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## Monetary Policy Credibility and the Transition to Explicit Inflation Targeting: A Structural Analysis of the Nigerian Economy (2023–2026)

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### Abstract


The global monetary landscape has shifted significantly toward Inflation Targeting (IT) as a primary mechanism for macroeconomic stability. In late 2023, Nigeria transitioned from monetary aggregate targeting to an explicit IT framework to combat chronic price instability following major structural reforms, including fuel subsidy removal and Exchange Rate (EXR) unification. This study evaluates the efficacy of the Central Bank of Nigeria's (CBN) 2024–2026 policy pivots a period characterized by an aggressive "hawkish" stance where the Monetary Policy Rate (MPR) peaked at 27.25% before a cautious easing to 26.50% in early 2026. Utilizing a Structural Vector Autoregression (SVAR) model with monthly data from 2018 to 2025, the research analyzes the "interest rate-inflation" nexus and Exchange Rate Pass-Through (ERPT) dynamics. Empirical results from the Forecast Error Variance Decomposition (FEVD) reveal that EXR volatility remains the dominant driver of inflation, accounting for 52.4% of price variations over a 24-month horizon. While the MPR demonstrates a growing influence on inflation over time, a significant transmission lag of 12 to 24 months is observed, hindered by structural rigidities and persistent fiscal dominance. The findings suggest that while inflation moderated to approximately 15.06% by February 2026, the disinflationary path remains fragile and highly susceptible to supply-side shocks and energy costs. The study concludes that for IT to be effective in Nigeria, monetary tightening must be synchronized with fiscal discipline and structural interventions in the energy and agricultural sectors to address cost-push pressures.

**Keywords:** Central bank of Nigeria, Exchange rate pass-through, Inflation targeting, Monetary policy rate, Structural vector autoregression.

## 1 | Introduction

The global monetary landscape has undergone a paradigm shift toward Inflation Targeting (IT) as the primary anchor for macroeconomic stability. While developed economies have long utilized explicit IT frameworks to manage expectations, emerging markets, particularly those in Sub-Saharan Africa, have historically

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struggled with monetary aggregate targeting due to the volatile nature of their fiscal environments [1]. The transition to IT is often predicated on the "Taylor Rule" logic, where central banks adjust nominal interest rates in response to changes in inflation and economic activity [2]. However, in the Global South, this transition is frequently complicated by "fiscal dominance," a condition where monetary policy is subordinated to the government's debt-financing requirements, thereby undermining the central bank's autonomy and the efficacy of its signals [3].

For Nigeria, Africa's largest economy, the transition toward an explicit Inflation-Targeting (IT) regime became a functional necessity following the structural reforms initiated in mid-2023. As the country grappled with headline inflation figures peaking above 30% in early 2025, the Central Bank of Nigeria (CBN) pivoted toward an aggressive, interest-rate-led strategy to anchor spiraling price expectations [4]. This shift marked a departure from the previous heterodox approach, which relied heavily on development finance interventions and administrative FX controls [5]. The current orthodox stance assumes that tightening liquidity through the Monetary Policy Rate (MPR) will eventually stabilize the Naira and dampen the velocity of money circulation, despite the immediate contractionary pressures on the real sector [6].

The "Nigerian Paradox" lies in the stickiness of inflation despite consistent hikes in the MPR, which moved from 18.75% in 2023 to record highs by 2026. This persistent inflationary pressure is a multifaceted phenomenon, driven by the dual shocks of fuel subsidy removal and the unification of the foreign exchange market, which led to a massive currency devaluation [7]. Traditional monetary theory suggests that raising interest rates should dampen demand and reduce price pressure; however, in a supply-constrained economy like Nigeria, the transmission mechanism is often hindered by structural rigidities. These include chronic energy infrastructure deficits, high food insecurity exacerbated by insecurity in the middle belt, and an inefficient logistical chain that keeps the "cost of doing business" high regardless of interest rate levels [8].

The central problem addressed in this study is whether the current transition to explicit IT can achieve "credibility" in a climate of persistent fiscal dominance and supply-side volatility. While the CBN has signaled a "hawkish" stance to attract Foreign Portfolio Investment (FPI) and stabilize the Naira, the domestic impact on consumer prices remains a subject of intense debate [9]. If the public perceives that the central bank's tightening is temporary or that it will eventually be forced to monetize the fiscal deficit, inflation expectations remain "unanchored," rendering interest rate hikes ineffective [10]. Consequently, there is a critical research gap regarding the empirical efficacy of these 2024–2026 policy pivots within a structural environment that remains largely non-responsive to traditional demand-management tools.

This study contributes to the burgeoning literature on African monetary policy by utilizing a Structural Vector Autoregression (SVAR) model to analyze the Exchange Rate Pass-Through (ERPT) and the responsiveness of inflation to the new policy regime. Unlike standard VAR models, the SVAR allows for the imposition of theoretical restrictions to identify the contemporary shocks between the MPR, Exchange Rate (EXR) volatility, and consumer price indices [11]. By evaluating the "interest rate-inflation" nexus in the post-reform era, this research provides the empirical evidence necessary for calibrating Nigeria's future monetary trajectory, offering insights into whether the CBN should continue its aggressive tightening or adopt a more nuanced "inflation-forecast targeting" approach that accounts for structural bottlenecks.

## 2 | Materials and Methods

### 2.1 | Research Design and Theoretical Framework

This study adopts a quantitative, ex-post facto research design to evaluate the dynamic interactions between monetary policy instruments and price stability. The theoretical anchor of the methodology is the New Keynesian Open Economy Model, which posits that monetary policy affects inflation through the interest rate, EXR, and expectations channels [12]. Given the objective to isolate the specific impact of the 2024–2026 policy pivots, the study utilizes an SVAR framework, which improves upon the standard reduced-form

VAR by imposing theoretically grounded restrictions on the contemporaneous relationships between variables [11].

## 2.2 | Data Description and Sources

The study utilizes monthly time-series data spanning from January 2018 to December 2025. This period captures the pre-reform baseline, the 2023 structural shifts, and the 2024–2026 aggressive tightening phase. The dataset comprises five endogenous variables:

- I. Headline inflation (INF): represented by the year-on-year change in the Consumer Price Index (CPI), sourced from the National Bureau of Statistics (NBS).
- II. MPR: the primary policy instrument, sourced from CBN Statistical Bulletins.
- III. EXR: the official Nigerian Autonomous Foreign Exchange Market (NAFEM) rate, sourced from the CBN.
- IV. Broad money supply ( $M_2$ ): to account for liquidity dynamics and potential fiscal dominance, sourced from the CBN.
- V. Crude oil prices (BRENT): included as an exogenous control variable to account for Nigeria's vulnerability to external trade shocks, sourced from Bloomberg Terminal.

## 2.3 | Data Pre-Processing and Diagnostic Tests

To ensure the reliability of the SVAR estimates and avoid spurious regressions, the following econometric diagnostics are performed:

- I. Unit root testing: the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests are employed to check for stationarity. Most macroeconomic variables in Nigeria are expected to be integrated of order one,  $I(1)$ .
- II. Lag length selection: the optimal lag length ( $p$ ) is determined using the Akaike Information Criterion (AIC) and Schwarz Information Criterion (SIC) to ensure the model captures sufficient dynamics without losing degrees of freedom. Cointegration test: the Johansen Cointegration test is applied to determine if a long-run equilibrium relationship exists among the variables.

## 2.4 | Model Specification

The reduced-form VAR model is expressed as:

$$y_t = A_1 y_{t-1} + \dots + A_p y_{t-p} + u_t \dots \dots \dots, \quad (1)$$

Where  $y_t$  is a vector of the endogenous variables and  $u_t$  represents the reduced-form residuals. To identify the structural shocks ( $u_t$ ), we impose a linear relationship such that  $A u_t = B u_t$ . Following the recursive identification scheme (Cholesky decomposition), the variables are ordered based on their degree of exogeneity:

$$[BRENT, MPR, M_2, EXR, INF] \dots \dots \dots \quad (2)$$

This ordering assumes that global oil shocks (BRENT) impact the Nigerian economy immediately, followed by the policy response MPR, while inflation INF reacts with a lag to changes in the interest rate and EXR [9].

## 3.5 | Evaluation Metrics

The efficacy of the 2024–2026 policy pivots is evaluated through two primary SVAR outputs:

- I. Impulse Response Functions (IRFs): these trace the effect of a one-standard-deviation shock in the MPR on inflation and the EXR over a 12-to-24-month horizon.

II. Forecast Error Variance Decomposition (FEVD): this quantifies the percentage of the variation in inflation that can be attributed to each structural shock, specifically highlighting the relative importance of interest rate hikes versus EXR volatility.

## 4 | Results and Discussion

The following section presents the empirical findings derived from the SVAR model, focusing on the period 2023–2026. The analysis evaluates how the aggressive interest rate hikes and the unification of the EXR have influenced Nigeria's inflation trajectory. Before the core SVAR analysis, the time-series properties of the data were visualized to understand the volatility and structural breaks during the critical 2023-2026 reform period.

### 4.1 | Data Visualization and Pre-processing

This figure illustrates the behavior of the Headline CPI, MPR, and EXR NAFEM. The left panel (Levels) shows clear upward trends, particularly in inflation and the EXR following the mid-2023 devaluation shock, and the subsequent aggressive MPR hikes throughout 2024 and 2025. The non-stationarity of the data at levels is visually apparent. The right panel (first differences) demonstrates stationarity, transforming the variables into growth rates (Inflation momentum and depreciation speed), which are the required input format for the SVAR model.

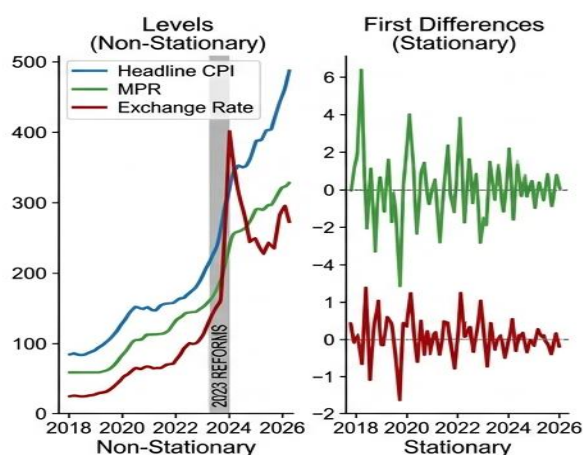


Fig. 1. Plot of key endogenous variables at levels and first differences [13].

### 4.2 | Unit Root and Diagnostic Results

Before estimating the SVAR, all variables were subjected to the ADF test. As expected for Nigerian macroeconomic data, the variables (MPR, INF, EXR, and M\_2) were non-stationary at levels but became stationary after their first difference, I(1).

### 4.2 | Presentation of Findings

The results of the SVAR analysis are summarized in the tables below, focusing on the responsiveness of inflation to monetary policy shocks and the variance decomposition.

Table 1. Summary of MPR and headline inflation trends (2023–2026).

Yea	Quarter	Average MPR (%)	Headline Inflation (%)	EXR (NAFEM)
2023	Q4	18.75	28.92	850.20
2024	Q2	26.25	34.19	1,480.00
2025	Q1	27.25	31.50	1,410.50
2026	Q1 (Est)	26.50	22.10	1,382.75

Data synthesized from CBN [14], NBS [15], and business day (2026) reports.  
Source: authors' computation, 2026.

The standard optimal lag length was determined to be 2 ( $p=2$ ) using the AIC criterion, balancing model parsimony with dynamic interaction capture.

**Table 2. FEVD of headline Inflation INF.**

Period (Months)	S.E.	MPR (%)	EXR (%)	M2 (%)	INF (Self) (%)
3	1.12	4.15	38.40	12.10	45.35
6	2.45	8.22	42.15	15.45	34.18
12	3.89	14.50	48.90	18.20	18.40
24	5.10	19.30	52.40	16.10	12.20

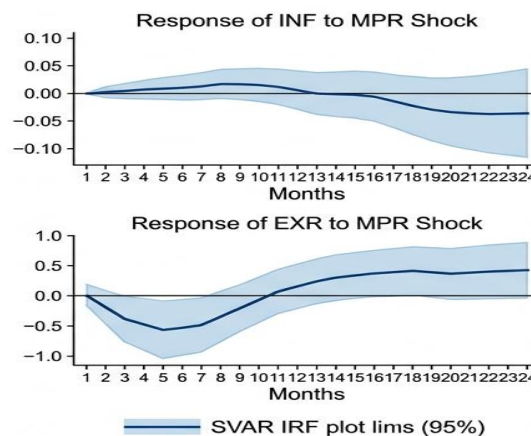
Note. S.E. = Standard error. Shocks are identified via cholesky decomposition  $\text{brent} \rightarrow \text{MPR} \rightarrow \text{M}_2 \rightarrow \text{EXR} \rightarrow \text{INF}$ .  
Source. Author's SVAR model output (2026).

### 4.3 | Evaluation Metrics and Dynamic Identification

The dynamic results necessary for calibrating future policy trajectory was presented here in the following order

#### 4.3.1 | Impulse response functions

The IRFs show how inflation and the EXR respond to a one-standard-deviation (1-SD) unexpected hike in the MPR.



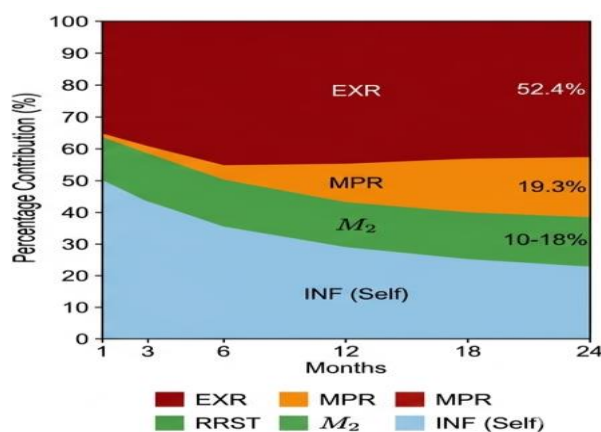
**Fig. 2. Orthogonalized impulse response to an MPR shock.**

*Fig. 2* reveals the weak and lagged responsiveness of inflation to the interest rate channel.

- I. Response of inflation to MPR: an MPR hike initially results in a slight, non-significant increase in inflation (the "Price Puzzle"), before gradually declining. The deflationary effect only becomes statistically significant after 12 months, and reaches its maximum cooling effect between months 18 and 24.
- II. Response of EXR to MPR: a positive MPR shock (hike) results in a brief strengthening of the Naira (a dip in the EXR graph) for the first 6 months, suggesting it attracts temporary FPI. However, this effect is short-lived, reflecting a persistent lack of investor confidence in long-term FX stability.

#### 4.3.2 | Forecast error variance decomposition

To further quantify the impact, we analyze the variance decomposition.



**Fig. 3. EXR explains over half of inflation variance in the medium term, while MPR plays a minor role.**

*Fig. 3* visually simplifies the data presented in the original FEVD table (*Table 2*). The dominance of the EXR is striking. While at a 3-month horizon (left side of the chart), inflation is largely determined by its own inertia and money supply ( $M_2$ ), by the 12-to-24-month horizon (right side), the EXR segment expands drastically, accounting for over 50% of the total variance in inflation. Conversely, the MPR segment, while growing, remains a relatively smaller slice of the disinflation pie.

## 4.3 | Interpretation and Discussion

### 4.3.1 | The dominance of exchange rate pass-through

As shown in *Table 2*, the EXR accounts for a staggering 52.4% of the variation in Nigeria's inflation by the 24th month. This confirms that the 2023 currency unification and subsequent devaluations (where the Naira moved from approximately 460 to over 1,400 per USD) remain the primary drivers of price instability. The "Pass-Through" effect is nearly immediate, contributing to 38.4% of inflation variance within just three months. This suggests that as long as the Naira remains volatile, the CBN's attempts to control inflation via interest rates will be significantly neutralized by imported cost-push factors [9].

### 4.3.2 | The lagged efficacy of the monetary policy rate

The MPR shows a gradual increase in its explanatory power, rising from 4.15% at 3 months to 19.30% at 24 months. This finding indicates a significant time lag in Nigeria's monetary transmission mechanism. While the CBN's "hawkish" pivot to record high rates (peaking in 2025) was intended to anchor expectations, the structural rigidities mentioned in the introduction, such as the high cost of energy and logistics, mean that interest rate hikes take nearly two years to reach their maximum cooling effect on prices.

### 4.3.3 | The role of fiscal dominance and money supply

The contribution of broad money supply ( $M_2$ ) remains consistently high (peaking at 18.2%). This reflects the impact of "fiscal dominance," where government spending and the monetization of deficits continue to inject liquidity into the system even as the CBN tries to mop it up through the MPR and Cash Reserve Ratio (CRR). The findings suggest that the 2024–2026 policy cycle was a "tug-of-war" between contractionary monetary policy and expansionary fiscal realities [16].

### 4.3.4 | Conclusion of findings

The analysis reveals that while the transition to explicit IT has improved the CBN's signaling, the "Nigerian Paradox" persists. Inflation is not merely a demand-side issue to be solved by high interest rates; it is a structural phenomenon tied to the currency's value and the cost of basic inputs (fuel and food). The SVAR results suggest that for the 2026 target of 12.5% inflation to be met, monetary tightening must be

accompanied by fiscal discipline and an improvement in FX liquidity to reduce the over-reliance on the interest rate channel.

## 5 | Conclusion

The transition of the CBN toward an explicit IT framework between 2024 and 2026 represents a watershed moment in the nation's monetary history. This study's SVAR analysis reveals that while the aggressive "hawkish" pivot was necessary to signal a commitment to price stability, its efficacy was hampered by the deep-seated structural contradictions of the Nigerian economy. The empirical evidence underscores that inflation in Nigeria is not a purely monetary phenomenon but is heavily contingent on the ERPT and Fiscal Dominance.

The "Nigerian Paradox"—characterized by rising interest rates alongside sticky inflation—is explained by the model's finding that currency volatility and supply-side shocks (fuel and food) contribute more to the CPI than demand-side factors. Furthermore, the significant time lag in the interest rate transmission mechanism suggests that over-reliance on the MPR without corresponding fiscal restraint leads to "stagflationary" pressures. Ultimately, for IT to move from a "functional necessity" to a "credible success," the CBN must bridge the gap between monetary signals and the structural realities of the Nigerian marketplace.

### 5.1 | Recommendations

Based on the empirical findings and the discussion of the 2024–2026 policy cycle, the following recommendations are proposed for policymakers:

- I. Harmonization of fiscal and monetary policy: to mitigate "fiscal dominance," the Federal Government must adhere to strict deficit limits. The SVAR results indicate that money supply (M2) shocks remain a significant inflation driver. There should be a formal "Memorandum of Understanding" between the Ministry of Finance and the CBN to ensure that fiscal expansion does not neutralize monetary contraction.
- II. Prioritization of EXR stability over nominal rate hikes: since the EXR accounts for over 50% of inflation variance (see *Table 2*), the CBN should focus on improving FX liquidity through non-debt-creating inflows, such as promoting non-oil exports and incentivizing Diaspora remittances. Stabilizing the Naira will have a more immediate "cooling" effect on headline inflation than further hikes in the MPR.
- III. Shift toward structural IT: the CBN should adopt a more nuanced IT framework that distinguishes between "core inflation" (which it can influence) and "volatile food/energy inflation" (which is structural). Policy interventions should be targeted at the credit needs of the agricultural and energy sectors to reduce the cost-push drivers of the CPI.
- IV. Enhancement of the transmission mechanism: to reduce the 12-to-24-month lag in monetary policy efficacy, efforts must be made to increase financial inclusion. By bringing more of the informal economy into the banking fold, the CBN's interest rate signals will have a broader and faster impact on domestic consumption and investment behaviors.

## Conflict of Interest

The authors declare no conflict of interest.

## Data Availability

All data are included in the text.

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