The credit channel works by how monetary policy affects how much banks lend to businesses and people. When the central bank takes a tight stance, like raising the Cash Reserve Ratio (CRR), banks have less extra money to give out as loans. This makes it harder for businesses and individuals to borrow, which lowers spending and investment. This drop in overall demand helps control inflation. In Nigeria, where most financial activities are done by commercial banks, this channel is very important (Uchendu, 1996; Ajayi, 2007). But it doesn't work as well because the credit market is weak,

high default risks, and small and medium-sized businesses don't have easy access to finance (money). Inflation in Nigeria comes from both sides: demand-side issues like too much money in the economy, government spending problems, falling currency value, imported inflation, sudden rises in energy prices, structural issues in the economy, insecurity, and problems with food supply (Akinbobola, 2012; NBS, 2023).

Over the years, the Central Bank of Nigeria (CBN) has used different tools to control inflation, such as the Monetary Policy Rate (MPR), Open Market Operations (OMO), Cash Reserve Ratio (CRR), Liquidity Ratio (LR), and managing the exchange rate. Even after many years of using these monetary policy tools, Nigeria still faces high inflation. Inflation has been above 10% for most of the time since 1980, and it has gotten worse in recent years. For example, Nigeria's inflation rate went from 12.1% in 2020 to over 28% by 2024, showing serious economic problems (NBS, 2024; CBN, 2023). This ongoing inflation hurts people's ability to buy things, makes people less likely to save money, affects where they choose to invest, increases the gap between rich and poor, and makes poverty worse.

There are several reasons why monetary policy in Nigeria hasn't been very effective. These include the government borrowing too much, weak financial systems, limited access to credit, unstable exchange rate, problems in getting goods, insecurity, energy issues, and reliance on imports (Adeniran, Yusuf & Adeyemi, 2014). These challenges have made traditional monetary tools less powerful, which has made it harder to control inflation (Mbutor, 2009; Nnanna, 2011). Therefore, it's important to understand how monetary policy affects inflation in Nigeria so that better policies can be made and the economy can become more stable. Studies on monetary policy and inflation in Nigeria have given mixed results, with some showing strong policy effectiveness (Okonta & Nwankwo, 2018; Tonprebofa, 2019) and others showing weak or insignificant effects (Clement, Cyril, Imoagwu & Ejefobihi, 2021). These differences come from differences in data periods, how models are built, which variables are included, and the methods used to analyze the data. Because of this, a new study using up-to-date data and strong analysis methods is needed to better understand the relationship between monetary policy and inflation in Nigeria. The rest of the paper is organized into sections on literature review, materials and methods, results and discussion, and finally, conclusion and recommendations.

II. LITERATURE REVIEW

Conceptual Clarifications and Philosophy

Monetary Policy Measures

Monetary policy refers to the deliberate actions taken by a country's apex bank to regulate the supply of money, credit, and interest rates in the economy to achieve macroeconomic objectives such as price stability, economic growth, and employment generation (Mishkin, 2019). In Nigeria, the apex bank is responsible for formulating and implementing monetary policy. The primary goal is to ensure price stability while supporting sustainable economic growth, financial system stability, and development objectives. The objectives of monetary policy measures are broadly classified into primary and secondary goals. The primary objective is usually price stability, which involves controlling inflation within a targeted range to preserve the purchasing power of the currency. Secondary objectives include promoting economic growth, employment, balance of payments stability, and financial sector development. In Nigeria, inflation control remains the dominant goal of monetary policy due to the adverse impact of high inflation on households, businesses, and investment (Ajayi, 2007; Nnanna, 2011).

Monetary policy tools are usually divided into two main types: quantitative and qualitative. Quantitative tools are used to manage the total amount of money and credit in the economy, and they usually affect all areas in the same way. Examples of quantitative tools include the Monetary Policy Rate (MPR), Cash Reserve Ratio (CRR), Liquidity Ratio (LR), and Open Market Operations (OMO). These tools are often called indirect or market-based because they work through the financial system. The Monetary Policy Rate (MPR) is a key rate that influences other interest rates and shows the direction of monetary policy. The Cash Reserve Ratio (CRR) requires banks to keep some of their deposits with the central bank, which controls how much they can lend. Open Market Operations (OMO) involve the central bank buying or selling government bonds to add or remove money from the system. These tools help control overall demand, spending, investment, and inflation.

Qualitative tools, also known as direct or administrative tools, are used to guide where credit goes rather than how much money is in the system. For example, the central bank might encourage banks to lend more to important areas like agriculture or small businesses, or limit lending to risky areas like speculation. Other methods include moral persuasion, controlling credit amounts, and setting interest rates for certain sectors. In Nigeria, qualitative tools are often used together with quantitative tools. This is because some problems in the economy and banking system make market-based policies less effective. Studies like Mbutor (2009) show that using both types of tools together can help manage the economy better.

Monetary policy tools affect inflation by managing how much money is in circulation, how easy it is to get loans, interest rates, and how people invest. When the central bank uses tight policies, like raising the minimum reserve ratio, increasing the cash reserve ratio, or selling government bonds through open market operations, it reduces the amount of money available for borrowing. This lowers overall spending and helps control inflation. On the other hand, when the central

bank uses looser policies, it makes more money available, encourages spending, and could lead to higher inflation if the economy isn't growing fast enough. In Nigeria, how well these tools work depends on several factors, like the government's control over the economy, how much the currency's value fluctuates, unexpected changes in supply, and how efficient the financial system is.

To sum up, monetary policy is the way a central bank manages money, loans, and interest rates to reach economic goals. It uses both quantitative tools, like the minimum reserve ratio, cash reserve ratio, and open market operations, to control money supply, and qualitative tools, like credit controls and persuasion, to guide where loans go. In Nigeria, these policies mainly aim to control inflation, but their success depends on how strong the financial markets are, how much trust people have in institutions, and how well they work with other economic policies.

Inflation Targeting/Inflation

Globally, inflation targeting is one of the most widely adopted monetary policy frameworks. According to Onwioduokit (2025), inflation targeting involves apex banks explicitly setting an inflation target, often in the range of 2%, as a benchmark for monetary policy decisions. What this suggests is that the apex bank committed to a specific inflation rate or range. On the other hand, inflation refers to the ongoing rise in the average prices of goods and services within an economy over a period of time, which reduces the value of money and the amount of goods and services that can be bought with it (Samuelson & Nordhaus, 2010). It reflects how much more expensive a set of goods and services has become compared to a previous period. When inflation is high, each unit of money can buy less than it could before, which affects how well people can afford things at home, how businesses plan for the future, and how stable the whole economy is. Inflation can be grouped based on why it happens and how fast it's growing. One type is demand-pull inflation, which happens when people and businesses want to spend more than what the economy can produce, causing prices to go up. Another type is cost-push inflation, which happens when the cost of making things goes up, like when wages or energy prices rise or when imported goods become more expensive. There's also structural inflation, which comes from long-term problems in the economy, such as poor infrastructure or shortages of supplies. In terms of how fast inflation is growing, it can be creeping (slow and small), walking (moderate), galloping (fast), or hyperinflation (very fast) (Blanchard & Johnson, 2013).

To measure inflation, price indices track how the cost of a group of typical goods and services changes over time. Two common ones are the Consumer Price Index (CPI), which shows how the prices of goods and services people buy change, and the Producer Price Index (PPI), which shows how prices change at the production level. The rate of inflation is usually shown as a percentage increase in the index over a certain period, like a month or a year. In Nigeria, the National Bureau of Statistics (NBS) releases the CPI-based inflation rate, which is a key guide for how the country's central bank manages money (NBS, 2023).

Inflation in an economy can come from two main sides: the demand side and the supply side. When there is too much demand in the economy because people are spending a lot, the government is spending more, or businesses are investing more, prices tend to go up. This is called demand-pull inflation. On the other hand, cost-push inflation happens when the costs of making goods go up, like when wages, fuel, or the price of materials from other countries increase, and these higher costs are then passed on to consumers. In Nigeria, inflation is often affected by several things at once, including the value of the local currency dropping, problems with getting enough food, changes in oil prices, and too much money being created (Akinbobola, 2012).

The effects of inflation can be either bad or not so bad, depending on how fast it happens and whether it is predictable. If inflation is not too high and happens in a steady way, it might encourage people to spend and invest, which can help the economy grow. But if inflation is high or unpredictable, it can make it harder for people to buy things with their money, reduce the value of savings, create uncertainty for businesses, make prices of things not match each other, and even make the gap between rich and poor bigger. In Nigeria, high inflation has led to lower real incomes, more people living in poverty, and less stable economic conditions (CBN, 2023).

Inflation in Nigeria has been unpredictable in the past, often caused by structural problems in the economy, sudden disruptions in supplies, the local currency losing value, and too much money being created. Prices of food, fuel, and imported goods are some of the main reasons for higher consumer prices. The Central Bank of Nigeria (CBN) has set a target for inflation between 6% and 9% in the medium term to keep prices stable, but inflation in reality often goes beyond this range because of problems both inside and outside the country (Ajayi, 2007; NBS, 2023). To fully understand inflation in Nigeria, you need to look at both the big economic policies and the deeper structural issues in the economy.

In short, inflation refers to a continuing rise in overall prices, which makes money less valuable over time. It can be caused by things like too much demand, higher production costs, or structural issues, and is measured through things like the Consumer Price Index (CPI) or Producer Price Index (PPI). Its impact can be good in the short term, encouraging spending and investment, but can lead to economic problems when it is too high. In Nigeria, inflation continues to be a big

challenge for policymakers due to a mix of money-related, government spending, and structural issues, and managing it is a key part of the country's economic plan.

Theoretical Review

Monetarist Theory of Inflation

The Monetarist theory of inflation is mainly connected to the work of Milton Friedman. He believed that inflation is mostly a monetary problem that happens when the amount of money in an economy grows faster than the amount of goods and services being produced. According to this idea, if there is more money in the economy than there are goods and services, it usually leads to higher prices overall. Friedman is well known for saying, "Inflation is always and everywhere a monetary phenomenon," which shows how important it is for monetary authorities to control inflation by managing the money supply properly (Friedman, 1963; Mishkin, 2019). In Nigeria, long periods of high inflation have often happened because of quick growth in the money supply, which is driven by deficit financing, credit expansion, and loose monetary policies from the Central Bank of Nigeria (CBN). This shows that the Monetarist idea is still useful for understanding inflation in Nigeria (CBN, 2023).

The basis for the Monetarist theory is the Quantity Theory of Money, which is expressed through the equation of exchange: MV = PY. In this equation, M is the money supply, V is the speed at which money is used, P is the general price level, and Y is the real output. Monetarists believe that velocity stays about the same and output increases at a steady rate in the long term. So if the money supply grows faster than output, prices rise. This means there is a direct link between the amount of money and the level of inflation. Evidence from Nigeria supports this, as times of fast money supply growth, especially for broad money (M2), have often gone along with higher inflation rates, especially during times of fiscal dominance and easy money policies (Akinlo, 2012; Onyeiwu, 2019). Therefore, Nigeria's inflation experience matches the Monetarist prediction that continuous money supply growth leads to price instability.

Monetarists believe that central banks should mainly focus on keeping prices stable by managing how much money is in the economy. They prefer using set rules for making money decisions instead of making up policies as needed, because this can cause problems in the economy. According to Friedman in 1968, having a steady and predictable increase in money supply helps people expect stable inflation and keeps the economy balanced. In Nigeria, the Central Bank of Nigeria (CBN) uses several tools like the Monetary Policy Rate (MPR), open market operations (OMO), cash reserve ratio (CRR), and liquidity ratio to control money supply and manage inflation. However, when the government often changes its plans or borrows money in ways that aren't clear, it makes these tools less effective, which causes ongoing inflation (CBN, 2022; Sanusi, 2017).

When a central bank uses expansionary monetary policy, it usually increases the amount of money available and lowers interest rates to boost economic growth during tough times. But monetarists say that too much of this can lead to high inflation without really helping the economy grow long-term. In Nigeria, times when the central bank has greatly increased money supply through ways and means financing, intervention funds, and credit easing have led to more money in banks. This extra money has made people spend more and invest in risky activities which raise prices. Research shows that Nigeria's high inflation, especially since 2015, is mostly because of rapid growth in money supply due to expansionary policies and when the government covers its financial shortfalls by printing more money (Ogunleye & Adepoju, 2020; IMF, 2023).

Monetarists suggest using contractionary monetary policies, like raising interest rates, increasing reserve requirements, and controlling liquidity, to control inflation. In Nigeria, the CBN has often raised the MPR and CRR to reduce extra money in the system and control inflation. For example, the MPR increased from 11.5% in 2021 to 18.75% by 2023 to help keep inflation in check. While these actions helped slow inflation, problems like structural issues, supply problems, and budget pressures made them less effective. As a result, inflation in Nigeria stays high, showing that just tightening money isn't enough without good fiscal control and structural changes (CBN, 2023; World Bank, 2023).

One big issue in applying monetarist ideas in Nigeria is fiscal dominance, where the government has a strong influence on monetary decisions. Big budget deficits funded through domestic loans and central bank support increase money supply and push inflation up. Monetarists say this process of using money to fund deficits weakens control over money and worsens inflation. In Nigeria, depending a lot on the CBN for budget funds has greatly increased money supply and kept inflation high (Emefiele, 2022; IMF, 2023). This supports the monetarist belief that controlling inflation needs good fiscal discipline.

Monetarists also say it's important to manage inflation expectations with consistent and reliable monetary policies. When people expect inflation to rise, they ask for higher wages and prices, which lead to more inflation. In Nigeria, changes in policy, unstable exchange rates, and weak monetary systems have hurt confidence in policies, making it hard to control inflation expectations. So, even with tighter money policies, inflation remains high, showing that stable and predictable policies are key to long-term price stability (Mishkin, 2019; CBN, 2023).

The Monetarist Theory of Inflation gives a clear way to understand why inflation happens in Nigeria. The main reason for high inflation is the steady increase in the amount of money in the economy. This happens because of policies that create more money, budget shortfalls, and problems with the economy's structure. While other factors like a falling currency value, security issues, and problems getting goods to market also cause inflation, the Monetarist view says that the biggest cause is when too much money is created. To control inflation in Nigeria, it's important to carefully manage how much money is in the economy, give the central bank more freedom to make decisions, keep government spending under control, and create strong rules for monetary policy (Akinlo, 2012; IMF, 2023; World Bank, 2023).

Keynesian Transmission Mechanism Theory

This theory explains how changes in monetary policy affect real economic activity and inflation mainly through interest rates, investment, aggregate demand, and output. Based on the ideas of John Maynard Keynes, the theory focuses on how adjusting interest rates is the main way monetary policy influences how people and businesses spend money. Keynes believed that changes in the money supply affect interest rates, which then influence investment, spending, and overall demand in the economy, which in turn affects production and prices (Keynes, 1936; Mishkin, 2019). In Nigeria, the Central Bank of Nigeria (CBN) uses interest rate-based monetary tools to control inflation and keep the economy stable, making the Keynesian transmission model especially important for understanding inflation trends.

According to Keynesian theory, when the central bank increases the money supply, interest rates drop, which encourages businesses to invest in new projects and households to spend more on things like cars and houses. Lower borrowing costs make it easier for companies to expand and for people to spend, increasing overall demand in the economy. If demand grows faster than what the economy can produce, prices rise, leading to inflation. In Nigeria, when the Monetary Policy Rate (MPR) is lowered or other measures are taken to ease monetary conditions, banks tend to lend more and people spend more, especially during tough economic times, which can push prices up. Research shows that changes in interest rates have a big impact on investment, credit growth, and inflation in Nigeria (Adebiyi & Babatope, 2004; CBN, 2023).

The Keynesian model focuses a lot on how investment responds to changes in interest rates. When interest rates go down, the return on capital becomes more attractive, which makes companies more willing to invest in new projects. More investment leads to more jobs, higher income, and more spending, which increases overall demand in the economy and can cause inflation. In Nigeria, lowering interest rates has helped more private businesses get loans, especially in manufacturing, farming, and trade. However, because of long-term issues like poor infrastructure and rigid systems, more investment doesn't always result in more goods being made. Instead, it often raises costs and makes inflation worse (Iyoha, Oyefusi, & Oriakhi, 2012; IMF, 2023).

Keynes also talked about liquidity preference, which is about how people and businesses decide whether to keep money or invest in things that earn interest. When there's more money in the system, interest rates go down, which makes people less likely to hold onto cash and more likely to spend. This boost in spending raises overall demand and can push prices up when the economy is already working at full capacity. In Nigeria, people often prefer to keep cash because of uncertainty, expectations of rising prices, and problems in the financial system. This makes it harder for monetary policy to work as intended. As a result, extra money in the system tends to lead to more speculation and higher prices for assets instead of real investments, making it harder to control inflation (Mishkin, 2019; CBN, 2022).

Another part of the Keynesian model is the credit channel, where changes in monetary policy influence how much banks can lend. When money is more available, banks have more reserves and are able to lend more, which encourages spending and investment. In Nigeria, changes in the Cash Reserve Ratio (CRR) and Open Market Operations (OMO) directly affect how much banks can lend. However, weak financial systems, a lot of bad loans, and banks being cautious often stop credit from reaching productive areas of the economy. This limits growth while increasing inflation through more consumer spending and demand for imported goods (Sanusi, 2017; CBN, 2023).

In open economies, the Keynesian way of passing on monetary policy also works through the exchange rate. When the central bank uses expansionary monetary policy, it lowers interest rates, which makes it less attractive for foreign investors to bring in money. This leads to the local currency losing value. A weaker currency makes imported goods more expensive, which increases inflation. In Nigeria, when the central bank eases monetary policy, it puts pressure on the naira, making imported goods, fuel, machinery, and food more costly. Because Nigeria depends a lot on imports, the drop in the value of the naira has become a key reason for inflation, supporting the Keynesian idea that monetary policy affects inflation mainly through changes in exchange rates (IMF, 2023; World Bank, 2023).

According to Keynesian theory, when the central bank uses contractionary monetary policy, like raising interest rates and reducing the amount of money in the economy, it lowers overall demand, investment, and spending, which reduces inflation. In Nigeria, the Central Bank has taken steps to tighten monetary policy, such as increasing the Minimum Reserve Ratio (MRR), raising the Cash Reserve Ratio (CRR), and doing more

Open Market Operations (OMO), especially between 2022 and 2024. These actions were meant to reduce too much money in the system, control credit expansion, stabilize the exchange rate, and manage inflation. However, problems like shortages of goods, insecurity, energy issues, and difficulties in transporting goods have made these steps less effective, and inflation has stayed high (CBN, 2023; IMF, 2023).

One big problem with the Keynesian transmission mechanism in Nigeria is that the effects of monetary policy don't reach the real economy very well. The financial system is not well-developed, financial inclusion is low, infrastructure is weak, and institutions are not efficient, so the response of investment and production to interest rate changes is not strong. So, when the central bank tightens monetary policy, it often causes the economy to slow down without really lowering inflation, leading to a situation where the economy slows and prices still rise (stagflation). This highlights the need for better fiscal policies and structural reforms to make the Keynesian transmission of monetary policy more effective in Nigeria (Iyoha *et al*., 2012; World Bank, 2023).

Overall, the Keynesian Transmission Mechanism Theory helps explain how monetary policy influences inflation in Nigeria through interest rates, investment, access to credit, total demand, and exchange rates. However, the ongoing high inflation shows that structural and institutional issues are weakening this process. To achieve lasting price stability, Nigeria needs not only effective monetary policy but also strong fiscal discipline, a stable exchange rate, better infrastructure, and reforms to improve the supply side (CBN, 2023; IMF, 2023).

Empirical Literature

A lot of studies have looked at how well monetary policy works in reaching inflation targets. For example, Okonta and Nwankwo (2018) studied how inflation targeting might work in Nigeria by using time series data from 1985 to 2015. They looked at inflation, exchange rates, prime lending rates, income (GDP), and money supply to build an Autoregressive Distributed Lag Model for inflation. Their findings showed that monetary factors are important in explaining changes in inflation in Nigeria. Also, the first and second lags of money supply had a strong and significant effect on inflation growth in the country.

Tonprebofa (2019) used an Error Correction Model (ECM) and monthly data from 2009 to 2017 to look at how monetary policy and inflation relate in Nigeria. The results showed that money supply, exchange rate, monetary policy rate, treasury bills rate, reserve requirements, and liquidity ratio all had a significant and effective influence on the inflation rate.

Henry and Sabo (2020) employed an Autoregressive Distributed Lag approach to study the effect of monetary policy management on inflation in Nigeria between 1985 and 2019. Their findings showed that the monetary policy rate and foreign exchange rate negatively influenced inflation, whereas broad money supply positively influenced inflation.

Clement, Cyril, Imoagwu and Ejefobihi (2021) looked at how monetary policy affects inflation control in Nigeria from 1980 to 2019 using an Error Correction Model - ECM. Their findings showed that monetary policy could not significantly influenced inflation in Nigeria, in short and long terms. Money supply negatively and significantly influenced inflation control in Nigeria. Also, exchange rate also negatively and insignificantly influenced inflation control in Nigeria. The Treasury bill rate negatively and significantly influenced inflation control in Nigeria in the short term, but in the long term, it influence on inflation is positive but not meaningful.

Diaz-Roldan, Prats, and Ramos-Herrera (2021) employed a dynamic panel threshold model to look into changing monetary policy to lower the point at which it can help when interest rates are at zero for 19 countries in the Euro Area spanning 1999 to 2019. They found that inflation gap and output gap affect interest rates in the short term differently depending on whether they are above or below a certain level.

Tolulope and Anthony (2022) used quarterly data from 2000:1 to 2019:4 and a sticky-price DSGE model with Bayesian estimation to study how well monetary policy works in Nigeria. Their results showed that the channels through which monetary policy affects the economy are effective in passing policy changes to the overall economy within this setup. However, the monetary aggregate framework, when made explicit, reduces the success of this system. The study suggested that inflation targeting should be made clear in the country to fully benefit from this framework.

Ighoroje and Orife (2022) studied exchange rate changes and inflation in Nigeria between 1987 and 2019. They used variables like inflation rate, official exchange rate, value of imports, and growth rate of gross domestic product. Their results found that macroeconomic variables are not the main causes of inflation in Nigeria. Instead, social and political factors such as unrests, consumer confidence, and political conditions can lead to inflation.

Uloko, Oniore and Aigbedion (2023) used the Autoregressive Distributed Lag (ARDL) method to study how monetary policy affects inflation targeting in Nigeria from 1986 to 2022. Their research found that both the amount of money in circulation and the monetary policy rate had a negative but strong effect in the short run. However, in the long run, these factors had

a negative but not significant impact on meeting inflation targets. Based on these results, the study suggested that increasing the money supply in the short term would not greatly affect the targeted inflation rate. It also recommended that the government should fully adopt an inflation benchmarking policy. Additionally, they advised regulating the monetary policy rate to avoid higher unemployment. The study also stressed the importance of good governance in creating a reliable and stable economic environment.

Valogo, Duodu, Yusif and Baidoo (2023) looked at how exchange rates affect inflation in Ghana's inflation targeting system from 2002 to 2018 using the threshold autoregressive (TAR) method. Their findings showed that when the exchange rate drops more than 0.70 percent per month, it has a strong positive impact on inflation, supporting the idea that there is a specific threshold level that matters.

Ntshangase, Sheunesu, and Kaseeram (2023) studied how the US's unconventional monetary policy influenced inflation in emerging markets after the 2007/2008 financial crisis and during the COVID-19 period. They used a panel vector autoregression analysis on twelve emerging markets and found that the US policy had a significant impact on both inflation-targeting and non-inflation-targeting economies.

Bello, Ebuh, and Umemezia (2024) looked at what causes inflation to stay stable in Nigeria from 2011Q1 to 2023Q1. They used a method called Autoregressive Distributed Lag (ARDL) bounds testing to find out how things like the monetary policy rate, money supply, crude oil prices, GDP growth, and government budget deficit affect inflation. Their study found that broad money and the fiscal deficit have a positive and significant effect on inflation, both in the short term and long term. However, the monetary policy rate only has an effect on inflation in the short run. Based on this, the researchers suggested that Nigerian policymakers should focus on managing broad money and fiscal deficits to help keep inflation stable in the long run.

Tonye and Gbarawae (2023) used an ARDL model to study the relationship between inflation targeting and monetary policy in Nigeria from 1981 to 2021. They found that the real interest rate and exchange rate had a negative and significant effect on inflation. When looking at short-term factors like broad money supply and gross capital formation, they noticed a positive and significant link with inflation rates. They also found that Treasury bills had a negative and significant connection with inflation rates.

Iriabije, Ekong, and Orebiyi (2024) studied how monetary policy influences inflation in Nigeria from 1980 to 2021, focusing on two tools: the monetary policy rate and money supply. They used threshold autoregression (TAR) to analyze country-specific data on inflation and monetary policy, along with other variables from the literature. They identified a threshold level of 13.69 units for the monetary policy rate and 11.19 units for money supply growth. This means that monetary policy behaves differently depending on whether it's below or above these threshold levels. For example, when policies are below or above these levels, only the monetary policy rate and money supply growth are statistically effective in reducing inflation. Exchange rate management works best when the policy rate is low. The researchers recommended that monetary policy should aim to keep inflation within the range defined by these thresholds to achieve better price stability.

Olise and Ejedegba (2025) used the Vector Auto Regression (VAR) model to examine how monetary policy affects inflation in Nigeria, using data from 1986 to 2023. Their findings showed that the monetary policy rate and money supply have a positive effect on inflation. On the other hand, interest rates and the liquidity ratio have a negative effect on inflation, with the liquidity ratio being statistically significant.

Anyanwu, Kalu, Mgbemena and Madubuike (2025) looked at how exchange rates and inflation targeting work together in Nigeria's monetary policy from 1986 to 2023. They used a few key factors like inflation rate, exchange rate premium, interest rates, oil prices, government debt, and money supply, along with food prices. Their findings showed that the exchange rate premium had a positive but not significant link with inflation targeting. The interest rate was found to be related in a negative way to inflation. Oil prices were also linked in a negative way with inflation targeting, while food prices had a negative but not significant link with inflation targeting. They concluded that the Central Bank of Nigeria's inflation targeting hasn't helped stabilize the exchange rate. Because of this, the exchange rate has been very unstable, and the local currency has lost value. Their recommendation is that both inflation targeting and exchange rate stability are important tools for managing the economy's inflation. So the best approach might be a mix of both, with more focus on keeping exchange rates stable for the Nigerian economy.

Tochukwu (2025) studied how effective monetary policy is in keeping prices stable when there's an external shock affecting the system. They used the change in the Naira/Dollar exchange rate as a way to measure external shocks. Using data from 1980Q1 to 2024Q1, they found that external shocks make monetary policy less effective. In short-term, expanding money supply doesn't lead to much inflation, but in the long-term, it does. On the other hand, reducing money supply lowers productivity without much effect on inflation in a closed economy without shocks. However, when there are shocks, both expansion and contraction of money supply have unclear and mixed effects on inflation in both short and long terms. This shows that besides the

weaknesses in the system from external shocks, it also weakens how well monetary policy can manage price stability. With inflation staying high for 77.7% and adjusting to the normal state only at 7.7% each quarter, it suggests the system will become more unstable over time. The study suggests that external shocks reduce the effectiveness of monetary policy. So, they recommend using a mix of fiscal and monetary policies, managing the exchange rate, and using inflation targeting to help with price stability.

Summary of the Empirical Literature Reviewed/Research Gap

Most studies were interested to look at whether monetary policy affects inflation, without deeply analyzing how monetary policy actually influences inflation through different paths, like interest rates, credit, exchange rates, asset prices, and expectations. It's important to understand these paths because it helps in making better policy decisions. This study explicitly integrated multiple channels into its introduction, conceptual and theoretical frameworks, which helps fill the gap. Also, past research on how monetary policy affects inflation in Nigeria has given mixed results. Some studies show strong effects (like Okonta & Nwankwo, 2018; Tonprebofa, 2019), while others show weak or no effects (Clement, Cyril, Imoagwu & Ejefobihi, 2021). These differences come from things like the time period used, the models used, which variables were chosen, and how the data was analyzed. This study added new, detailed, and carefully done research that helps clear up these disagreements and gives better guidance for making policies.

III. MATERIALS AND METHODS

The study employed an ex-post facto research design and time series data spanning from 1981 to 2023. The data were obtained from a report by Nigeria's central bank. To capture the monetary policy and inflation dynamics in Nigeria, the model of Iriabije, Ekong and Orebiyi (2024) was adopted because it suits the study purpose. They (i.e., Iriabije, Ekong and Orebiyi, 2024) employed threshold autoregression (TAR) model to investigate the threshold effects of monetary policy on inflation for Nigeria from 1980 to 2021. Specifically, their model relates monetary policy rate, broad money supply, lending interest rate, exchange rate and gross domestic product to inflation. Therefore, the model for this study is presented thus:

$INF = F(MPR, M2, EXR, LIR, RGDP)$ (1)

From the above functional model or association between the dependent and explanatory variables, the econometric form of the model was specified as follows:

$INF_t = \alpha_0 + \alpha_1 MPR_t + \alpha_2 M2_t + \alpha_3 EXR + \alpha_4 LIR + \alpha_5 RGDP + e_t$ (2)

The log form of equation (2) produced;

$INF_t = \alpha_0 + \alpha_1 MPR_t + \alpha_2 LnM2_t + \alpha_3 LnEXR + \alpha_4 LIR + \alpha_5 LnRGDP + e_t$ (3)

Where:

INF is inflation rate, MPR is monetary policy rate, M2 is broad money supply, EXR is exchange rate, LIR is lending interest rate, RGDP is real gross domestic product, α_0 = intercept parameter, e = is error term which denotes other variables not included in the model, Ln is natural log, t = is the period of time, α_1 - α_5 = slope parameters. It is expected that; $\alpha_1 < 0$ (higher MPR reduces inflation); $\alpha_2 > 0$ (increase in M2 increases in inflation), $\alpha_3 > 0$ (currency depreciation increases inflation), $\alpha_4 < 0$ (Higher lending rates reduce inflation - policy channel dominates) and $\alpha_5 > 0$ (via demand pressure).

Techniques of Data Analysis

This investigation employed the techniques of Augmented Dickey Fuller test (ADF) and the Autoregressive Distributed Lag (ARDL) approach. The ADF test is utilized to check if the data is stationary, meaning it does not change over time in a manner that influences the outcomes. The general formula for the ADF test is:

$\Delta y_t = \alpha_0 + \alpha_1 y_{t-1} + \Sigma\alpha_1 \Delta y_i + \delta_t + U_t$ (3)

Where: y represents a time series, t is a linear time trend, Δ denotes the first difference operator, α_0 is a constant, n is the optimum number of lags in the explanatory variables and U is random error term. To examine both short-term and long-term associations between monetary policy measures and inflation, the Autoregressive Distributed Lag – ARDL technique was used. This approach helps mitigate problems such as autocorrelation and endogeneity, providing unbiased and efficient results. The ARDL model used in this investigation is presented thusly:

$$INFI_{t,j} = C_0 + C_1 INF_{t-1,j} + C_2 MPR_{t-1,j} + C_3 M2_{t-1,j} + C_4 EXR_{t-1,j} + C_5 LIR_{t-1,j} + C_6 RGDP_{t-1,j} + \sum_{i=1}^{n1} a_{1i,j} \Delta INF_{t-1,j} + \sum_{i=0}^{n2} a_{2i,j} \Delta MPR_{t-1,j} + \sum_{i=0}^{n3} a_{3i,j} \Delta M2_{t-1,j} + \sum_{i=0}^{n4} a_{4i,j} \Delta EXR_{t-1,j} + \sum_{i=0}^{n5} a_{5i,j} \Delta LIR_{t-1,j} + \sum_{i=0}^{n6} a_{6i,j} \Delta RGDP_{t-1,j} + \lambda ECMt - 1 + \mu_t \; -- \; --- \; (4)$$

Where; change operator takes the symbol Δ, white noise or error term is μt, optimal lag length is n, short run dynamics of the model are $\alpha_1, \acute{\alpha}_2, \acute{\alpha}_3, \acute{\alpha}_4, \acute{\alpha}_5, \acute{\alpha}_6$ and long run elasticities are $c_1, c_2, c_3, c_4, c_5, c_6$ and error term is μ_t. Error correction term obtained from the co-integration model is ECM_{t-1}. The error coefficients ($\lambda 1$) demonstrate how fast the co-integration model amends any unevenness from the preceding period or the speed at

which it corrects to get back to the long term stability. The coefficient of ECM is anticipated to be negative and statistically noteworthy. A negative and noteworthy ECMt-1 coefficient suggests that any short-term movement between the outcome and explanatory variables will ultimately return to the elongated term association.

IV. RESULTS AND DISCUSION

Appraising the trends of monetary policy rate, broad money supply, exchange rate and inflation rate in Nigeria from 1981 to 2023.

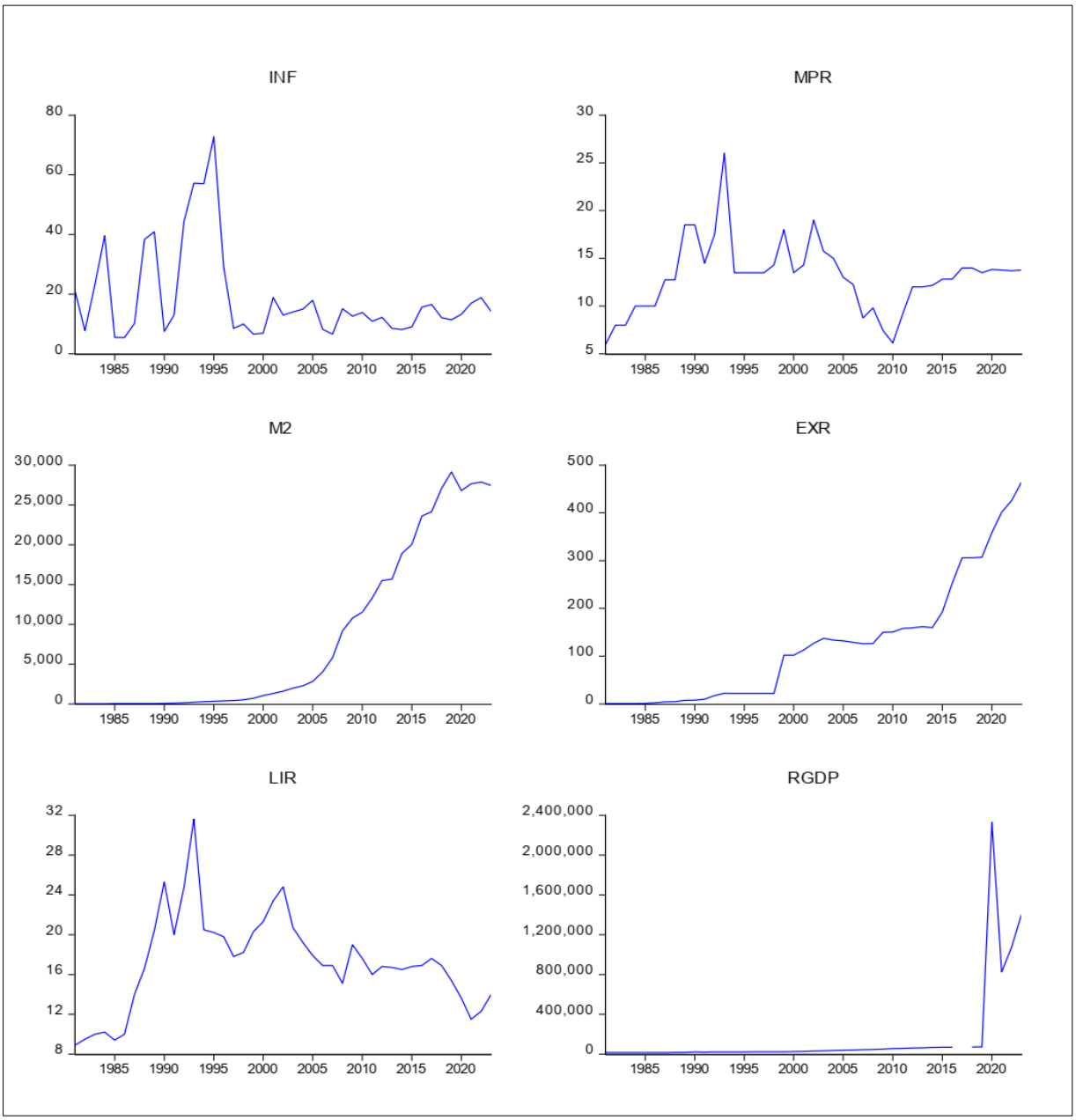

Figure 1: Monetary Policy Implications of Trends in Inflation (INF), Monetary Policy Rate (MPR), Broad Money Supply (M2), Exchange Rate (EXR), Lending Interest Rate {(LIR) and Real Gross Domestic Product (RGDP) in Nigeria from 1981 to 2023
Source: *Authors (2026).*

The graphical evidence in Figure 1 presents the dynamic interactions among inflation (INF), monetary policy rate (MPR), broad money supply (M2), exchange rate (EXR), Lending Interest Rate {(LIR) and Real Gross Domestic Product (RGDP) over time, offering important insights into the conduct and effectiveness of monetary policy by the Central Bank of Nigeria. With inflation rate (INF) specified as the dependent variable and monetary policy rate (MPR), broad money supply (M2), exchange rate (EXR), lending interest rate (LIR), and real gross

domestic product (RGDP) as explanatory variables, the behaviour of each series over time provides important insights into how inflation responds to macroeconomic dynamics in Nigeria.

Inflation was very unpredictable in the late 1980s and throughout the 1990s, with sudden rises and quick drops. This shows that the economy had a lot of instability and that different policies weren't working well together. From the early 2000s, inflation became less extreme but still went up and down, usually staying in double digits with some bigger increases in recent years. This behaviour indicates that although monetary policy may have improved in stabilizing prices, inflation remains persistent and sensitive to shocks, suggesting that it is influenced by both monetary and structural factors.

Broad money supply (M2) displays a consistently upward and accelerating trend, particularly from the mid-2000s. The growth becomes more pronounced after 2010, indicating sustained liquidity expansion in the economy. When compared with inflation, periods of rapid monetary growth tend to coincide with renewed upward movements or persistence in inflation, even when inflation does not spike proportionately. This trend behaviour supports a positive relationship between M2 and inflation, while also suggesting that excess liquidity may be absorbed imperfectly due to structural inefficiencies. The implication is that continuous monetary expansion contributes to underlying inflationary pressures over time.

The value of the currency (EXR) has been slowly losing value in the early years, then dropped more and more, especially from the late 1990s, with big drops in recent times. This long-term fall in value matches up with times when inflation was high or starting to go up again. This shows a strong connection between the falling currency value and inflation, which means that when the currency weakens, it has a direct effect on prices. This pattern shows that inflation in Nigeria is greatly influenced by foreign-related factors, especially how much the country depends on imports.

The monetary policy rate (MPR) exhibits a cyclical and discretionary pattern, with notable increases during the 1990s, followed by periods of decline and relative stabilization in later years. However, the trend in MPR does not consistently move inversely with inflation. For instance, there are periods where MPR remains stable or even declines while inflation fluctuates independently. This behaviour indicates a weak and inconsistent inverse relationship between MPR and inflation, suggesting that policy rate adjustments are not fully transmitted to the broader economy. It reflects limitations in the effectiveness of MPR as a tool for controlling inflation.

Lending interest rate (LIR) shows a generally high and volatile trend in the 1990s, followed by a gradual decline and partial stabilization in the 2000s, though it remains relatively elevated. Despite this decline, inflation does not exhibit a corresponding sustained decrease. The lack of clear inverse co-movement between LIR and inflation suggests that the credit channel of monetary policy is weak. The persistently high lending rates, even when policy rates change, point to structural rigidities in the banking sector, which dilute the expected negative relationship between interest rates and inflation.

Real gross domestic product (RGDP) demonstrates a slow and almost stagnant trend in earlier years, followed by a sharp and significant increase in recent periods, particularly after the mid-2010s. Despite this growth, inflation does not show a consistent downward trend; instead, it remains moderately high and fluctuating. This behaviour implies that the expansion in output has not been sufficient to offset inflationary pressures, likely due to structural constraints such as supply bottlenecks. Thus, the relationship between RGDP and inflation appears ambiguous, with weak evidence of strong supply-side effects in reducing inflation.

Overall, the combined trend behaviour suggests that inflation in Nigeria is largely driven by persistent monetary expansion and continuous exchange rate depreciation, while the influence of interest rate variables (MPR and LIR) remains weak due to poor transmission mechanisms. The observed patterns indicate that inflation is not solely demand-driven but also significantly shaped by cost-push and structural factors. From a policy point of view, these trends show that controlling inflation needs more than just changing interest rates. It also needs strict control over how much money is created, keeping the currency value stable, and making changes to the financial system to make it work better. It's important to boost the economy's ability to produce goods and services so that growth can help reduce inflation. In inference, looking at these trends helps show that inflation doesn't react the same way to all factors. While increasing money supply and changes in exchange rates have a strong and steady effect, interest rate changes don't work as well or consistently. This means Nigeria needs a broader and more unified approach to managing its economy.

Unit Root Test Results

To avoid spurious regressions which may arise as a result of carrying out regressions on time series data, this study first subjected the data to stationarity test by using the Augmented Dickey Fuller (ADF) test. The ADF result is presented in Table 1.

Table 1: Augmented Dickey-Fuller (ADF) Unit Root Test

Variables	Level form		First difference		Order of integration
	ADF Statistics	5% Critical Value	ADF Statistics	5% Critical Value	
INF	-4.085462	-3.523623	-	-	I(0)
MPR	-3.349048	-3.520787	-6.853004	-3.526609	1(1)
M2	-1.452114	-3.520787	-5.331108	-3.523623	1(1)
EXR	0.263461	-3.520787	-5.306409	-3.523623	1(1)
LIR	-2.388586	-3.520787	-5.869684	-3.526609	1(1)
RGDP	-2.194069	-3.533083	-10.50540	-3.533083	1(1)

***Note**: INF, MPR, M2 and EXR as earlier defined*
***Source:** Authors' Computation, 2026.*

The ADF test results for each series in Table 2 show that at the 5% significance level, INF is stationary at its original level 1(0) because its ADF statistic is higher than the 5% critical value. On the other hand, MPR, M2, EXR, LIR and RGDP become stationary after one difference, which means they are 1(1). Since the variables are integrated of order 1(0) and 1(1), it meets the requirement to use an ARDL model to check for long-run relationships.

Table 2: ARDL Bounds Test for Co-integration

Model		**F-Statistic** = 8.075893
INF= F(MPR, M2, EXR, LIR, RGDP)		K = 5
Critical Values	Lower Bound	Upper Bound
5%	2.39	3.38

***Source:** Authors' Computation, 2026.*

The ARDL bounds test for co-integration shows there is a long-term connection between the variables (INF, MPR, M2, EXR, LIR and RGDP). This is because the F-statistic, which is around 8.1, is higher than the upper critical value at the 5% significance level. This result means we can reject the idea that there is no long-term relationship between these variables at the 5% level. As a result, the study was able to determine both the long-run and short-run effects of the variables.

Table 3: Estimated ARDL Long Run Coefficients. Dependent Variable: INF ARDL (4, 3, 4, 4, 3, 4)

Regressors	Coefficient	t-Statistic	P-Value
MPR	-3.314311	-0.944999	0.3811
LOG(M2)	-99.75732	-1.627822	0.1547
LOG(EXR)	59.24468	1.331168	0.2315
LIR	-1.874406	-0.713557	0.5023
LOG(RGDP)	256.4433	1.654002	0.1492

***Source:** Authors' Computation, 2026.*

The long result in Table 3 reveals monetary policy rate, broad money supply and lending interest rate have negative relationship with inflation rate. However, exchange rate and real gross domestic product have positive association with inflation rate. Importantly, none of the variables is statistically noteworthy.

Table 4: Error Correction Representation for the Selected ARDL Model ARDL (4, 3, 4, 4, 3, 4)

Regressors	Coefficients	t-Statistic	P-Value
D(MPR)	3.666534	4.311049	0.0050
DLOG(M2)	85.00496	3.485103	0.0131
DLOG(EXR)	22.28238	3.595046	0.0114
D(LIR)	-3.129552	-3.111575	0.0208
DLOG(RGDP)	-218.8966	-5.091129	0.0022
ECM (-1)	-0.941750	-5.802764	0.0011
R^2 = 0.944479 **Adjusted R-squared** = 0.847317 **D-W stat.** = 2.316379			

***Source:** Authors' Computation, 2026.*

Table 4 displays the results of the short-term dynamic coefficients that are linked to the long-term associations found in the ECM equation. In the model, the Error Correction Term has the correct sign, which is negative, and it is statistically significant. This means the model adjusts towards long-term equilibrium over time. In other words, it shows how the model moves from short-term balance to long-term balance. This suggests

that any differences from the short-term inflation rate eventually return to the long-term equilibrium. The Durbin Watson value of 2.316379, shows that there is no problem of autocorrelation in the model. Additionally, the dynamic connections between the variables, as shown by the ECM, reveal that the model's ability to describe the data measured by R-squared is around 0.94. This means the model fits the data well. It indicates that during the time period studied, about 94 percent of the changes in the inflation rate can be explained by the variables included in the model, while the remaining 6 percent is explained by other factors not included in the model, and these are captured as the error term.

Interestingly, monetary policy rate, broad money supply and exchange rate have positive and significant relationship with inflation rate in Nigeria during the period of study. This finding corroborates the empirical findings of earlier scholars including Olise and Ejedegba (2025), who employed Vector Auto regression (VAR) model to examine the effects of monetary policy on inflation in Nigeria, using data covering the period 1986 to 2023 and affirmed that monetary policy rate and money supply have positive effects on inflation rate in Nigeria. However, lending interest rate and real gross domestic product have negative and significant relationship with inflation rate in Nigeria during the period of study. This finding validates the empirical findings of earlier scholars including Olise and Ejedegba (2025), who employed Vector Auto regression (VAR) model to examine the effects of monetary policy on inflation in Nigeria, using data covering the period 1986 to 2023 and affirmed that lending rate has a negative relationship with inflation rate in Nigeria.

Policy Implication of a Positive and Statistically Significant Relationship between Monetary Policy Rate (MPR), Broad Money Supply (M2), Exchange Rate (EXR), and Inflation in the Short-Run ARDL Results

A positive and statistically significant relationship between Monetary Policy Rate (MPR), broad money supply (M2), exchange rate (EXR), and inflation in the short-run ARDL results has important implications for monetary and macroeconomic policy, particularly in an inflation-prone economy.

First, the positive and significant impact of MPR on inflation shows that raising the policy rate is linked to higher inflation in the short term. This goes against what traditional monetary theory usually says, which thinks higher interest rates should lower inflation. However, the main point here is that the interest rate channel isn't working well as a tool to fight inflation in the short run. Instead, higher MPR might be a reaction to an already high inflation environment, where the central bank raises rates after inflation has already started. It could also point to cost-push effects, where higher lending rates raise production costs, which businesses then pass on to customers as higher prices. This suggests that tightening MPR in the short run might not help reduce inflation and could even make it worse.

Second, the strong and positive link between broad money supply (M2) and inflation supports the idea that more money in the system can lead to higher prices quickly. This means that when there's too much money in the economy, it quickly turns into higher demand, especially in places where production isn't able to keep up. From a policy standpoint, this shows that uncontrolled money growth can cause inflation right away. So, the central bank needs to use strict tools like open market operations, reserve requirements, and tighter credit controls to stop too much money from moving around in the economy.

Third, the positive and significant relationship between exchange rate and inflation shows that changes in the exchange rate strongly affect prices. In practice, when the domestic currency weakens, it makes imported goods more expensive, which can raise overall prices, especially in countries that rely on imports for fuel, machinery, and other consumer goods. The policy message is that exchange rate instability is a major cause of inflation in the short run. This means that controlling inflation without stabilizing the exchange rate is difficult. So, there needs to be coordinated efforts between monetary policy and policies that manage the external sector, including managing foreign reserves, diversifying exports, and stepping in the foreign exchange market when needed.

Overall, the short-term results show that inflation is very sensitive to money supply growth, interest rate changes, and exchange rate movements. However, these factors tend to make inflation worse rather than help control it. This suggests that the economy has weak macroeconomic stability and strong structural problems.

Policy Implication of a Negative and Statistically Significant Relationship between Lending Interest Rate (LR), Real Gross Domestic Product (RGDP), and Inflation Rate in the Short-Run ARDL Results

A negative and statistically significant relationship between lending interest rate (LR), real gross domestic product (RGDP), and inflation rate in the short-run ARDL results carries important and somewhat unconventional policy implications for monetary stability and macroeconomic management.

Regarding lending interest rates, the research shows that higher lending rates can help lower inflation quickly. This means that when the central bank raises interest rates, it becomes more expensive for people and businesses to borrow money. As a result, they spend and invest less, which reduces overall demand in the economy. With less demand, there is less pressure on prices to go up. This suggests that the central bank can use higher interest rates as a tool to control inflation in

the short term. It also shows that banks adjust their lending based on central bank policies, and when they lend less, it affects spending in the real economy. So, inflation control should focus on interest rates, especially when inflation is driven by demand. However, keeping rates too high for a long time can limit borrowing for businesses, slow down investments, and slow the economy's recovery.

Regarding real GDP, the study found that when the economy grows, inflation tends to decrease. This happens because as the economy produces more goods and services, there is more supply, which helps keep prices from rising too fast. This suggests that inflation is not only about demand but also about how efficiently the economy produces things. When real GDP goes up, production increases, which makes it easier to meet consumer needs and lowers pressure on prices. This means that policies that boost economic growth, like improving infrastructure, supporting industries, and expanding agriculture, can also help control inflation. So, these kinds of policies should be part of efforts to manage inflation, not just relying on raising interest rates.

Post Estimation Diagnostic Tests Results

Investigative tests were conducted in this study to see if the model's estimates can be relied upon for making policy predictions or recommendations. The study included specific tests such as the Wald test to check restrictions on coefficients, the Breusch-Godfrey Serial Correlation LM Test, and a normality test as part of the analysis after estimating the model. The results from these tests are carefully displayed in Table 5, Table 6, and Figure 2.

Wald Test

The Wald test is used to check if the coefficients of the cause variables in the ECM model are all important together. The F-statistic in Table 6 was used to determine this.

Table 5: Wald Test Result

Wald Test:			
Equation: Untitled			
Test Statistic	**Value**	**Df**	**Probability**
F-statistic	92.05167	(6, 6)	0.0000
Chi-square	552.3100	6	0.0000

Source: *Authors' Computation, 2026.*

The results in Table 5 show that the F-statistic is around 92 and the probability value is 0.0000, which is lower than 0.05 at the usual 5 percent significance level. This means all the predictor variables included in the model together play a significant role in explaining the inflation rate in Nigeria during the time covered by the study.

Test for Serial Correlation

Table 6: Breusch-Godfrey Test for Serial Correlation

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	**0.252602**	**Prob. F(1,9)**	**0.6273**
Obs*R-squared	0.928222	Prob. Chi-Square(1)	0.3353

Source: *Authors' Computation, 2026.*

The results shown in Table 6 indicate that the error correction model does not have a serial autocorrelation issue. This is because the chi-square value and the associated probability of the chi-square statistic are both above 0.05.

Normality Test Result

The Jarque-Bera statistic was used to check if the error term in the inflation rate model follows a normal distribution at the 5 percent significance level.

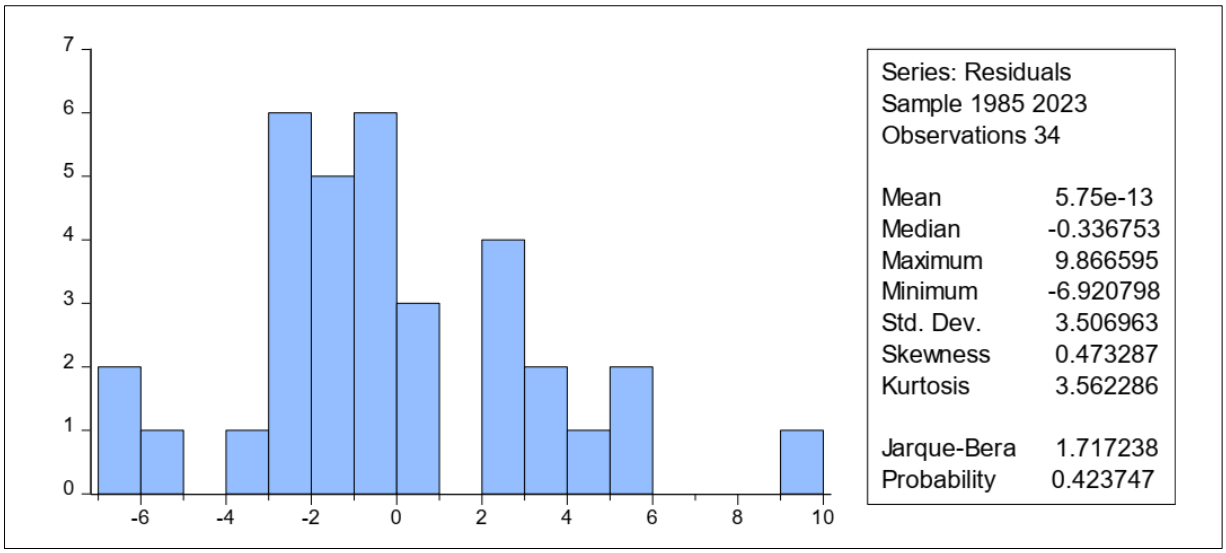

Figure 2: Normality Test Result
Source: *Authors (2026)*

The result in Figure 2 shows that the error term is normally distributed at the usual significance level, which is 5%. This is because the probability value, or p-value, for the Jarque-Bera statistic is about 0.424, which is higher than the standard 0.05 level. This means the assumption that the residuals in the ECM model are normally distributed is supported by the Jarque-Bera test.

V. CONCLUSION AND RECOMMENDATIONS

This study carefully investigated monetary policy measures and inflation targeting in Nigeria from 1981-2023. Data on inflation rate, monetary policy rate, broad money supply, exchange rate, lending interest rate and real gross domestic product were collected from the yearly reports of the apex bank in Nigeria and World Bank Group. The data were thoroughly investigated using an Autoregressive Distributed Lag – ARDL Bounds testing technique. The results disclosed a long term association between the variables. The results also uncover that in the long, monetary policy rate, broad money supply and lending interest rate have negative and insignificant relationship with inflation rate. However, exchange rate and real gross domestic product have positive and insignificant relationship with inflation rate. In the short run, monetary policy rate, broad money supply and exchange rate have positive and significant relationship with inflation rate in Nigeria during the period of study. At the same time, lending interest rate and real gross domestic product have negative and significant relationship with inflation rate in Nigeria during the period of study. Importantly, while monetary policy tools significantly influence inflation, how well these tools work depends on things like trust in institutions, careful management of government spending, and keeping the value of the currency steady. Based on the study's results, it was found that in Nigeria, inflation is very responsive to increases in money supply, changes in interest rates, and movements in the exchange rate. However, these factors tend to make inflation worse rather than help control it. This shows that Nigeria needs a better, more structured approach to monetary policy instead of just changing the monetary policy rate alone. From a policy point of view, the study suggested the following:

i. Monetary policy should focus on keeping the exchange rate stable while also aiming to control inflation.
ii. The money supply growth should be closely managed to prevent inflation caused by too much money in the system.
iii. The central bank should keep using changes in lending rates as a way to control inflation in the short term, but it must be careful not to cut off credit too much, which could harm the economy.
iv. Inflation targeting should be paired with policies that boost real economic growth (RGDP), since growth itself can reduce inflationary pressures.
v. Monetary policy should work together with fiscal and supply-side policies to avoid putting too much pressure on interest rates alone.

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