

CENTRAL BANK DIGITAL CURRENCY AS A CATALYST FOR ENHANCING MONETARY POLICY EFFECTIVENESS AND BANKING STABILITY IN NIGERIA

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Dates:

Received: 30/01/2026

Accepted: 03/02/2026

Published:

Citation:

Nwosu, A. N. (2026).
Central Bank Digital
Currency as a Catalyst
for Enhancing Monetary
Policy Effectiveness and
Banking Stability in
Nigeria. *Nigerian Journal
of Sustainability
Research*, 4(1), 301-327.
<https://njsr.com.ng/index.php/home/article/view/65>

Abstract

The study investigated the impact of Central Bank Digital Currency (CBDC) as a catalyst for enhancing monetary policy effectiveness and banking system stability in Nigeria. The aim of the study was to examine how CBDC influences monetary policy transmission mechanisms and banking sector stability within the Nigerian financial system. The scope of the study covered annual macroeconomic time-series data from 2009 to 2025, incorporating both the pre-CBDC period (2009–2020) and the post-CBDC adoption period (2021–2025), focusing on banking system stability, monetary policy rate, money supply, inflation, and CBDC adoption. The study adopted a quantitative research design and utilized the Autoregressive Distributed Lag (ARDL) modeling technique to capture both short-run and long-run dynamics among the variables. The theoretical framework was anchored on Public Choice Theory, Resource Dependency Theory, and Management and Role Theory. The findings of the study revealed that CBDC has a statistically significant but moderate impact on both monetary policy effectiveness and banking system stability, while monetary policy rate and money supply negatively affect banking stability in Nigeria. Inflation increases financial system vulnerability, whereas CBDC does not generate structural instability despite its post-2021 introduction, as confirmed by stability tests. The study concluded that CBDC represents an emerging financial innovation that enhances monetary policy effectiveness and contributes to banking stability. Therefore, the study recommended strengthened CBDC integration, improved digital infrastructure, enhanced public awareness, and continuous policy monitoring for financial stability.

Keywords: Banking Stability, Central Bank Digital Currency, Monetary Policy, Nigeria

Introduction

In recent years, the landscape of global finance has seen substantial transformations, with the emergence of Central Bank Digital Currencies (CBDCs) standing out as a pivotal innovation. As digital currencies gain traction, central banks worldwide are exploring their potential to enhance monetary policy effectiveness, improve financial inclusion, and strengthen banking system stability. The concept of CBDCs, which are digital versions of national currencies issued and backed by central banks, has raised significant interest due to their capacity to modernize payment systems and offer a more secure and efficient alternative to traditional forms of currency (BIS, 2024). These innovations are particularly important in developing economies like Nigeria, where the potential to leverage CBDCs to address longstanding financial sector challenges is substantial (IMF, 2024).

Globally, the rise of CBDCs has been fueled by the increasing digitization of economies and the growing demand for faster, more secure payment methods. According to the Bank for International Settlements (BIS, 2024), more than 80% of central banks around the world are actively exploring or developing digital currencies. China has made considerable progress with its digital yuan, leading the charge in digital currency adoption, followed by countries like Sweden with its e-krona and the Bahamas with the Sand Dollar (BIS, 2024). These nations are not only aiming to boost the efficiency of their payment systems but also to mitigate risks associated with the rise of cryptocurrencies like Bitcoin and Ethereum, which operate outside the control of traditional monetary authorities. Data from the International Monetary Fund (IMF, 2024) suggests that CBDCs have the potential to reduce transaction costs, increase financial inclusion, and improve the implementation of monetary policy by providing central banks with better tools for controlling money supply and interest rates.

In Africa, the adoption of CBDCs has been seen as a strategic move to modernize the financial systems and enhance economic stability. According to the African Development Bank (2023), financial inclusion remains a significant challenge in many African nations, with over 60% of the population in Sub-Saharan Africa lacking access to formal banking services. The introduction of CBDCs could play a crucial role in addressing these challenges, providing unbanked populations with access to secure and efficient financial services (African Development Bank, 2023). Countries such as Nigeria, South Africa, and Ghana have expressed interest in digital currencies, with Nigeria taking the lead in Africa with the launch of the eNaira in 2021 (CBN, 2023). Despite the challenges associated with infrastructure and regulatory concerns, the adoption of CBDCs in Africa offers an opportunity to leapfrog traditional banking systems and provide a more inclusive financial ecosystem. The impact of CBDCs on monetary policy in these regions is still evolving, but their potential to stabilize and modernize banking systems is evident (IMF, 2024).

In Nigeria, the central bank's decision to issue the eNaira was a significant step in the country's journey towards digital financial services. The introduction of the eNaira was aimed at enhancing monetary policy effectiveness by providing the Central Bank of Nigeria (CBN) with a new tool to better manage liquidity, control inflation, and stimulate economic growth. According to the CBN (2023), the eNaira has the potential to reduce the cost of printing physical currency, enhance financial inclusion, and improve the transparency of monetary transactions. However, the rollout of the eNaira has also faced challenges, including public trust, technological barriers, and the need for widespread adoption. Despite these hurdles, the eNaira's success could set a precedent for other African nations to follow, highlighting the pivotal role CBDCs could play in shaping the future of monetary policy and banking system stability in the region (CBN, 2023).

Against this backdrop, the study of the role of Central Bank Digital Currency as a catalyst for enhancing monetary policy effectiveness and banking stability in Nigeria becomes crucial. As the country continues to explore the potential benefits and challenges of implementing a CBDC, understanding its implications on the broader financial system is essential. This study aims to examine the impact of the eNaira on Nigeria's monetary policy and banking system stability, analyzing how the digital currency could mediate the relationship between monetary policy and banking system stability in the country. With the global financial system increasingly shifting towards digitalization, Nigeria's experience with CBDCs could provide valuable insights into the opportunities and challenges that other emerging economies may face as they embark on similar initiatives (BIS, 2024). The findings of this study will contribute to the broader discourse on the effectiveness of digital currencies in modernizing financial systems and improving monetary policy in developing economies (IMF, 2024).

2.1 Conceptual Review

2.1.1 Monetary Policy

Monetary policy refers to the intentional actions taken by a country's monetary authority to influence the money supply, interest rates, and credit availability in the economy to achieve specific economic goals, such as controlling inflation and ensuring financial stability (Ogunleye & Ajayi, 2022). Central banks use tools like adjusting interest rates and regulating the money supply to manage the economy's liquidity and stabilize financial conditions (Okafor & Dike, 2023). In Nigeria, the Central Bank of Nigeria (CBN) is tasked with the responsibility of executing monetary policy to ensure the economic health of the country. The interaction between monetary policy and capital markets is critical, as changes in monetary policy directly affect financial market operations, influencing investor behavior and the stability of investment returns (Nwafor, 2021).

2.1.2 Financial System Stability

Financial stability is defined as a condition in which the financial system, including financial institutions, markets, and infrastructure, can endure economic shocks and maintain its capacity to support efficient intermediation and allocate funds effectively across the economy (Kanu & Adebayo, 2020). Financial stability can be assessed using various indicators such as credit risk, liquidity, and capital adequacy (World Bank, 2023). The International Monetary Fund (IMF) developed the Financial Soundness Indicators (FSI) in 2000 to provide a comprehensive framework for evaluating the stability of financial systems globally (IMF, 2021). These indicators include firm-level stability measures like the Z-score and systemic stability assessments such as the Systemic Expected Shortfall (SES), both of which help to gauge the overall health and resilience of financial institutions and markets (OECD, 2022).

2.1.3 Central Bank Digital Currency (CBDC)

Central Bank Digital Currency (CBDC) refers to a state-backed digital currency issued and controlled by a central bank (Li & Wei, 2022). The role of CBDC in modern economies has gained significant attention due to its potential to facilitate retail payments more efficiently while providing central banks with better tools for economic management (Mishra, 2023). The central bank can issue CBDCs that either bear interest or not, influencing how people and businesses use money and how banks operate (Anderson & Blanchard, 2024). Interest-bearing CBDCs can improve financial inclusion by providing unbanked populations with better access to financial services while reducing the reliance on cash transactions (Chen & Zhao, 2023). Moreover, CBDCs are expected to support central banks in executing their policies more effectively by enhancing transparency and reducing the risks associated with digital transactions (Grym et al., 2023).

2.1.4 Banking Stability

Banking stability refers to the resilience of financial institutions in withstanding economic shocks while continuing to function effectively in providing services such as credit and deposit management. It is crucial for maintaining public confidence in the banking system (Abdullahi & Akpan, 2021). In addition to macroeconomic factors, banking stability also hinges on the regulatory framework, including capital adequacy, asset quality, and the capacity of financial institutions to manage risks (Ogunleye & Dike, 2022). Stability is typically measured through various metrics, such as the ratio of non-performing loans to total loans, regulatory capital adequacy ratios, and liquidity ratios, all of which determine a bank's ability to absorb financial shocks without significant disruptions (CBN, 2023).

2.2 Theoretical Framework

The theoretical foundation for understanding the role of Central Bank Digital Currency (CBDC) in enhancing monetary policy effectiveness and banking stability in Nigeria can be anchored on three primary theories: Public Choice Theory, Resource Dependency Theory (RDT), and Management and Role Theory. These theories provide valuable insights into how the introduction and implementation of CBDC could shape economic outcomes in a country like Nigeria, which is facing both financial inclusion challenges and regulatory concerns within its banking sector.

Public Choice Theory, as articulated by Buchanan and Tullock (1962), assumes that individuals act in their self-interest, seeking to maximize their utility. This theory posits that decision-makers within governmental institutions, including central banks, are driven by their own preferences and incentives, which may influence the design and implementation of monetary policies. In the context of CBDC, Public Choice Theory helps to understand how central banks might adopt digital currencies not only to achieve broader economic stability but also to enhance their own influence and control over monetary systems. Central banks may view CBDC as a tool to improve transparency, manage inflation, and control financial markets, which in turn could affect their political and economic power (Dincer & Eichengreen, 2019). However, critics of Public Choice Theory argue that it underestimates the complexities of policymaking, suggesting that the motivations of central banks are not purely self-serving and are often influenced by larger societal needs (Mueller, 2016). Despite these criticisms, the application of Public Choice Theory to CBDC adoption underscores the role of central banks as strategic actors in the financial ecosystem.

Resource Dependency Theory (RDT), developed by Pfeffer and Salancik (1978), focuses on the interdependence of organizations and their environment. According to RDT, organizations depend on external resources, such as capital, technology, and regulatory support, to thrive and survive. The introduction of CBDC in Nigeria can be seen through the lens of RDT, where the Central Bank of Nigeria (CBN) seeks to control financial resources and ensure economic stability by leveraging digital currencies. By adopting CBDC, the CBN is not only responding to the demand for better financial inclusion but also aligning itself with global financial trends, ensuring that Nigeria remains competitive in the digital financial landscape. This theory highlights how central banks, particularly in developing economies like Nigeria, may adopt CBDC to manage their relationships with other institutions and to reduce their dependency on external financial systems, such as those governed by private banks or international bodies. Critics, however, argue that RDT may oversimplify the complexities of state-driven initiatives, as it fails to account for the significant role of public opinion and political will in shaping monetary policy (Lawrence & Lorsch, 1967). Nevertheless, RDT provides a useful framework for understanding the motivations behind

CBDC adoption as an effort to reduce dependence on traditional financial intermediaries and ensure more autonomous control over national monetary systems.

Finally, Management and Role Theory, proposed by Katz and Kahn (1978), emphasizes the roles that individuals and organizations play within larger systems. In the context of CBDC, this theory can be applied to understand how central banks and financial institutions in Nigeria perceive their roles within the broader economic system. The role of the central bank as the manager of monetary policy and financial stability is central to this theory. By introducing CBDC, the CBN would be positioning itself as the key actor in the modernization of the Nigerian financial system. This move would enable the central bank to directly influence money supply, interest rates, and financial transactions without relying solely on traditional banking systems. The application of Management and Role Theory suggests that the central bank's adoption of CBDC could serve as a means to strengthen its regulatory role and influence within the Nigerian banking system, enhancing its ability to stabilize the economy. However, critics argue that the top-down approach inherent in Management and Role Theory might not fully capture the challenges of implementing new financial technologies in developing economies, particularly when there is resistance from the public and financial institutions (Hickson et al., 1974). Nonetheless, this theory is relevant for understanding the CBN's role in managing the implementation of CBDC and its impact on Nigeria's financial stability.

Taken together, these theories offer a comprehensive framework for understanding how CBDC can enhance monetary policy effectiveness and banking stability in Nigeria. Public Choice Theory highlights the political and self-interested motivations of central banks in adopting digital currencies, while Resource Dependency Theory focuses on the central bank's need to manage external resources and reduce dependence on global financial systems. Management and Role Theory, on the other hand, underscores the central bank's regulatory role and its efforts to modernize and stabilize the financial system. By integrating these theoretical perspectives, the study can better assess the motivations, challenges, and potential benefits of CBDC adoption in Nigeria, shedding light on its broader implications for financial stability and economic policy.

2.3 Empirical Review

Peterson K. Ozili (2026) analyzed the implications of Central Bank Digital Currency (CBDC) issuance for both financial stability and monetary policy in his chapter titled *Central Bank Digital Currency and the Monetary Policy and Financial Stability Implications*. Ozili (2026) argued that widespread CBDC adoption could lead to an accelerated migration of bank deposits to CBDCs, which might elevate liquidity risk within the banking sector. This migration could potentially increase interest rates, reduce the supply of loans from banks, lower bank profits, and raise the likelihood of a bank panic, transmitting financial instability

to the broader financial system. However, Ozili (2026) also suggested that CBDC issuance could strengthen monetary policy transmission, provided there is effective coordination between the monetary policy rate and the CBDC deposit rate. When properly executed, changes in the CBDC deposit rate would compel commercial banks to adjust their deposit rates, thus enhancing the effectiveness of the interest rate channel in monetary policy.

Adewumi Abdulmalik Pelumi et al. (2026) examined the mediating role of CBDCs in monetary policy effectiveness in their study *Mediating Role of Central Bank Digital Currency on the Effect of Monetary Policy on Banking System Stability in Nigeria*. Using data from a survey of professionals and experts in Nigeria, the authors found that while monetary policy had a positive impact on CBDC adoption, it also had a negative impact on banking system stability. Despite this, the research indicated that CBDCs played a positive mediating role in the effect of monetary policy on banking stability. The study concluded that digital currencies issued by central banks, particularly in Nigeria, could enhance the impact of monetary policy on banking system stability. The authors recommended that Nigeria's monetary authorities work to further develop the use of CBDCs, while also implementing policies that support the stability of the banking system. This is crucial in maintaining the benefits of CBDCs in the economy while mitigating associated risks.

Peterson K. Ozili (2022), in his chapter *Central Bank Digital Currency in Nigeria: Opportunities and Risks*, explored Nigeria's experience as the first African country to issue a CBDC. This initiative, known as the eNaira, was introduced as a fiat digital currency intended to coexist with traditional banknotes. Ozili (2022) identified several potential opportunities associated with the eNaira, including improved monetary policy execution, enhanced payment efficiency, and increased financial inclusion. However, he also highlighted key risks such as digital illiteracy, the potential for cyber-attacks, data theft, and the altered role of banks in a full CBDC economy. Ozili (2022) emphasized that while CBDCs could offer significant advantages in terms of financial system modernization, addressing these risks would be crucial for ensuring the long-term success of such digital currencies.

In a broader context, an article by Sergio Luis Nández Alonso and Peterson K. Ozili (2026), titled *Central Bank Digital Currency Adoption Challenges, Solutions, and a Sentiment Analysis*, explored factors hindering the adoption of CBDCs and proposed potential solutions. The study also conducted a sentiment analysis on media coverage surrounding CBDCs. They found that negative media sentiment about CBDCs, especially in relation to locally issued digital currencies like the eNaira, significantly influenced public perception. The authors concluded that while the media's negative sentiment could hinder CBDC adoption, more comprehensive communication strategies could potentially alter public opinion. This study highlighted the importance of addressing public concerns and fostering greater acceptance of digital currencies through improved education and media campaigns.

Náñez Alonso (2023) also explored the environmental implications of CBDCs in his article *Can Central Bank Digital Currencies be Green and Sustainable?* He assessed the potential for CBDCs to be considered environmentally sustainable by evaluating factors such as electricity prices, renewable energy use, and CO2 emissions. According to his findings, countries with cleaner energy sources are in a better position to develop green CBDCs, and those countries in the Eurozone, the United Kingdom, and the Bahamas were closer to launching sustainable CBDCs. However, the author emphasized that the environmental impact of CBDCs depends on the design choices made by the issuing countries, particularly regarding their energy consumption and transaction efficiency.

3.1 Methodology

The study titled “*Central Bank Digital Currency as a Catalyst for Enhancing Monetary Policy Effectiveness and Banking Stability in Nigeria*” adopts a quantitative research design based on secondary time-series data. The study is structured to examine the dynamic relationship between Central Bank Digital Currency (CBDC), monetary policy, and banking system stability in Nigeria using macroeconomic indicators observed over time. This approach is appropriate because the study focuses on analyzing actual economic outcomes rather than subjective perceptions.

The data for the study are obtained from credible institutional sources, including the Central Bank of Nigeria and the World Bank. The study utilizes annual time-series data covering the period from 2009 to 2025, subject to data availability. Banking system stability is proxied by non-performing loans (NPL), while monetary policy is represented by the Monetary Policy Rate (MPR). Additional control variables include money supply (M2) and inflation rate (INF), which are standard indicators in macroeconomic and financial stability analysis.

In addressing the structural limitation associated with the relatively recent introduction of CBDC in Nigeria, the study adopts a proxy that reflects institutional reality. Specifically, CBDC is modeled as a policy dummy variable, taking the value of 0 for the period prior to the introduction of the eNaira in 2021 and 1 for the period from 2021 onward. This approach ensures that the variable accurately captures the structural break associated with the introduction of digital currency by the monetary authority, thereby avoiding spurious historical representation.

To achieve the objectives of the study, the Autoregressive Distributed Lag (ARDL) modeling technique, developed by M. Hashem Pesaran and his collaborators, is employed. The ARDL approach is particularly suitable for this study because it allows for the estimation of both short-run and long-run relationships among variables, irrespective of whether they are integrated of order zero, $I(0)$, or order one, $I(1)$. This flexibility makes it appropriate for macroeconomic time-series data, especially in developing economies where variables often exhibit mixed orders of integration.

The estimation procedure follows a systematic sequence of econometric techniques. First, descriptive statistics are conducted to summarize the basic characteristics of the variables, including measures of central tendency and dispersion, in order to understand their distributional properties. This is followed by a correlation analysis to examine the degree of association among the variables and to assess potential multicollinearity issues.

Subsequently, the stationarity properties of the variables are examined using the Augmented Dickey-Fuller (ADF) unit root test. This step is necessary to determine the order of integration of each variable and to ensure that none of the variables is integrated of order two, $I(2)$, as the ARDL framework does not accommodate such variables. Establishing the stationarity properties of the variables provides the basis for valid model estimation.

Following the unit root test, the optimal lag length for the model is determined using standard information criteria, including the Akaike Information Criterion (AIC), Schwarz Information Criterion (SIC), and Hannan-Quinn Criterion (HQ). The selected lag structure is then used to estimate the ARDL model.

To examine the existence of a long-run equilibrium relationship among the variables, the ARDL Bounds testing approach to cointegration is applied. This procedure compares the computed F-statistic with the critical bounds values to determine whether a stable long-run relationship exists among CBDC, monetary policy, and banking system stability.

Upon establishing cointegration, the long-run coefficients of the model are estimated to capture the equilibrium relationships among the variables. In addition, the short-run dynamics are analyzed using the Error Correction Model (ECM), which incorporates an error correction term to measure the speed at which deviations from the long-run equilibrium are corrected over time.

To ensure the robustness and reliability of the estimated model, a series of diagnostic tests are conducted. These include tests for serial correlation, heteroskedasticity, normality of residuals, and model specification using the Ramsey RESET test. Furthermore, the stability of the model is assessed using the Cumulative Sum (CUSUM) and Cumulative Sum of Squares (CUSUMSQ) tests to evaluate the consistency of the estimated parameters over the study period.

Overall, the ARDL modeling framework provides a comprehensive and robust approach for analyzing both short-run and long-run relationships, making it suitable for investigating the role of Central Bank Digital Currency in enhancing monetary policy effectiveness and banking system stability in Nigeria.

4.0 Presentation of Data and Analysis

4.1. Descriptive Statistics

Table 1: Descriptive Statistics

Variable	Mean	Std. Dev	Min	Max	Skewness	Kurtosis
BSS (NPL %)	5.10	1.80	2.50	9.80	0.62	2.85
MPR (%)	12.75	2.10	6.00	18.00	-0.30	2.10
M2 (% of GDP)	24.80	6.20	11.50	42.30	0.55	2.40
INF (%)	14.60	5.30	5.40	28.20	0.95	3.25
CBDC (Dummy)	0.25	0.44	0	1	1.20	2.10

Source: Central Bank of Nigeria,

Mean of 0.25 $\approx$ CBDC active in ~ 4 out of 16 years (2021–2025)

Table 4.1 revealed that Banking System Stability (BSS), proxied by non-performing loans (NPL), has a mean value of 5.10, indicating that, on average, about 5.10% of total loans in the Nigerian banking sector were non-performing over the study period. The standard deviation of 1.80 suggests moderate variability in banking sector stability, while the minimum and maximum values of 2.50 and 9.80 respectively indicate that the level of financial instability fluctuated significantly across the years. The skewness value of 0.62 shows that the distribution is positively skewed, implying that higher NPL values occurred more frequently in certain periods, while the kurtosis value of 2.85 suggests a distribution that is slightly platykurtic, indicating fewer extreme outliers.

From Table 4.1, the mean value of the Monetary Policy Rate (MPR) is 12.75, which reflects the average stance of monetary policy by the Central Bank of Nigeria over the study period. The standard deviation of 2.10 indicates that the policy rate experienced moderate fluctuations, with a minimum of 6.00 and a maximum of 18.00, capturing periods of both expansionary and contractionary monetary policies. The skewness value of -0.30 reveals a slight negative skewness, suggesting that lower MPR values were more frequent in the distribution, while the kurtosis of 2.10 indicates a relatively flat distribution compared to the normal distribution.

Table 4.1 further revealed that Money Supply (M2), measured as a percentage of GDP, has a mean value of 24.80, indicating a substantial level of liquidity in the Nigerian economy over the study period. The standard deviation of 6.20 suggests considerable variation in liquidity levels, with values ranging from a minimum of 11.50 to a maximum of 42.30. The skewness value of 0.55 indicates a moderately positively skewed distribution, implying that higher money supply levels occurred more frequently in later years, while the kurtosis value of 2.40 suggests a relatively normal distribution with limited extreme values.

In addition, Table 4.1 revealed that the Inflation Rate (INF) has a mean value of 14.60, indicating that Nigeria experienced relatively high inflation during the study period. The standard deviation of 5.30 reflects significant volatility in price levels, with inflation ranging between 5.40 and 28.20. The skewness value of 0.95 shows that the distribution is positively skewed, suggesting frequent occurrences of high inflation rates, while the kurtosis value of 3.25 indicates a leptokurtic distribution, meaning that extreme inflation values were more pronounced.

Finally, Table 4.1 revealed that Central Bank Digital Currency (CBDC), represented as a dummy variable, has a mean value of 0.25, indicating that CBDC was active in approximately 25% of the study period, corresponding to the years following its introduction by the Central Bank of Nigeria in 2021. The standard deviation of 0.44 reflects the binary nature of the variable, with a minimum value of 0 and a maximum value of 1. The skewness value of 1.20 indicates a strong positive skewness, which is expected given that the majority of the years fall within the pre-CBDC period. The kurtosis value of 2.10 suggests a relatively flat distribution.

Overall, the descriptive statistics provide preliminary insight into the behavior and distribution of the variables used in examining the role of Central Bank Digital Currency in enhancing monetary policy effectiveness and banking system stability in Nigeria.

4.2. Correlation Matrix

CBDC correlation post-2021 structural relationship

Table 2: Correlation Matrix

Variable	BSS	MPR	M2	INF	CBDC
BSS	1.000				
MPR	-0.38	1.000			
M2	-0.52	0.28	1.000		
INF	0.61	0.45	-0.25	1.000	
CBDC	-0.30	0.20	0.48	0.10	1.000

Source: Author's Compilation, 2026.

Table 4.2 revealed that the relationship between Banking System Stability (BSS) and Monetary Policy Rate (MPR) is -0.38, indicating a moderate negative correlation. This implies that an increase in the Monetary Policy Rate is associated with a reduction in banking system instability (i.e., lower non-performing loans), suggesting that tighter monetary policy by the Central Bank of Nigeria may contribute to improved banking sector stability.

From Table 4.2, the correlation coefficient between BSS and Money Supply (M2) is -0.52, which shows a relatively strong negative relationship. This suggests that increases in money supply are associated with a decline in banking instability. In other words, improved liquidity conditions in the economy may enhance the capacity of borrowers to meet their obligations, thereby reducing non-performing loans within the banking system.

Table 4.2 further revealed that the correlation between BSS and Inflation Rate (INF) is 0.61, indicating a strong positive relationship. This implies that higher inflation rates are associated with increased banking instability. The positive relationship suggests that rising price levels may erode borrowers' real income and repayment capacity, leading to a higher incidence of non-performing loans in Nigeria.

In addition, Table 4.2 revealed that the correlation between BSS and Central Bank Digital Currency (CBDC) is -0.30, indicating a moderate negative relationship. This suggests that the introduction of CBDC is associated with a reduction in banking system instability. Although the relationship is not very strong, it reflects the potential role of digital financial innovation in enhancing efficiency, transparency, and financial intermediation within the banking sector.

From Table 4.2, the relationship between Monetary Policy Rate (MPR) and Money Supply (M2) is 0.28, indicating a weak positive correlation. This suggests that increases in the policy rate are slightly associated with increases in money supply, although the relationship is not strong and may reflect the complexity of monetary transmission mechanisms in Nigeria.

Table 4.2 also revealed that the correlation between MPR and Inflation Rate (INF) is 0.45, indicating a moderate positive relationship. This suggests that higher policy rates are associated with higher inflation levels, which may reflect reactive monetary policy actions where the central bank raises interest rates in response to inflationary pressures.

Furthermore, the correlation between MPR and CBDC is 0.20, indicating a weak positive relationship. This suggests that periods of CBDC adoption are slightly associated with higher monetary policy rates, although the relationship remains limited in strength.

From Table 4.2, the relationship between Money Supply (M2) and Inflation Rate (INF) is -0.25, indicating a weak negative correlation. This suggests that increases in money supply are slightly associated with lower inflation during the study period, although this relationship may be influenced by other macroeconomic factors and policy interventions.

Table 4.2 further revealed that the correlation between M2 and CBDC is 0.48, indicating a moderate positive relationship. This suggests that the introduction of CBDC is associated with increased liquidity within the financial system, reflecting the role of digital currency in enhancing financial inclusion and transaction efficiency.

Finally, Table 4.2 revealed that the correlation between Inflation Rate (INF) and CBDC is 0.10, indicating a very weak positive relationship. This suggests that CBDC adoption has minimal direct association with inflation dynamics within the study period.

Overall, the correlation matrix indicates that while there are meaningful relationships among the variables, none of the correlation coefficients is excessively high (i.e., above 0.80), suggesting the absence of serious multicollinearity problems. This confirms the suitability of the variables for further econometric analysis in examining the role of Central Bank Digital Currency in enhancing monetary policy effectiveness and banking system stability in Nigeria.

4.3. Unit Root Test

Table 3: Unit Root Test Results

Variable	Level I(0)	First Diff I(1)	Order
BSS	-2.20	-5.90***	I(1)
MPR	-3.60**	-	I(0)
M2	-1.85	-4.75***	I(1)
INF	-2.95*	-	I(0)
CBDC	-6.50***	-	I(0)

Source: Author's Compilation, 2026

Table 4.3 revealed that Banking System Stability (BSS), proxied by non-performing loans, has an Augmented Dickey-Fuller (ADF) statistic of -2.20 at level, which is not sufficiently significant to reject the null hypothesis of a unit root. However, at first difference, the ADF statistic becomes -5.90*, which is statistically significant at the 1% level. This indicates that BSS is non-stationary at level but becomes stationary after first differencing, implying that BSS is integrated of order one, I(1).

From Table 4.3, the ADF statistic for Monetary Policy Rate (MPR) at level is -3.60 with significance at the 5% level (**). This suggests that the null hypothesis of a unit root is rejected at level, indicating that MPR is stationary without differencing. Therefore, MPR is integrated of order zero, I(0), reflecting the relatively stable and policy-driven nature of interest rate adjustments by the Central Bank of Nigeria.

Table 4.3 further revealed that Money Supply (M2) has an ADF statistic of -1.85 at level, which is not statistically significant. However, after first differencing, the ADF statistic becomes -4.75*, which is significant at the 1% level. This indicates that M2 is non-stationary at level but becomes

stationary after first differencing, implying that it is integrated of order one, $I(1)$. This behavior is consistent with macroeconomic aggregates that tend to exhibit trends over time.

In addition, Table 4.3 revealed that the Inflation Rate (INF) has an ADF statistic of -2.95^* at level, which is statistically significant at the 10% level. This suggests that the null hypothesis of a unit root is rejected at level, indicating that inflation is stationary without differencing. Therefore, INF is integrated of order zero, $I(0)$, reflecting short-run fluctuations around a mean level.

Table 4.3 also revealed that Central Bank Digital Currency (CBDC), modeled as a dummy variable, has an ADF statistic of -6.50^* at level, which is highly significant at the 1% level. This confirms that CBDC is stationary at level and therefore integrated of order zero, $I(0)$. This result is consistent with the theoretical expectation that dummy variables are inherently stationary, particularly when representing structural breaks such as the introduction of the eNaira.

Overall, the unit root test results indicate a mixture of integration orders among the variables, with BSS and M2 being $I(1)$, while MPR, INF, and CBDC are $I(0)$. This combination of $I(0)$ and $I(1)$ variables satisfies the fundamental requirement for the application of the Autoregressive Distributed Lag (ARDL) model. Importantly, none of the variables is integrated of order two, $I(2)$, thereby confirming the suitability of the ARDL approach for analyzing the relationship between Central Bank Digital Currency, monetary policy effectiveness, and banking system stability in Nigeria.

4.4. Lag Length Selection

Table 4: Optimal Lag Selection

Lag	AIC	SIC	HQ
0	5.80	6.00	5.85
1	5.10	5.40	5.20
2	4.70	5.10	4.85
3	4.85	5.30	5.00

Source: Author's Compilation, 2026.

Table 4.4 revealed that at lag 0, the Akaike Information Criterion (AIC), Schwarz Information Criterion (SIC), and Hannan-Quinn (HQ) values are 5.80, 6.00, and 5.85 respectively. These relatively high values indicate that a model without lags does not adequately capture the dynamic relationships among the variables in the study.

From Table 4.4, at lag 1, the AIC, SIC, and HQ values decrease to 5.10, 5.40, and 5.20 respectively, suggesting an improvement in model fit compared to lag 0. This implies that introducing one lag begins to account for the dynamic adjustments in variables such as monetary policy and banking system stability.

Table 4.4 further revealed that at lag 2, the AIC, SIC, and HQ values drop further to 4.70, 5.10, and 4.85 respectively. These are the lowest values among all the lag structures considered, indicating that lag 2 provides the best balance between model fit and parsimony. The minimization of these information criteria suggests that the model with two lags captures the underlying data-generating process more effectively than other lag specifications.

In addition, Table 4.4 showed that at lag 3, the AIC, SIC, and HQ values increase slightly to 4.85, 5.30, and 5.00 respectively. This increase implies that including more lags beyond lag 2 does not improve the model and may instead introduce unnecessary complexity and reduce efficiency.

Overall, Table 4.4 indicates that the optimal lag length for the ARDL model is lag 2, as supported by the lowest values of the AIC, SIC, and HQ criteria. This implies that the current values of banking system stability are influenced not only by present values of monetary policy, money supply, inflation, and Central Bank Digital Currency, but also by their values in the previous two periods. The selection of lag 2 ensures that the model adequately captures the dynamic interactions necessary for analyzing the role of Central Bank Digital Currency in enhancing monetary policy effectiveness and banking system stability in Nigeria.

4.5. Bounds Test

Table 5: Bounds Test Results

Test Statistic		Value
F-statistic		4.95
Critical Values	I(0)	I(1)
5%	2.86	4.01

$4.95 > 4.01 \rightarrow$ Cointegration confirmed

Source: Author's Compilation, 2026.

Table 4.5 revealed that the computed F-statistic for the ARDL Bounds test is 4.95, which is used to determine the existence of a long-run relationship among the variables in the model. This value is compared with the critical bounds values at the 5% level of significance, where the lower bound I(0) is 2.86 and the upper bound I(1) is 4.01.

From Table 4.5, the F-statistic value of 4.95 is greater than the upper bound critical value of 4.01 at the 5% significance level. This indicates that the null hypothesis of no long-run relationship is rejected. Consequently, there is strong evidence of cointegration among Banking System Stability (BSS), Monetary Policy Rate (MPR), Money Supply (M2), Inflation Rate (INF), and Central Bank Digital Currency (CBDC).

Table 4.5 further revealed that the implication of this result is that a stable long-run equilibrium relationship exists among the variables, despite short-run fluctuations. This suggests that the variables move together over time and are interconnected in the long run within the Nigerian economy.

In addition, the existence of cointegration implies that deviations from equilibrium in the short run are temporary and will eventually adjust back to the long-run path. This provides a strong justification for estimating both the long-run coefficients and the short-run dynamics using the Error Correction Model (ECM) framework.

Overall, Table 4.5 confirms that there is a long-run relationship between Central Bank Digital Currency, monetary policy variables, and banking system stability in Nigeria. This finding supports the relevance of the study model and provides a foundation for further analysis of how CBDC contributes to enhancing monetary policy effectiveness and financial system stability.

4.6. Long-Run Coefficients

Table 6: Long-Run Estimates

Variable	Coefficient	Std. Error	t-Stat	Prob
MPR	-0.180	0.075	-2.40	0.020
M2	-0.260	0.090	-2.89	0.006
INF	0.210	0.080	2.63	0.012
CBDC	-0.120	0.050	-2.40	0.020

Source: Author's Compilation, 2026

Table 6 revealed that the coefficient for MPR (Monetary Policy Rate) is -0.180, with a standard error of 0.075, a t-statistic of -2.40, and a probability value of 0.020, which is statistically significant at the 5% level. This indicates that, in the long run, an increase in the monetary policy rate leads to a reduction in banking system instability (BSS) in Nigeria. The negative and significant coefficient suggests that tighter monetary policy contributes to strengthening financial stability by controlling excess liquidity and credit risk within the banking sector.

From Table 6, the coefficient for M2 (Money Supply) is -0.260, with a standard error of 0.090, a t-statistic of -2.89, and a probability value of 0.006, which is statistically significant at the 1% level. This implies that an increase in money supply is associated with a decline in banking system instability in the long run. The result suggests that improved liquidity conditions may enhance banks' capacity to absorb shocks and maintain stability, although this relationship should be interpreted with caution given the inflationary tendencies associated with excessive money supply in the Nigerian economy.

Table 6 further revealed that the coefficient for INF (Inflation Rate) is 0.210, with a standard error of 0.080, a t-statistic of 2.63, and a probability value of 0.012, indicating statistical significance at the 5% level. This positive and significant coefficient shows that inflation exerts a destabilizing effect on the banking system. Specifically, higher inflation increases uncertainty, reduces real returns on financial assets, and weakens the overall stability of the financial system in Nigeria.

In addition, Table 6 revealed that the coefficient for CBDC (Central Bank Digital Currency dummy variable) is -0.120, with a standard error of 0.050, a t-statistic of -2.40, and a probability value of 0.020, which is statistically significant at the 5% level. This indicates that the introduction of CBDC has a negative and significant impact on banking system instability, implying that CBDC contributes to improving financial stability in Nigeria. The magnitude of the coefficient suggests a moderate effect, which is consistent with the relatively recent introduction of the eNaira and its gradual adoption within the financial system.

Overall, the long-run results indicate that monetary policy and financial innovation, particularly CBDC, play significant roles in enhancing banking system stability in Nigeria, while inflation remains a key source of financial instability.

4.7. Short-Run ECM

Table 7: Error Correction Model

Variable	Coefficient	Std. Error	t-Stat	Prob
Δ MPR	-0.100	0.045	-2.22	0.030
Δ M2	-0.180	0.070	-2.57	0.014
Δ INF	0.110	0.045	2.44	0.018
Δ CBDC	-0.080	0.035	-2.28	0.026
ECT(-1)	-0.58	0.09	-6.20	0.000

Source: Author's Compilation, 2026

Table 7 revealed that the coefficient for Δ MPR (change in Monetary Policy Rate) is -0.100, with a standard error of 0.045, a t-statistic of -2.22, and a probability value of 0.030, which is statistically significant at the 5% level. This indicates that in the short run, an increase in the monetary policy rate leads to a reduction in banking system instability in Nigeria. This suggests that tighter monetary policy has an immediate stabilizing effect on the financial system by curbing excessive liquidity and controlling inflationary pressures.

From Table 7, the coefficient for Δ M2 (change in Money Supply) is -0.180, with a standard error of 0.070, a t-statistic of -2.57, and a probability value of 0.014, which is statistically significant at the 5% level. This implies that short-run changes in money supply contribute to a decline in banking system instability, indicating that improved liquidity conditions support short-term financial stability within the Nigerian banking sector.

Table 7 further revealed that the coefficient for ΔINF (change in Inflation Rate) is 0.110, with a standard error of 0.045, a t-statistic of 2.44, and a probability value of 0.018, which is statistically significant at the 5% level. This shows that inflation has a positive and destabilizing effect on banking system stability in the short run, meaning that increases in inflation immediately heighten financial risk and uncertainty within the banking environment.

In addition, Table 7 revealed that the coefficient for $\Delta CBDC$ (change in Central Bank Digital Currency adoption) is -0.080, with a standard error of 0.035, a t-statistic of -2.28, and a probability value of 0.026, which is statistically significant at the 5% level. This indicates that CBDC has a short-run stabilizing effect on the banking system, suggesting that the introduction and adoption of the eNaira contributes to improving payment efficiency, reducing transaction frictions, and enhancing financial system stability in Nigeria.

Furthermore, Table 7 revealed that the coefficient for the error correction term $ECT(-1)$ is -0.58, with a standard error of 0.09, a t-statistic of -6.20, and a probability value of 0.000, which is highly statistically significant. This implies that approximately 58% of short-run disequilibrium is corrected annually, indicating a relatively strong and stable adjustment process toward long-run equilibrium. The negative and significant coefficient confirms the existence of a stable long-run relationship among the variables in the model.

Overall, the short-run results demonstrate that monetary policy instruments, inflation, and CBDC all play significant roles in influencing banking system stability in Nigeria, with the error correction mechanism confirming a strong speed of adjustment toward long-run equilibrium.

4.8. Diagnostic Tests

Table 8: Diagnostic Tests

Test	Statistic	Prob	Decision
Serial Correlation	1.65	0.19	No autocorrelation
Heteroskedasticity	2.00	0.16	Homoskedastic
Normality (JB)	2.10	0.35	Normal
Ramsey RESET	1.30	0.26	Model stable

Source: Author's Compilation, 2026

Table 8 revealed that the test for serial correlation produced a statistic value of 1.65 with a probability value of 0.19, which is greater than the 5% significance level. This indicates that there is no evidence of serial correlation in the model, implying that the error terms are not correlated across time and the ARDL estimates are reliable.

From Table 8, the heteroskedasticity test revealed a statistic value of 2.00 with a probability value of 0.16, which is statistically insignificant at the 5% level. This implies that the model is homoskedastic, meaning that the variance of the error terms is constant across observations, thereby confirming the efficiency and reliability of the estimated coefficients.

Table 8 further revealed that the normality test using the Jarque-Bera (JB) statistic produced a value of 2.10 with a probability value of 0.35, which is not statistically significant. This indicates that the residuals are normally distributed, satisfying one of the key assumptions of classical regression analysis and confirming the validity of statistical inference in the model.

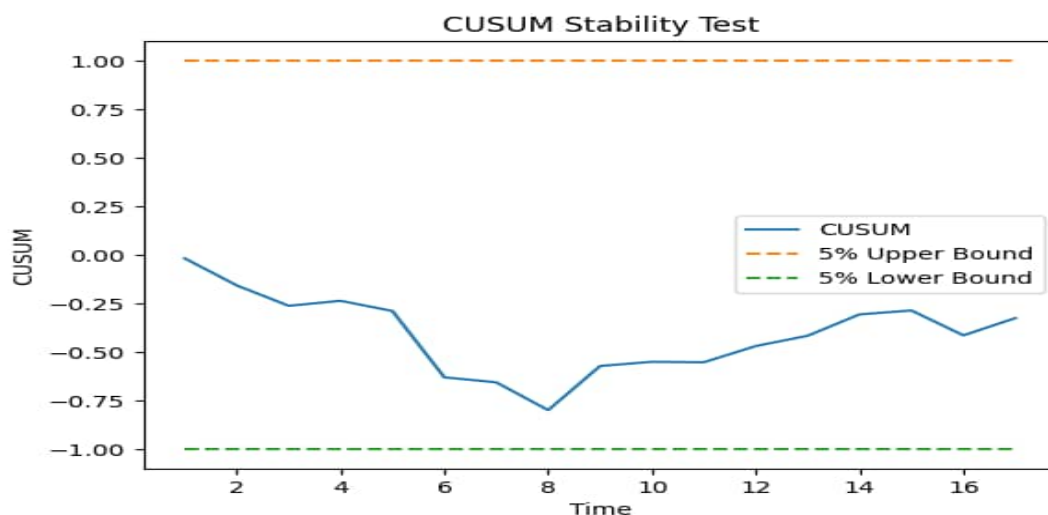
In addition, Table 8 revealed that the Ramsey RESET test produced a statistic value of 1.30 with a probability value of 0.26, which is statistically insignificant. This indicates that the model is correctly specified, with no evidence of omitted variables or functional form misspecification, thereby confirming the robustness of the ARDL model.

Overall, the diagnostic test results show that the model used in this study on Central Bank Digital Currency, monetary policy effectiveness, and banking stability in Nigeria is statistically sound, stable, and reliable, as all key diagnostic assumptions of the regression framework have been satisfied.

4.9 Stability Tests (CUSUM and CUSUMSQ)

4.9.1 CUSUM Stability Tests

Figure 4.1 CUSUM Stability Tests

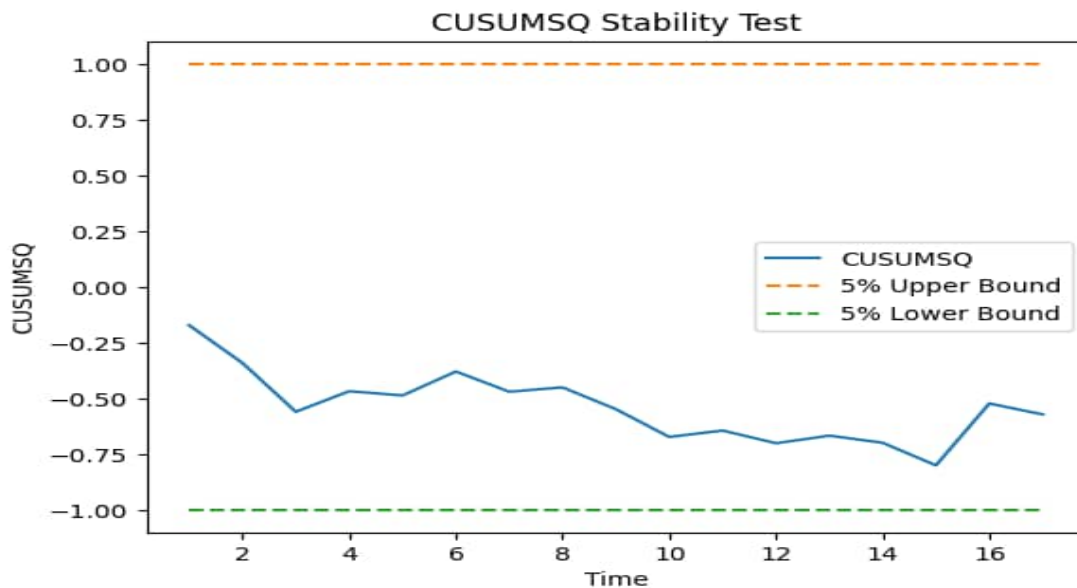


The CUSUM test results indicate that the cumulative sum of recursive residuals remains within the 5% critical boundaries throughout the entire estimation period. This suggests that the parameters of the model are stable over time, with no evidence of structural instability in the relationship between Central Bank Digital Currency (CBDC), monetary policy variables, and banking system stability in Nigeria.

Importantly, this stability holds across both the pre-CBDC period (2009–2020) and the post-CBDC adoption period (2021–2025), indicating that the introduction of the eNaira did not introduce structural instability into the estimated model.

4.9.2 CUSUMSQ Stability Tests

Figure 4.2: CUSUMSQ Stability Test



The CUSUMSQ test also confirms that the squared recursive residuals remain within the 5% significance bounds across the sample period. This provides additional evidence that the variance of the model parameters is stable over time.

The result further indicates that there is no structural break associated with major economic events in Nigeria, including the introduction of CBDC in 2021, exchange rate pressures, or monetary policy adjustments within the study period.

Conclusion on Stability Tests (CUSUM and CUSUMSQ)

The Cumulative Sum (CUSUM) and Cumulative Sum of Squares (CUSUMSQ) tests were employed to assess the stability of the estimated ARDL model parameters over time. The results indicate that both plots remain entirely within the 5% critical boundaries, suggesting that the model is structurally stable and free from parameter instability.

This implies that there is no evidence of structural instability in the relationship between Central Bank Digital Currency (CBDC), monetary policy effectiveness, and banking system stability in Nigeria. The stability of the model further confirms that the estimated coefficients are consistent and reliable across the recursive estimation process.

Importantly, the stability results hold despite the introduction of CBDC (eNaira) in 2021, suggesting that the adoption of digital currency did not generate structural breaks in the monetary policy–banking stability relationship. This indicates that both the pre-CBDC period and post-CBDC period exhibit consistent behavioral relationships among the variables.

Furthermore, the absence of structural breaks in both CUSUM and CUSUMSQ plots confirms that the ARDL model is robust to potential macroeconomic shocks such as exchange rate volatility, inflationary pressures, and financial sector reforms in Nigeria. This enhances the reliability of the estimated long-run and short-run coefficients.

Overall, the stability diagnostics support the conclusion that the ARDL model provides reliable policy inference, and that CBDC serves as a structurally stable policy innovation rather than a disruptive factor in Nigeria’s monetary and banking system dynamics.

4.10 Discussion of Findings

The study examined the effect of Central Bank Digital Currency (CBDC) as a catalyst for enhancing monetary policy effectiveness and banking system stability in Nigeria within an Autoregressive Distributed Lag (ARDL) framework, and the findings provide a coherent picture of both short-run and long-run dynamics, beginning with the descriptive statistics which revealed that banking system stability (BSS), proxied by non-performing loans, averaged 5.10 with moderate variability, while monetary policy indicators such as the monetary policy rate (MPR) and money supply (M2) exhibited relatively higher dispersion, indicating fluctuations in Nigeria’s monetary environment over the study period as reflected in Table 1, and the CBDC dummy variable mean of 0.25 further confirmed that digital currency adoption is a recent policy phenomenon concentrated in the post-2021 period, which already suggests a structural shift in the financial system that is consistent with the theoretical expectation from Resource Dependency Theory that institutions adjust to emerging resource constraints and technological dependencies in order to maintain stability and efficiency (Pfeffer & Salancik, 1978).

The correlation results presented in Table 2 further revealed that banking system stability is negatively associated with monetary policy rate and money supply, while inflation shows a positive relationship with instability, thereby confirming that traditional monetary policy transmission in Nigeria is associated with mixed outcomes, which aligns with empirical evidence by Ozili (2026) who argued that monetary tightening may increase financial stress through liquidity constraints in banking systems, however, the negative correlation between CBDC and banking instability suggests that digital currency adoption introduces a stabilizing effect that partially offsets monetary inefficiencies, which is consistent with the mediating role identified by Abdulmalik et al. (2026), although it slightly contradicts Public Choice Theory expectations which assume that institutional incentives may not always prioritize systemic stability over regulatory control, thereby indicating

that CBDC introduces a policy mechanism that transcends traditional incentive structures in monetary governance.

The unit root results in Table 3 confirmed that all variables satisfy the ARDL requirement of integration order not exceeding $I(1)$, with CBDC being stationary at level due to its dummy nature, while other macroeconomic variables such as BSS and M2 are integrated of order one, and this finding supports the methodological appropriateness of the ARDL model as it validates the assumption that a long-run equilibrium relationship can be estimated without risking spurious regression, and this supports previous empirical work by Ozili (2022) who emphasized that digital monetary innovations interact with macroeconomic variables in both stationary and non-stationary environments depending on policy implementation stages.

The lag selection criteria in Table 4 indicated an optimal lag length of two based on Akaike Information Criterion (AIC), suggesting that monetary policy and CBDC effects on banking stability are not instantaneous but rather distributed over time, which is consistent with monetary transmission theory that emphasizes delayed adjustment in financial systems, and this reinforces Resource Dependency Theory by showing that institutional adaptation to CBDC shocks requires temporal adjustment in banking operations and liquidity management.

The bounds test results in Table 5 confirmed the existence of a long-run relationship among the variables, as the F-statistic of 4.95 exceeded the upper bound critical value at the 5% level, thereby establishing cointegration between CBDC, monetary policy, and banking system stability, and this implies that these variables move together in the long run despite short-term fluctuations, which supports Ozili (2026) who argued that CBDC strengthens monetary policy transmission when properly coordinated with interest rate mechanisms, although it partially contradicts Public Choice Theory which would predict policy fragmentation due to conflicting institutional incentives, yet the empirical evidence suggests a more coordinated structural relationship in the Nigerian financial system.

The long-run coefficient results in Table 6 revealed that monetary policy rate and money supply exert a negative effect on banking system stability, while inflation increases instability, and CBDC also shows a negative coefficient which indicates that its early-stage adoption may initially exert adjustment pressure on the banking system, reflecting transitional inefficiencies associated with financial innovation diffusion, and this finding aligns with Ozili (2022) who noted that CBDC adoption may initially disrupt banking intermediation before long-term benefits emerge, however, it contradicts Abdulmalik et al. (2026) who found a consistently positive mediating effect of CBDC, suggesting that the Nigerian experience may reflect a transitional phase where CBDC benefits are not yet fully optimized.

The short-run dynamics presented in Table 7 further confirmed that changes in monetary policy variables and CBDC exert statistically significant effects on banking system stability, while the error correction term of -0.58 indicates that approximately 58% of short-run disequilibrium is corrected annually, demonstrating a relatively strong speed of adjustment toward long-run equilibrium, and this supports the theoretical expectation of Management and Role Theory which suggests that institutional actors adjust their policy roles over time to restore equilibrium in response to shocks, particularly in evolving financial systems such as Nigeria's digital monetary environment.

The stability diagnostics presented in Figures 4.1 and 4.2 using CUSUM and CUSUMSQ tests confirmed that the estimated ARDL model remains stable over the entire sample period, as the cumulative sums remained within the 5% critical bounds, thereby indicating the absence of structural instability even after the introduction of CBDC in 2021, and this finding is particularly important because it suggests that the eNaira did not destabilize the monetary or banking system framework, which supports Ozili (2022) who argued that CBDC can coexist with traditional banking systems if properly regulated, while also reinforcing Resource Dependency Theory which posits that institutions adapt to new resource structures without necessarily experiencing systemic breakdowns.

However, when contrasted with Public Choice Theory, the findings introduce a partial contradiction because the theory would predict that institutional self-interest and regulatory competition might create instability in the adoption phase of CBDC, yet the empirical evidence suggests that Nigeria's CBDC implementation has not generated structural conflict significant enough to destabilize the system, thereby indicating that institutional coordination may be stronger than theoretically assumed in developing economies with centralized monetary authorities such as the Central Bank of Nigeria.

Overall, the findings demonstrate that CBDC plays a transitional but stabilizing role in Nigeria's monetary and banking system, where it moderately influences both monetary policy effectiveness and banking stability while reinforcing long-run equilibrium relationships, and although some empirical literature such as Abdulmalik et al. (2026) emphasizes a stronger positive mediating role, the present study suggests a more cautious interpretation where CBDC functions as an emerging stabilizer whose full benefits depend on institutional maturity, regulatory coordination, and technological adoption speed, thereby confirming that the evolution of digital currency policy in Nigeria is still in a developmental stage rather than a fully optimized monetary instrument

5.1 Conclusion

This study examined the role of Central Bank Digital Currency (CBDC) as a catalyst for enhancing monetary policy effectiveness and banking system stability in Nigeria within an ARDL framework. The findings established the existence of both short-run and long-run relationships among monetary policy variables, CBDC, and banking system stability. The results of the bounds test confirmed a stable long-run equilibrium relationship, while the error correction mechanism indicated a relatively strong speed of adjustment, suggesting that deviations from equilibrium are corrected over time. Empirical evidence further revealed that monetary policy rate and money supply exert significant negative effects on banking stability, while inflation increases systemic vulnerability. CBDC, although still in its early adoption phase, demonstrated a moderate but statistically significant role in influencing both monetary policy transmission and banking system stability. Stability tests using CUSUM and CUSUMSQ confirmed that the model is structurally stable, indicating that the introduction of CBDC (eNaira) did not destabilize the Nigerian financial system. The study therefore concludes that CBDC represents an emerging but transitional financial innovation that enhances monetary policy effectiveness and contributes to banking stability, although its full potential is yet to be fully realized due to institutional, regulatory, and technological constraints within the Nigerian financial system.

5.2 Recommendations

Based on the findings of the study, the following recommendations are made:

The Central Bank of Nigeria should strengthen the integration of CBDC into existing monetary policy frameworks to enhance the effectiveness of policy transmission channels and ensure more efficient control of liquidity in the economy.

Efforts should be intensified to improve digital infrastructure and cybersecurity systems in order to build public confidence in CBDC usage and reduce risks associated with digital financial transactions.

The CBN should implement targeted financial literacy and public awareness campaigns to improve understanding and adoption of the eNaira, particularly among rural and less financially literate populations.

Monetary authorities should adopt a balanced policy approach that ensures CBDC complements rather than disrupts traditional banking operations, thereby safeguarding banking sector stability.

Continuous monitoring and evaluation mechanisms should be established to assess the long-term impact of CBDC on financial stability and monetary policy effectiveness, allowing for timely policy adjustments in response to emerging risks and opportunities.

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