

# INFLATION AND FINANCIAL SECTOR STABILITY IN SUB-SAHARAN AFRICA STATES

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## Abstract

In SSA, persistent inflation remains a macroeconomic challenge capable of weakening banking resilience and undermining sustainable financial intermediation. This study examines the effect of inflation on financial sector stability in selected Sub-Saharan African (SSA) countries over the period 2008–2024. The study therefore aims to assess whether inflation significantly influences financial sector stability, while controlling for key macroeconomic conditions. The analysis is anchored on Financial Stability Theory and Financial Repression Theory, which explain how inflation distorts interest rate signals, weakens balance sheets, discourages savings, and heightens systemic fragility in bank-dominated economies. Methodologically, the study employs a quantitative panel design using secondary data sourced from the World Development Indicators (WDI). Financial stability is proxied by the bank capital-to-assets ratio (BCAR), while inflation (CPI), GDP per capita, interest rate spread, and exchange rate serve as explanatory variables. A Fixed Effects regression model is adopted, supported by the Hausman specification test. Findings reveal that inflation has a negative and statistically significant effect on BCAR, indicating that rising inflation reduces bank capitalization and weakens stability. Interest rate spread is positive and significant, while GDP per capita and exchange rate are insignificant. The study recommends credible inflation management, stronger fiscal–monetary coordination, enhanced prudential supervision, and financial market deepening to strengthen stability.

**Keywords:** Inflation; Financial sector stability; Bank capitalization; Fixed effects; Sub-Saharan Africa

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## 1.0 Introduction

Inflation is a macroeconomic process that is consistent rise in the overall price level of goods and services, and the effects of this phenomenon are severe on the economic performance and financial system stability. Price stability is one of the key goals of the macroeconomic policy since it facilitates

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purchasing power, increases savings and investment behaviour, efficiency in resource allocation, and overall economic confidence. In this context, the financial sector, which includes deposit money banks, non-bank financial institutions, capital markets, and payment systems, is an important avenue through which economic resources are mobilized and distributed (Sethi and Acharya, 2020; Onwubuariri et al., 2021). Stable financial system helps in growth through intermediation, making payments, extending credit and risk management. Financial sector stability is thus the ability of the financial system to absorb shocks and continue with its core functions and prevent systemic disruptions that may cripple economic activity (Kolawole, et al., 2020; Ibrahim et al., 2022; Bilalli and Sadiku, 2023). The impact of inflation on the financial sector is both direct and indirect because it impacts on the interest rates, credit supply, asset values, bank balance sheets, and investor expectations. The relationship between inflation and financial sector stability is of particular concern in Sub-Saharan Africa, where macroeconomic volatility is quite a frequent occurrence and financial systems in most economies are still shallow. This relationship is critical in understanding how monetary and financial policies can be formulated to enhance sustainable growth and protect financial resilience within the region.

Inflationary pressure has been a common macroeconomic issue in Sub-Saharan Africa, and this has been caused by a mix of structural rigidities, fiscal imbalances and external vulnerabilities. These factors are supply-side bottlenecks, inadequate infrastructure and production capacity, depreciation of the exchange rate, reliance on imported food and fuel, fiscal deficits, and vulnerability to global commodity price shocks (Bilalli and Sadiku, 2023; Almansour et al., 2021). Most SSA countries have gone through periods of high and unstable inflation, which is usually accompanied by macroeconomic instability, deterioration of investor confidence, and exposure to financial systems. Despite the financial development achieved in the region in the last decades, financial intermediation is still predominantly bank-based, and commercial banks take the biggest part of financial sector operations. In the meantime, capital markets and non-bank financial institutions are not yet developed or evenly distributed in most SSA economies (Almansour et al., 2021; Sethi and Acharya, 2020; Kolawole, et al., 2024). Continuous inflation undermines the real value of financial assets, undermines savings incentives, distorts interest rate signals, and increases credit risk by decreasing the ability of borrowers to make repayments. Such dynamics can be reflected in the form of poor quality of assets and increase in non-performing loans in the banking systems. Moreover, high inflation tends to cause more monetary policy reactions, which can raise the cost of borrowing, limit credit growth, and decrease the effectiveness of financial intermediation. In turn, inflation is one of the critical macroeconomic variables that determine the performance, depth, and resilience of financial systems across Sub-Saharan Africa (Bilalli and Sadiku, 2023; Onwubuariri et al., 2021).

Although reforms have been made to improve the credibility of monetary policy and increase the regulation of the financial sector, the results have been varied across SSA. The monetary policy regimes of central banks in the region are varied and may include inflation targeting frameworks, monetary targeting, exchange rate-based, and others (Iyke and Odhiambo, 2017; Almansour et al., 2021; Moyo et al., 2020; Onwubuariri et al., 2021). Nonetheless, institutional inefficiencies like poor institutional capacity, fiscal preeminence, ineffective financial markets, and ineffective monetary transmission systems have limited the efficacy of policy interventions. Inflationary episodes have been associated with distress in the banking sector, declining credit in the private sector, and financial vulnerability in most instances (Bandura, 2020; Ibrahim et al., 2022). Increased inflation raises operational and compliance expenses incurred by financial institutions, reduces the real returns on savings, deters long term investment, and heightens uncertainty in financial markets. Additionally, volatility of interest rates due to inflation puts financial institutions at risk of maturity mismatches, liquidity strains, and repricing risk, especially in those systems in which long-term funding markets are constrained. Households and firms are also experiencing the deterioration of access to cheap credit, exacerbating the problem of financial inclusion and productive investment (Ibrahim et al., 2022; Bilalli and Sadiku, 2023). The conditions lead to an uncertain business environment that deters domestic capital formation and foreign investment and eventually slows the financial deepening and economic growth. Consequently, the fragility of the financial sector remains a major challenge to the macroeconomic stability and development performance in Sub-Saharan Africa.

Empirical research concerning the correlation between inflation and the performance of the financial

sector is not consistent, especially in the Sub-Saharan Africa setting. Some studies also indicate that moderate inflation can help to support financial development by decreasing real debt burdens and stimulating borrowing, but high and volatile inflation negatively impacts the stability of the financial sector by creating more uncertainty, undermining institutional performance, and deterring long-term financial contracts (Iyke and Odhiambo, 2017; Bandura, 2020; Ibrahim et al., 2022; Bilalli and Sadiku, 2023; Almansour et al., 2021; Moyo et al). In addition, most of the research uses financial development indicators, including credit-to-GDP ratios or financial depth measures, with inadequate attention to the broader financial stability indicators, including banking soundness, systemic risk, shock resilience, and institutional strength. The interplay between inflation, the responses of monetary policies, and the stability of the financial sector is also not well studied in most of the SSA studies, especially in a region with a diverse policy regime and financial development. Thus, the research attempts to fill this gap by examining the connection between inflation and financial sector stability in Sub-Saharan Africa, with empirical findings that will guide policy-making and reinforce the current arguments on macroeconomic management and financial system resilience in the region.

## **2.0 Theoretical and Empirical Review**

### **2.1 Financial Stability Theory**

The Financial Stability Theory was a development of Keynesian and post-Keynesian economics, and was developed most famously by Hyman Minsky. Later it was institutionalized by the IMF and Bank of International Settlements, which focused on systemic risk and macro-financial interconnections (Minsky, 1986). Financial Stability Theory presupposes that the financial system is unstable per se, because of pro-cyclical behavior, incentives to take risks, and information asymmetries. When the macroeconomic environment is expanding, economic agents, especially financial institutions, are more likely to leverage up and speculate, and they usually underestimate risks. Inflation is very important as it distorts interest rates, asset prices and credit allocation thus undermining balance sheets and risking default. The theory also presupposes that the financial markets are unable to correct themselves efficiently in the absence of regulatory controls, and thus macro-prudential policies and credible monetary frameworks are necessary. Stability is considered not only as the lack of crises but as the ability of the system to take shocks without interfering with the intermediation. In the developing world, fragility is increased by weak institutions, shallow markets and inflation volatility. Therefore, financial stability is maintained through co-ordinated policy measures, good supervision and control of inflation (Minsky, 1986; Gorton and Metrick, 2012).

One of its major weaknesses is that it focuses on systemic risk, and thus tends to ignore structural constraints, developmental finance requirements and informal financial processes common in low-income and emerging economies. In spite of this drawback, the theory is useful as it provides a sound macro-financial model that relates inflation, credit cycles, and systemic risk. The fact that it is very flexible in the macro-prudential regulation contributes to its high relevance in fragile and bank-dominated financial systems.

Financial Stability Theory is an effective tool to explain why the stability of financial systems can be undermined by persistent and volatile inflation in interrelated ways in the context of Sub-Saharan Africa (Ibrahim et al., 2022). Inflation leads to a decrease in financial stability by decreasing the real value of savings and financial assets, deterring long-term deposits and investment, and undermining the effectiveness of financial intermediation (Bilalli and Sadiku, 2023). It also increases credit risk by reducing the real income and repayment ability of borrowers, which leads to more non-performing loans and poor quality of bank assets. The fact that the majority of the financial systems in Sub-Saharan Africa are still heavily bank-based with comparatively shallow and poorly developed capital markets implies that inflation shocks are more likely to be transmitted through the banking system, increasing liquidity pressures, increasing the interest rate spreads, and increasing the maturity mismatches. Moreover, the volatility of inflation also skews the interest rates and undermines the transmission of monetary policy, which generates uncertainty that increases risk perceptions and financial vulnerability. The theory also states that the instability of inflation may create spillover risks throughout SSA because of the increasing cross-border banking operations and financial integration in the region, whereas the ineffective capacity

to regulate, fiscal dominance, and poor policy credibility tend to support inflationary pressures and systemic vulnerability. Therefore, Financial Stability Theory provides an interesting analytical approach to the inflation-financial stability nexus in Sub-Saharan Africa.

## **2.2 Financial Repression Theory**

Ronald McKinnon and Edward Shaw formulated the Financial Repression Theory in the early seventies. It is critical of government intervention in the financial markets, especially policies that reduce interest rates and distort financial intermediation (McKinnon, 1973; Shaw, 1973). The theory presupposes that the controls that are imposed by the government, including interest rate ceilings, high reserve requirements, directed credit, and capital controls, distort financial markets and decrease efficiency. Financial repression in the form of inflation is an implicit tax on the savers as it creates negative real interest rates, which discourages savings mobilization. Low savings restrict the supply of loanable funds, restrict investment by the private sector, and undermine financial institutions. The theory assumes that liberalized interest rates and market-based credit distribution are beneficial to financial deepening, better capital allocation, and institutional stability. It also presupposes that rational agents will react to repression by redirecting resources to the informal markets or non-financial assets. In the long run, disintermediation and financial fragility are caused by chronic inflation and repression in developing economies. Therefore, inflation is not neutral but increases the distortive impact of repressive policies (McKinnon, 1973; Shaw, 1973).

The theory overestimates market failures and institutional weaknesses and is based on the assumption that liberalization will automatically enhance efficiency which may not be true in poor regulatory and governance conditions (Bilalli and Sadiku, 2023). Nevertheless, Financial Repression Theory is analytically strong in that it shows clearly the combination of inflation and policy distortions undermining financial institutions. It gives a solid basis on which to assess the macroeconomic costs of persistent inflation in controlled financial systems.

When applied to Sub-Saharan Africa, Financial Repression Theory describes the interaction between inflation and policy and regulatory controls to undermine the stability of the financial sector. Historically, many SSA economies have been dependent on controlled interest rates, directed credit programmes, high reserve requirements, and fiscal preeminence of monetary policy, commonly utilizing the financial system to finance government requirements. In this type of environment, inflation exacerbates repression by increasing negative real interest rates, decreasing the incentive to save formally, and promoting capital flight, dollarisation, and the growth of informal financial markets. Such consequences undermine the mobilisation of deposits by banks, limit their capacity to issue stable long-term credit, and raise liquidity and solvency risks, which increase systemic susceptibility. Despite the liberalisation of financial activities in some areas of the region due to financial liberalisation and regulatory reforms, aspects of repression are usually still present in the form of administrative interventions, shallow market depth, and lack of competition. Financial Repression Theory can thus be used to understand why inflationary pressures in Sub-Saharan Africa often turn into financial fragility and not financial development. It is a complement to Financial Stability Theory because it focuses on structural and policy-based processes in which inflation disrupts the financial sector.

## **2.3 Empirical Reviews**

Empirical research confirms that inflation is an important macroeconomic variable that determines performance and stability in the financial sector, especially in developing and Sub-Saharan African economies. Based on Ghanaian quarterly data (1990-2008), Abbey (2013) determined that inflation has a negative effect on financial development, but with a complex dynamic. Although correlation analysis indicated negative correlation, regression analysis indicated that there were a positive short-run effect and no long-run relationship, which indicated instability in the inflation-finance nexus. Abbey also found that the inflation thresholds are 11-16% which means that moderate inflation can co-exist with financial development. Iyke and Odhiambo (2017) also presented similar threshold-based evidence, based on Ghana and Nigeria, where financial development only advanced growth in the low-to-

moderate inflation regimes. Bandura (2020) also supported their findings by stating that the inflation threshold in Sub-Saharan Africa is 31% and above which financial development has a negative impact on growth. The same was also confirmed by Ndoricimpa (2017), who found lower inflation thresholds in low- and middle-income countries, which have nonlinear inflation-growth relationships. Taken together, these works indicate that inflation compromises the stability of the financial sector at some point but small inflation might not be a total bad thing.

On the regional and cross-country level, some studies highlight the fact that long term inflation undermines the development and stability of the financial sector. Investigating the 22 Sub-Saharan African countries through GMM, Kagochi (2019) found out that inflation fails to stimulate the development of the financial sector but trade openness and good governance do. This is in line with Alimi (2014) who reported that inflation had negative impacts on the financial development of Nigeria during the period between 1970 and 2012 and that inflation passed its negative impacts to economic growth through the financial sector. Ibrahim et al. (2022) took this argument a step further and examined the role of inflation as a mediator between financial development and economic growth nexus in 36 SSA countries and found low inflation levels (6.767.65) above which financial development ceases to contribute to economic growth. Western Balkan countries showed similar results in a similar panel evidence by Bilalli and Sadiku (2023) that inflation was positively correlated with private credit but negatively with broad money, which indicates instability in monetary aggregates. All these findings are indicative that inflation perverts the financial intermediation channels, particularly within the bank-based system, such as West Africa, and, therefore, poses a risk to the stability of the financial sector.

Empirical support and methodological information is further supported by country-specific studies outside of West Africa. In Saudi Arabia, Almalki and Batayneh (2015) applied ARDL and found that there was a significant negative long-run and short-run correlation between inflation and financial development and positive impact of economic growth on the performance of the financial sector. Similar results were found by Almansour et al. (2021) in Jordan, where inflation had a strong impact on the performance of banks, and by Moyo et al. (2020) in South Africa, who discovered that inflation had a negative impact on the return on equity of banks. Sinah (2018) highlighted the close correlation between the general money growth and inflation and implied that monetary expansion is a disruptive factor in financial systems. Hale et al. (2019) included an inflationary aspect related to trade, which indicates that tariffs and disputes increase prices and production costs, which indirectly impact financial stability. The research by Sethi and Acharya (2020) and Brukwicka and Dudzik (2021) pointed to inflation targeting as an efficient stabilization instrument, but its effectiveness relies on the strength of the institutions. These researches highlight the fact that the destabilizing impact of inflation on the financial sector is not peculiar to West Africa but is enhanced by poor monetary and regulatory systems.

Lastly, there is an emerging literature that associates financial instability caused by inflation with macroeconomic outcomes. Ezako (2023) validated that inflation is a major setback to economic growth in Sub-Saharan Africa and Burundi, respectively, and that there are optimal levels (approximately 13 percent) above which growth will decline. Bangura et al. (2024), and Tenaw et al. (2020) both found nonlinear inflation-growth relationships, which supports the threshold hypothesis. The inflationary issues in Nigeria were reported by Okoro et al. (2024), Ikwor et al. (2024), Onwubuariri et al. (2021), Yakubu et al. (2023), and Idris et al. (2017), who demonstrated the negative effects of inflation, stagflation, and monetary tightening on growth and financial performance. Although Zummo et al. (2023) also indicated that inflation has negligible growth impacts, this is contrary to the prevailing empirical evidence. Wang et al. (2022) and Forbes et al. (2022) also put the long-term destabilizing effects of inflation into perspective. Generally, the empirical literature demonstrates that inflation, particularly at volatile or threshold levels, is a major threat to the stability of the financial sector in the Sub-Saharan Africa, but there are gaps in the empirical literature on the direct measures of stability, including bank resilience, systemic risk, and financial soundness, which the current study aims to fill.

## 2.4 Research Gap

The inflation-finance nexus in developing and Sub-Saharan African countries has been studied in a number of studies (Abbey, 2013; Alimi, 2014; Iyke and Odhiambo, 2017; Kagochi, 2019; Bandura,

2020; Ibrahim et al., 2022), but the evidence is still divided, context-specific, and indirectly linked to the stability of the financial sector. Although most studies claim that inflation compromises financial development and performance, particularly above specified thresholds (Abbey, 2013; Iyke and Odhiambo, 2017; Bandura, 2020; Ndoricimpa, 2017; Ezako, 2023), some studies have reported mixed or insignificant relationships based on horizon, proxies, or model specification (Abbey, 2013; Zummo et al., 2023). In addition, the majority of empirical literature is to a large extent a proxy of finance via financial development or finance-growth channels instead of direct stability indicators like bank soundness, resilience, systemic risk, and financial stress (Almalki and Batayneh, 2015; Moyo et al., 2020; Almansour et al., 2021). Also, a significant body of empirical literature approximates finance using financial development or finance-growth pathways, but does not use of the evidence, instead utilizing single-country (or frequently Ghana or Nigeria) or broad SSA panels with limited West Africa-specific comparability, and often does not consider the interaction of inflation with institutional quality, monetary regimes (e.g., inflation targeting), monetary aggregates, or external shocks (Sinah, 2018; Hale et al., 2019; Sethi and Acharya, 202). As a result, there is still an evident gap in terms of a new West Africa-specific empirical evaluation, which captures the dynamics of inflation (including thresholds and volatility) in relation to explicit financial sector stability measures, but which considers the structural characteristics and policy frameworks that influence the results of stability in the area.

### 3.0 Methodology

This study used a quantitative panel research design to examine the impact of inflation on financial sector stability in the selected Sub-Saharan African (SSA) countries between the years 2008 and 2024. The reason why panel data analysis is appropriate is that it is able to capture time variation within countries and structural variation across countries thus giving deeper evidence compared to cross-sectional or time-series analysis. The primary source of annual data is the World Development Indicators (WDI) and is structured into a country year panel dataset. Interpolation is used where there are limited observations to achieve a balanced panel to retain degrees of freedom.

The bank capital-to-assets ratio in the financial sector is used as a proxy of financial sector stability, as it measures the ability of banks to absorb shocks and the strength of their solvency. Inflation is important explanatory variable, which is the consumer price index (CPI). The model incorporates GDP per capita (economic performance and income level), interest rate spread (lending minus deposit rate, which measures the cost and efficiency of the banking intermediation), and the exchange rate (external sector vulnerability and currency pressures) to explain other macroeconomic factors that can affect financial stability.

To estimate the impact of inflation on financial sector stability, the study specifies the following panel regression model:

$$BCAR_{it} = \beta_0 + \beta_1 INF_{it} + \beta_2 GDPPC_{it} + \beta_3 IRS_{it} + \beta_4 EXR_{it} + u_{it}$$

Where:

$BCAR_{it}$  = Bank capital to assets ratio (%) for country  $i$  at time  $t$

$INF_{it}$  = Inflation (CPI)

$GDPPC_{it}$  = GDP per capita

$IRS_{it}$  = Interest rate spread (lending – deposit)

$EXR_{it}$  = Exchange rate

$u_{it}$  = error term

This study uses the Fixed Effects (FE) panel regression for the estimation. FE estimator is suitable in that it adjusts the unobserved, time-invariant country-specific factors, including institutional quality, regulatory systems, and financial system structure, which can influence both inflation and financial stability. The Hausman specification test supports the use of FE over Random Effects because it shows that there is a correlation between country effects and regressors.

To enhance the validity of findings, heteroskedasticity (Breusch-Godfrey/Wooldridge test) and cross-sectional dependence diagnostic tests are performed. No violations are detected. Variance inflation factors (VIFs) are also used to check multicollinearity so that the estimates of the coefficients are stable.

#### 4.0 Results and Analysis

**Table 1: Descriptive Statistics for the Variables**

Variable	Obs	Mean	Std. Dev.	Min	Max
BCAR	323	8.672	4.618	0	18.507
INF	323	7.773	6.548	-16.86	38.107
GDPPCAP	323	3419.179	3842.096	441.49	19141.512
INR	323	8.963	8.231	0	49.046
EXR	323	537.496	1018.242	1.052	4525.425

Source: Author's STATA Result (2026).

Table 1 presents the descriptive statistics of the variables used in the study based on 323 panel observations. The dependent variable, bank capital-to-assets ratio (BCAR), records a mean value of 8.672%, indicating a moderate level of capitalization among banks in the sampled Sub-Saharan African countries. However, the relatively high standard deviation (4.618) and the wide range (0–18.507) suggest substantial differences in banking sector resilience across countries and over time. Inflation (INF) averages 7.773%, reflecting generally moderate inflationary conditions, but its large dispersion (Std. Dev. = 6.548) and extreme values (–16.86 to 38.107) indicate periods of deflation and episodes of high inflation. GDP per capita (GDPPCAP) shows a mean of 3,419.179 with significant variation, implying wide income disparities across the sample. Interest rate (INR) averages 8.963, with considerable volatility. Exchange rate (EXR) exhibits the highest dispersion, highlighting substantial currency instability across SSA economies.

**Table 2: Correlations for the Variables**

Variables	(1)	(2)	(3)	(4)
(1) INF	1.000			
(2) GDPPCAP	-0.176	1.000		
(3) INR	0.098	-0.232	1.000	
(4) EXR	-0.059	-0.337	0.412	1.000

Source: Author's STATA Result (2026).

Table 2 reports the pairwise correlation coefficients among the explanatory variables. Inflation (INF) exhibits a weak negative correlation with GDP per capita (GDPPCAP) ( $r = -0.176$ ), suggesting that higher-income SSA economies tend to experience relatively lower inflation. Inflation shows very weak associations with interest rate (INR) ( $r = 0.098$ ) and exchange rate (EXR) ( $r = -0.059$ ), implying limited linear dependence. GDPPCAP is negatively correlated with INR ( $r = -0.232$ ) and EXR ( $r = -0.337$ ), indicating that richer countries generally have lower interest rates and more stable exchange rates. The strongest relationship is between INR and EXR ( $r = 0.412$ ), though it remains moderate, suggesting multicollinearity concerns are minimal.

**Table 3: Pooled regression**

BCAR	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
INF	-.122	.039	-3.11	.002	-.198 - .045	***
GDPPCAP	0	0	-4.59	0	0	***
INR	.016	.033	0.49	.626	-.05 .082	
EXR	0	0	-0.55	.583	-.001 0	
Constant	10.656	.589	18.11	0	9.498 11.814	***

  

Mean dependent var	8.672	SD dependent var	4.618
R-squared	0.082	Number of obs	323

F-test	7.140	Prob > F	0.000
Akaike crit. (AIC)	1886.201	Bayesian crit. (BIC)	1905.089

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

Source: Author's STATA Result (2026).

Table 3 presents the pooled OLS regression results examining the determinants of financial sector stability, proxied by the bank capital-to-assets ratio (BCAR). The findings indicate that inflation (INF) exerts a statistically significant negative effect on BCAR ( $\beta = -0.122$ ,  $p = 0.002$ ). This suggests that higher inflation is associated with weaker banking sector capitalization, implying that inflationary pressures may erode bank balance sheet strength and reduce resilience to shocks. GDP per capita (GDPPCAP) is also statistically significant ( $p < 0.01$ ), though the coefficient is reported as approximately zero due to scaling; nevertheless, the negative t-value indicates that increases in GDP per capita are associated with changes in BCAR, albeit marginal in magnitude. In contrast, interest rate (INR) shows a positive but statistically insignificant relationship with BCAR ( $\beta = 0.016$ ,  $p = 0.626$ ), indicating that variations in interest rates do not significantly influence banking stability within the pooled framework. Similarly, exchange rate (EXR) is insignificant ( $p = 0.583$ ), implying limited direct association with capitalization levels. The model is jointly significant ( $F = 7.140$ ,  $p < 0.001$ ), but the explanatory power is low ( $R^2 = 0.082$ ), meaning that only 8.2% of the variation in BCAR is explained. Overall, the pooled results highlight inflation as the key macroeconomic factor adversely affecting banking stability.

**Table 4: Breusch-Pagan / Cook-Weisberg Test**

	Coef.
Chi-square test value	2.75
P-value	0.0973

Source: Author's STATA Result (2026).

Table 4 reports the Breusch–Pagan/Cook–Weisberg test for heteroskedasticity. The chi-square statistic is 2.75 with a p-value of 0.0973. At the 5% significance level, the null hypothesis of homoskedasticity cannot be rejected, suggesting no strong evidence of heteroskedasticity in the pooled regression residuals. However, the result is marginally significant at the 10% level, indicating possible mild heteroskedasticity.

**Table 5: Multicollinearity**

	VIF	1/VIF
	1.340	0.749
	1.240	0.810
	1.190	0.842
	1.060	0.941
Mean	1.210	

Source: Author's STATA Result (2026).

Table 5 presents the variance inflation factor (VIF) results used to assess multicollinearity among the explanatory variables. The VIF values range from 1.06 to 1.34, with a mean VIF of 1.21. These values are far below conventional thresholds (e.g., 5 or 10), indicating that multicollinearity is not a concern in the model. Hence, the regression coefficients are unlikely to be biased or unstable due to high intercorrelations.

**Table 6: Fixed Effect Regression**

BCAR	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
INF	-.136	.046	-2.97	.003	-.227 - .046	***
GDPPCAP	0	0	-0.83	.409	-.001 0	
INR	.285	.064	4.44	0	.159 .411	***
EXR	0	.001	-0.37	.709	-.002 .001	
Constant	8.133	1.502	5.42	0	5.178 11.088	***
Mean dependent var	8.672		SD dependent var	4.618		
R-squared	0.107		Number of obs	323		
F-test	8.972		Prob > F	0.000		

Akaike crit. (AIC)	1798.114	Bayesian crit. (BIC)	1817.002
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\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

Source: Author's STATA Result (2026).

Table 6 presents the Fixed Effects (FE) regression results examining the relationship between inflation and financial sector stability, proxied by the bank capital-to-assets ratio (BCAR), across the sampled Sub-Saharan African countries. The results show that inflation (INF) has a statistically significant negative effect on BCAR ( $\beta = -0.136$ ,  $p = 0.003$ ), implying that rising inflation reduces bank capitalization and weakens the stability of the banking sector. This finding supports the view that inflationary pressures can erode real asset values, heighten uncertainty, and undermine banks' ability to maintain adequate capital buffers. GDP per capita (GDPPCAP) is statistically insignificant ( $p = 0.409$ ), indicating that variations in income levels do not exert a meaningful within-country effect on bank capitalization once country-specific characteristics are controlled for. Interest rate (INR) has a positive and highly significant relationship with BCAR ( $\beta = 0.285$ ,  $p < 0.01$ ), suggesting that higher interest rates are associated with stronger capitalization, possibly reflecting improved bank profitability or risk pricing within countries over time. Exchange rate (EXR) is negative but insignificant ( $p = 0.709$ ), implying limited direct impact on BCAR within the FE framework. The model is jointly significant ( $F = 8.972$ ,  $p < 0.001$ ) and explains 10.7% of the variation in BCAR ( $R^2 = 0.107$ ). Overall, the FE results emphasize inflation as a key destabilizing factor, while interest rates appear to strengthen banking stability.

**Table 7: Random Effect Regression**

BCAR	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
INF	-.145	.042	-3.46	.001	-.227	-.063	***
GDPPCAP	0	0	-2.58	.01	-.001	0	***
INR	.134	.044	3.02	.003	.047	.221	***
EXR	-.001	0	-1.52	.128	-.001	0	
Constant	10.001	.913	10.95	0	8.21	11.791	***
Mean dependent var	8.672		SD dependent var	4.618			
Overall r-squared	0.060		Number of obs	323			
Chi-square	26.336		Prob > chi2	0.000			
R-squared within	0.095		R-squared between	0.053			

\*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

Source: Author's STATA Result (2026).

Table 7 reports the Random Effects (RE) regression estimates for the determinants of financial sector stability, proxied by the bank capital-to-assets ratio (BCAR), in the sampled Sub-Saharan African countries. The results indicate that inflation (INF) has a statistically significant negative effect on BCAR ( $\beta = -0.145$ ,  $p = 0.001$ ), implying that higher inflation reduces bank capitalization and weakens banking sector stability. This supports the argument that inflationary pressures erode the real value of financial assets and increase macroeconomic uncertainty, thereby undermining banks' ability to maintain adequate capital buffers. GDP per capita (GDPPCAP) is also statistically significant ( $p = 0.010$ ), though the coefficient is close to zero due to scaling; the negative t-value suggests that higher income levels are associated with changes in BCAR across countries. Interest rate (INR) shows a positive and significant relationship with BCAR ( $\beta = 0.134$ ,  $p = 0.003$ ), suggesting that higher interest rates may enhance bank capitalization, possibly through improved profitability and better risk pricing. Exchange rate (EXR) is negative but statistically insignificant ( $\beta = -0.001$ ,  $p = 0.128$ ), indicating that exchange rate movements do not exert a strong direct influence on bank capitalization in the RE framework. The model is jointly significant ( $\chi^2 = 26.336$ ,  $p < 0.001$ ), but the overall explanatory power is modest (overall  $R^2 = 0.060$ ). Overall, the RE results reaffirm inflation as a key destabilizing factor while highlighting the stabilizing role of interest rates.

**Table 8: Hausman Specification Test**

	Coef.
Chi-square test value	20.982
P-value	0.003

Source: Author's STATA Result (2026).

Table 8 presents the Hausman specification test used to determine the appropriate estimator between the Fixed Effects and Random Effects models. The test yields a chi-square statistic of 20.982 with a p-value of 0.003. Since the p-value is significant at the 1% level, the null hypothesis that the Random Effects estimator is consistent is rejected. This implies that the regressors are correlated with the unobserved country-specific effects; therefore, the Fixed Effects model is preferred.

## **5.0 Discussion of Findings**

The fixed effects results provide strong evidence that inflation is a statistically significant destabilizing factor for financial sector stability in Sub-Saharan Africa, as measured by the bank capital-to-assets ratio (BCAR). The negative inflation coefficient implies that rising inflation reduces banking sector capitalization within countries over time, thereby weakening banks' solvency buffers and resilience to shocks. This outcome is consistent with the theoretical argument that inflation erodes the real value of financial assets and liabilities, distorts pricing signals, and increases uncertainty in financial markets, all of which can undermine the soundness of banking institutions (McKinnon, 1973; Boyd, Levine & Smith, 2001). Empirically, the result aligns with Abbey (2013), who found that inflation is generally detrimental to financial development in Ghana, and with Alimi (2014), who documented that inflation exerts adverse effects on Nigeria's financial development and transmits instability to the broader economy. Similar evidence is reported by Moyo et al. (2020), who show that inflation weakens bank performance, and by Almansour et al. (2021), who also find inflation to significantly influence banking outcomes through balance-sheet and profitability channels.

Importantly, the finding also reinforces the threshold-based interpretation widely emphasized in the literature, namely that inflation becomes harmful once it rises above moderate levels or becomes volatile. Abbey (2013) identified inflation thresholds between 11% and 16%, beyond which inflation undermines finance, while Iyke and Odhiambo (2017) similarly show that financial development contributes to growth only under low-to-moderate inflation regimes in Ghana and Nigeria. Ibrahim et al. (2022) further report that in SSA, financial development loses its growth-enhancing role once inflation exceeds low thresholds around 6.76%–7.65%, and Bandura (2020) estimates an SSA inflation threshold of about 31% beyond which financial development adversely affects growth. Ndoricimpa (2017), Ezako (2023), Tenaw et al. (2020), and Bangura et al. (2024) equally confirm nonlinear inflation relationships across African economies, suggesting that inflation above optimal levels increases macro-financial fragility. Although the present model is linear and does not explicitly test for threshold effects, the significant negative inflation coefficient implies that the inflation environment across sampled SSA economies may have exceeded stability-consistent levels, supporting the argument that sustained inflation undermines bank resilience (Abbey, 2013; Iyke & Odhiambo, 2017; Ibrahim et al., 2022).

The insignificance of GDP per capita suggests that variations in income levels do not exert a meaningful within-country effect on bank capitalization after controlling for unobserved structural factors. This contrasts with evidence from Almalki and Batayneh (2015), who found economic growth to be positively linked to financial development, and indicates that in SSA, bank stability may depend more on institutional quality, regulatory enforcement, and financial sector structure than on income changes alone (Kagochi, 2019; Sethi & Acharya, 2020). This is consistent with the argument that weak supervisory capacity and institutional constraints amplify macroeconomic shocks and weaken financial system responses in developing regions (World Bank, 2020; Brukwicka & Dudzik, 2021).

The positive and significant effect of interest rate indicates that higher rates are associated with stronger capitalization, possibly reflecting improved bank profitability and wider net interest margins that allow banks to build capital buffers. This finding is plausible given that banks in SSA are often heavily dependent on interest income, meaning that tighter pricing of credit may strengthen capital positions in the short run (Almansour et al., 2021; IMF, 2019). Nevertheless, this outcome should be interpreted cautiously because higher interest rates can also raise borrowing costs, worsen debt-servicing capacity, and increase non-performing loans, which may erode stability over time—an effect widely discussed in macro-financial studies (Boyd, Levine & Smith, 2001; IMF, 2019; BIS, 2021). The insignificance of exchange rate suggests that currency movements may not directly affect capitalization once country effects are controlled for, possibly due to offsetting mechanisms such as partial hedging, limited foreign

currency exposure in some banking systems, or regulatory constraints (Forbes et al., 2022; Wang et al., 2022). Overall, the evidence supports the broad empirical consensus that inflation, particularly when persistent, high, or volatile, poses a major threat to financial sector stability in Sub-Saharan Africa, while also highlighting the importance of monetary conditions and institutional context in shaping banking resilience (Abbey, 2013; Kagochi, 2019; Ibrahim et al., 2022; Ezako, 2023).

## 6.0 Conclusion and Recommendations

This study examined the impact of inflation on financial sector stability in selected Sub-Saharan African countries over the period 2008–2024 using the Fixed Effects panel regression technique. Financial sector stability was measured by the bank capital-to-assets ratio (BCAR). The findings show that inflation has a statistically significant negative effect on BCAR, implying that rising inflation weakens bank capitalization and reduces the ability of banks to absorb shocks. This result confirms that inflationary pressures constitute a major macroeconomic threat to banking system resilience in Sub-Saharan Africa, particularly within financial systems that are largely bank-dominated and vulnerable to volatility. GDP per capita was found to be statistically insignificant, suggesting that improvements in income levels alone do not necessarily translate into stronger bank capitalization once country-specific characteristics are controlled for. Interest rate exhibited a positive and significant relationship with financial stability, indicating that higher interest rates may strengthen capitalization through improved profitability and risk pricing, although this may also raise borrowing costs and potentially worsen credit risk in the long run. Exchange rate movements were statistically insignificant, implying that currency fluctuations may not directly influence bank capitalization within the study context.

Based on these findings, the study recommends that monetary authorities prioritize credible inflation management strategies aimed at maintaining low and stable inflation, since inflation volatility undermines banking stability. There is also a need for stronger coordination between fiscal and monetary authorities to reduce inflationary pressures associated with fiscal deficits and policy inconsistency. In addition, financial regulators should strengthen prudential supervision and enforce capital adequacy requirements to ensure banks build sufficient buffers against macroeconomic shocks. Finally, Sub-Saharan African economies should pursue reforms that deepen financial markets and expand access to long-term financing, thereby reducing overreliance on the banking sector and improving overall financial system stability.

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