

The Impact of Financial Indicators on Economic Growth in Sierra Leone: Evidence from the Banking Sector (1980–2024)

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Abstract

This study looks at the relationship between economic growth in Sierra Leone from 1980 to 2024 and important financial indicators such as lending rates, private sector credit, interest rate spreads, and broad money (M2/GDP). The financial industry is still fragmented and shallow in spite of multiple banking reforms and liberalizations. The study uses the Autoregressive Distributed Lag (ARDL) model to assess both short- and long-term correlations using annual time-series data from the Bank of Sierra Leone and the World Development Indicators. Results reveal that broad money and private sector credit exhibit positive but statistically negligible effects on growth, while lending rate and interest rate spread have negative and substantial effects in the near run. According to the findings, financial deepening and sustainable growth are still hampered by inefficiencies and excessive intermediation costs. The main goals of policy recommendations are to strengthen financial inclusion through institutional reforms, lower lending costs, and increase credit accessibility.

Keywords: WDI, ARDL, Bank of Sierra Leone, Broad Money and Interest Rate Spread

1. Introduction

In discussions of financial policy and development economics, the contribution of financial indicators to economic growth is still crucial. Theoretically, financial deepening improves savings mobilization, money channeling to profitable investments, and innovation stimulation through a larger money supply, effective intermediation, and loan availability. Long-term growth is facilitated by a healthy financial system, which reduces transaction costs, controls risks, and encourages capital accumulation and entrepreneurship.

The anticipated relationship between financial development and economic success has, however, been erratic and poor in Sierra Leone. The economy has undergone little structural change in

spite of a number of financial liberalization measures put in place during the 1980s, such as interest rate deregulation, state bank privatization, and payment system modernization.

Large portions of the rural and unorganized sectors continue to be financially excluded, and the nation's banking system is nevertheless shallow and concentrated, controlled by a small number of commercial banks that mostly serve metropolitan customers. The image painted by key financial indicators is difficult. The average private sector credit is less than 10% of GDP, which is significantly less than that of Ghana, a neighbor, which accounts for over 20%, and Nigeria, which accounts for over 25%. High intermediation profits and inefficiencies are indicated by the interest rate spread over 15% and the continued high lending rates,

which are frequently between 18 and 25%.

Economic diversification and private investment are hampered by these enduring issues.

In light of this, the second goal of the primary study is the main focus of this paper:

To evaluate the influence of important financial metrics, such as lending rates, interest rate spreads, private sector credit, and wide money on Sierra Leone's economic expansion. The study aims to give evidence-based insights to direct specific monetary, banking, and financial inclusion changes by assessing the impact of each financial component on economic performance.

1.1 Motivation of the Study

The second paper's impetus stems from the need to go beyond the previous paper's exploration of the overall relationship between finance and growth in Sierra Leone.

Although prior research has demonstrated a connection between financial development and economic growth, it is still unknown how, where, and how stable this relationship is in the setting of a small, post-conflict economy with poor institutions and shallow financial markets.

Economic growth has not always responded well to financial advancement, even with significant changes aimed at advancing capital market development, banking sector modernization, and financial inclusion. This discrepancy implies that financial development's effectiveness, inclusivity, and quality might be just as important as its depth. Therefore, the need to investigate whether various aspects of financial growth, such as credit distribution, interest rate behavior, or financial access, have diverse effects on economic performance is what drives Paper Two.

Ongoing policy discussions about the optimal order of banking sector reforms for long term growth also served as inspiration for the study. It is also unclear how increasing lending or encouraging participation would actually result in genuine growth in economies like Sierra Leone, where structural vulnerabilities and macroeconomic instability endure. The goal of the paper's empirical investigation of these mechanisms is to offer policy-relevant insights that direct the development of macroeconomic and financial policies that are adapted to local conditions. The need to clarify the mechanisms by which financial development influences growth, the discrepancies in earlier research and the potential for asymmetric or non-linear effects, and the policy imperative to determine which elements of financial development can best support sustainable growth in Sierra Leone are the main drivers of the second paper.

2. Literature Review

2.1 Theoretical Background

Based on financial intermediation theory, which highlights how financial institutions help close the gap between investors and savers, the study was conducted [1-3]. This theory holds that

an economy's ability to convert idle resources into profitable investment depends on the size and effectiveness of its financial intermediaries.

While a small interest rate spread suggests efficiency and robust competition in the financial sector, high lending rates deter borrowing and investment. The extent to which financial assets are utilized in economic activity is reflected in financial depth, which is frequently gauged by metrics like private sector credit (as a percentage of GDP) and wide money (M2/GDP).

This Link is Supported by Two Traditional Theories:

i. Schumpeter's (1911) Supply-Leading Hypothesis States:

By increasing investment efficiency and mobilizing savings, financial development both precedes and drives economic expansion.

ii. The Demand-Following Hypothesis (Patrick, 1966; Robinson, 1952):

The financial industry grows as a result of rising demand for financial services brought on by economic prosperity.

According to Lucas's (1988) alternative neutrality hypothesis, finance has little to no causal impact on growth. This relationship's strength and direction are still context-specific and are impacted by financial structure, macroeconomic stability, and institutional quality.

2.2 Empirical Data

The results of empirical studies on the relationship between finance and growth vary by nation and methodological approach:

➤ **Positive Connections:** Using cross-country data, King and Levine and Levine discovered that financial growth encourages productivity and capital accumulation [4,5]. According to Adu et al., broad money (M2/GDP) and private credit both considerably boost growth in Ghana arguing that productivity is enhanced by more comprehensive and inclusive financial systems [6].

➤ **Negative or Negligible Effects:** In research on low-income African economies, Odhiambo and Wolde-Rufael discovered weak or negligible correlations because of high intermediation costs, shallow financial markets, and lax regulatory frameworks [7].

These findings suggest that economic transformation may not always follow financial expansion in the absence of institutional development.

➤ **Context of Sierra Leone:** The country is the subject of relatively few empirical investigations. Despite financial sector reforms, Bendu and Kamara noted that high lending costs and credit restrictions still impede the flow of funds to the actual economy [8]. A weak financial-growth linkage persists due in part to a lack of diverse financial products, poor credit risk management, and a low savings culture.

The body of research indicates that the influence of finance on economic performance, particularly in developing and post-conflict economies, depends on its quality and accessibility rather than just its quantity.

3. Methods

3.1 Data Sources and Research Design

Using a quantitative, time-series research design, the study examines data from 1980 to 2024. Important economic periods are covered by this extensive observation period, including pre-war, civil war, post-war reconstruction, and post-pandemic recovery.

Data Sources: Bank of Sierra Leone (BSL) annual reports and monetary policy statements for domestic financial data; International Monetary Fund (IMF) databases and Article IV country reports for cross-validation; World Bank (World Development Indicators) for macro-financial indicators [9,10].

3.2 Model Specification

- Real GDP per capita growth, which measures economic performance, is the dependent variable.
- Indicators of financial development are captured by the independent variables: The percentage of domestic credit given to the private sector as a percentage of GDP is known as Private Sector Credit (DOCPS).
M2/GDP, or broad money, is a measure of financial depth.
LR, or lending rate, is the cost of borrowing money.
Financial efficiency is represented by the Interest Rate Spread (INTSP).
- **The Functional Model is Expressed as:**
 $GDP_t = f(M2_t, DOCPS_t, LR_t, INTSP_t)$
- **The ARDL (p, q₁, q₂, q₃, q₄) Framework is Specified as:**

$$\Delta GDP_t = \alpha_0 + \sum_{i=1}^p \beta_i \Delta GDP_{t-i} + \sum_{i=0}^{q_1} \alpha_i \Delta M2_{t-i} + \sum_{i=0}^{q_2} \Phi_i \Delta DOCPS_{t-i} + \sum_{i=0}^{q_3} \gamma_i \Delta LR_{t-i} + \sum_{i=0}^{q_4} \Delta_i \Delta INTSP_{t-i} + \lambda (GDP_{t-1} - \psi_1 M2_{t-1} - \psi_2 DOCPS_{t-1} - \psi_3 LR_{t-1} - \psi_4 INTSP_{t-1}) + \varepsilon_t$$

3.3 Estimation Technique

Cointegration between variables of mixed integration orders (I(0) and I(1)) is tested using Pesaran, Shin, and Smith's Autoregressive Distributed Lag (ARDL) Bounds Testing technique [11].

Following confirmation of cointegration, the Error Correction Model (ECM) representation is used to estimate both long-run coefficients and short-run dynamics.

3.4 Diagnostic Tests

To guarantee the stability and dependability of the model:

- Serial correlation is checked using the Breusch-Godfrey test.
- Heteroscedasticity is evaluated using the White Test.
- The Jarque-Bera Test verifies that the residuals are normal.
- Assess the stability of the parameters using the CUSUM and CUSUMSQ tests.

The model is statistically sound and stable during the estimating period, according to all tests.

4. Results and Discussion

4.1 Descriptive Statistics and Correlation

The Tables Below Show the Pattern, Trend and Behaviour of the Data.

| Variable | Mean | Std. Dev. | Min | Max | Obs. |
|----------------|----------|-----------|----------|----------|------|
| lgdp_pcA | 6.846679 | 0.1670603 | 6.464645 | 7.094952 | 45 |
| Bm (M2GDP (%)) | 3337.764 | 5097.037 | 9.925912 | 13309.49 | 45 |
| Docps (%) | 3.593662 | 1.519737 | 1.031624 | 7.86759 | 45 |
| intsp (%) | 12.02399 | 4.43234 | 1.833333 | 23.45833 | 45 |
| lr | 24.45487 | 10.87498 | 11 | 62.83333 | 45 |

Source: Researcher's computation using data from World Development Indicator From the table above, Growth in GDP per capita on average: 3.1%, Credit to the private sector: less than 10% of GDP and Interest rate spread: around 14%; lending rate: 18– 25%.

Table 1: Descriptive Statistics (1980–2024)

4.2 Correlation Analysis

The table 2 shows the partial correlation results, revealing the

relationships between variables while controlling for the influence of other variables in the model.

| Variable | Partial corr. | Semipartial corr. | Partial corr.^2 | Semipartial corr.^2 | Significance |
|----------|---------------|-------------------|-----------------|---------------------|--------------|
| bm | -0.0738 | -0.0479 | 0.0054 | 0.0023 | 0.6554 |
| Docps | 0.3484 | 0.2405 | 0.1214 | 0.0578 | 0.0298 ** |

| | | | | | |
|-------|---------|---------|--------|--------|-----------|
| intsp | -0.3315 | -0.2274 | 0.1099 | 0.0517 | 0.0392 ** |
| lr | -0.2752 | -0.1852 | 0.0757 | 0.0343 | 0.0900 * |
| inf | 0.1956 | 0.1047 | 0.0255 | 0.0110 | 0.3312 |
| tra | 0.3136 | 0.2137 | 0.0984 | 0.0457 | 0.0518 * |
| po_g | -0.0204 | -0.0132 | 0.0004 | 0.0002 | 0.9018 |

*Note: **p < 0.05; p < 0.10. Source: Author's computation from Stata output (2025) Source: Researcher's computation from Stata output (September, 2025)

Table 2: Partial Correlation Results (Controlling for Other Variables)

The partial correlation analysis, presented in Table 3, explores the net associations between economic growth (lgdp_pca) and the explanatory variables after controlling for the effects of the other regressors. The Correlation research showed that while lending rate and interest spread are negatively connected with growth, M2/GDP and private credit are positively correlated, indicating that high borrowing costs limit profitable investment.

4.3 Trend Analysis

4.3.1 Trends in Financial Development Indicators

❖ Broad Money

The figure 1 shows the trend of broad money over the study period, highlighting the changes in money supply within the economy and its potential influence on financial development.

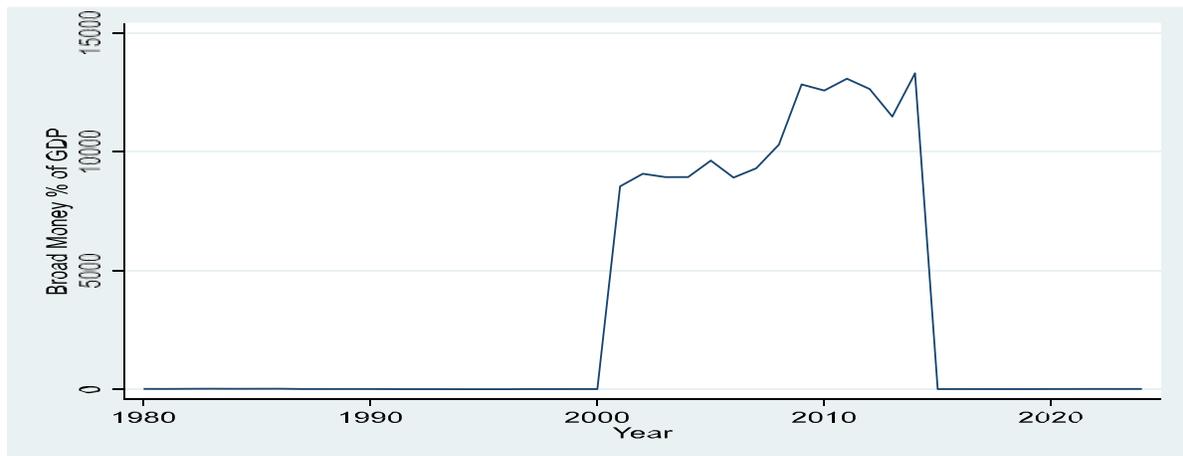


Figure 1: Trend of Broad Money (M2/GDP) in Sierra Leone (1980–2024)

Source: Researcher's computation using data from World Development Indicator (WDI) (September, 2025).

Figure 1 displays the trend of broad money (M2 as a percentage of GDP) over the period 1980–2024. Broad money has shown a general upward movement, particularly from the early 2000s onward, reflecting efforts at financial deepening following post-war reconstruction. However, there are visible fluctuations during global and domestic shocks, including the Ebola crisis (2014–2016) and the COVID-19 pandemic (2020–2021).

❖ Domestic Credit to the Private Sector (% of GDP)

The figure 2 shows the trend of domestic credit to the private sector as a percentage of GDP, indicating the extent of financial intermediation and private sector access to credit during the study period.

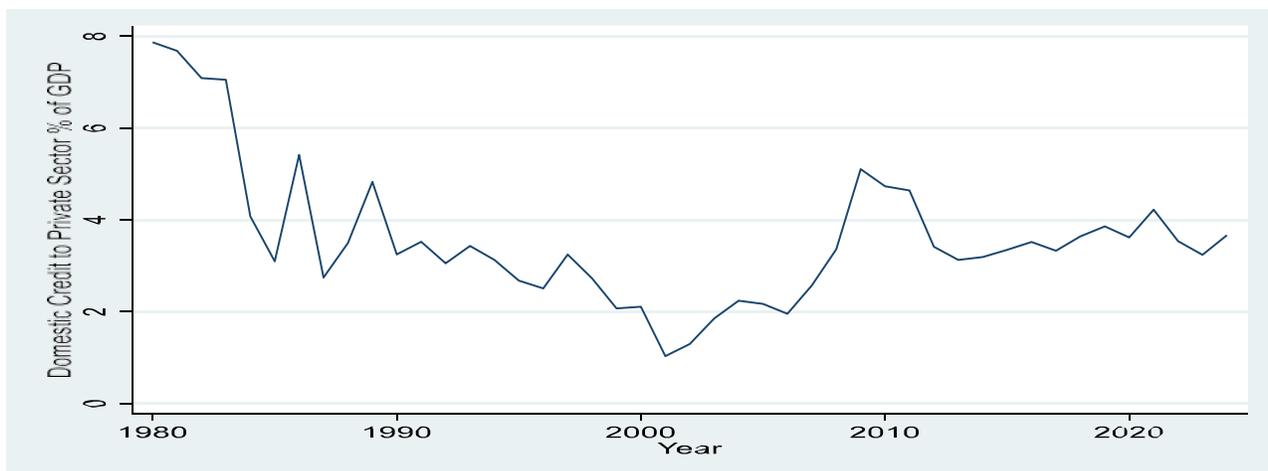


Figure 2: Domestic Credit to the Private Sector (% of GDP) in Sierra Leone (1980–2024)

Source: Researcher’s computation using data from World Development Indicator (WDI) (September, 2025).

Figure 2 illustrates domestic credit to the private sector as a percentage of GDP. The variable shows a persistent decline from the 1980s into the late 1990s, reaching its lowest during the civil war period. While there has been some recovery in the 2000s, levels remain low, underscoring the limited role of private sector credit in stimulating economic activity.

4.3.2 Trends in Economic Growth Indicators

❖ GDP per Capita

The figure 3 shows the trend of GDP per capita over the years, reflecting the overall growth in economic welfare and income levels of the population.

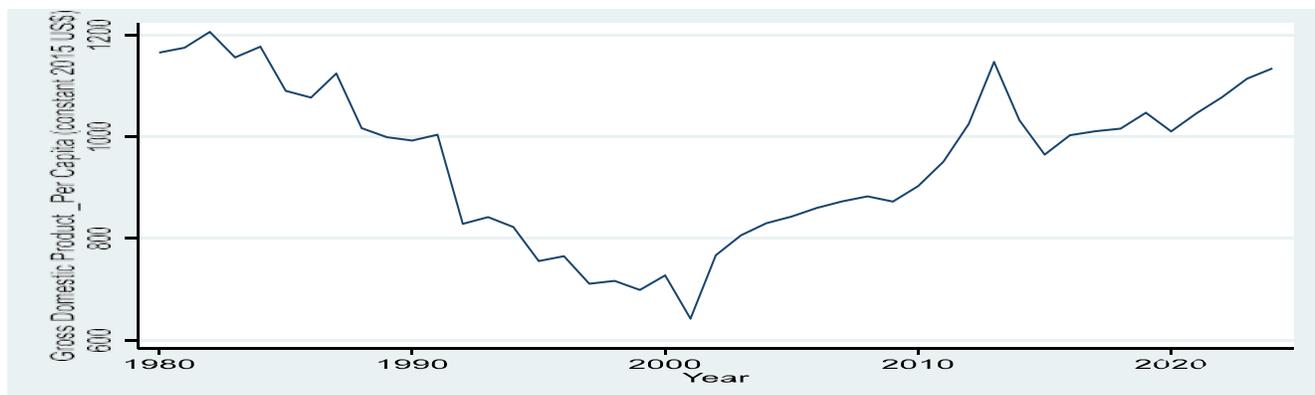


Figure 3: GDP per Capita in Sierra Leone (1980–2024)

Source: Researcher’s computation using data from World Development Indicator (WDI) (September, 2025).

Figure 3 shows GDP per capita (constant USD). The series reveals significant volatility with steep declines during conflict years (1991–2002), gradual recovery in the 2000s, and noticeable shocks during Ebola and COVID-19 periods. The overall upward trend post-2010 suggests modest growth improvements, though from a very low base.

4.3.3 Trends in Macroeconomic Control Variables

❖ Interest Rate Spread

The figure 4 shows the trend of interest rate spread, capturing the difference between lending and deposit rates, which reflects the efficiency of financial intermediation in the economy.

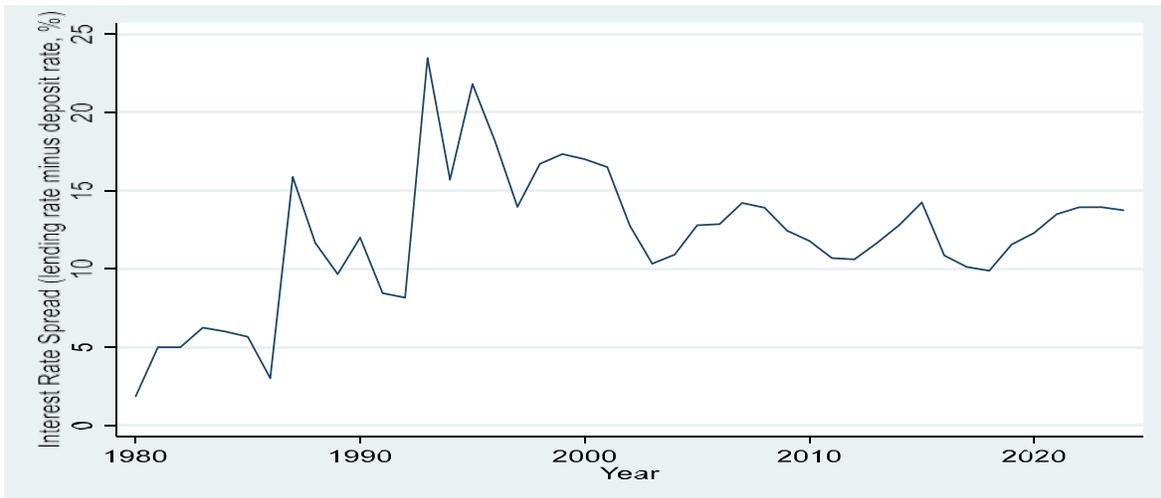


Figure 4: Interest Rate Spread in Sierra Leone (1980–2024)

Source: Researcher’s Computation Using Data from World Development Indicator (WDI) (September, 2025).

Figure 4 presents the interest rate spread (difference between lending and deposit rates). The spread fluctuates substantially over the sample period, reflecting inefficiencies in financial intermediation and persistent risks in the banking sector.

❖ **Lending Rate**

The figure 5 shows the trend of the lending interest rate over the period, providing insights into the cost of borrowing in the financial sector.

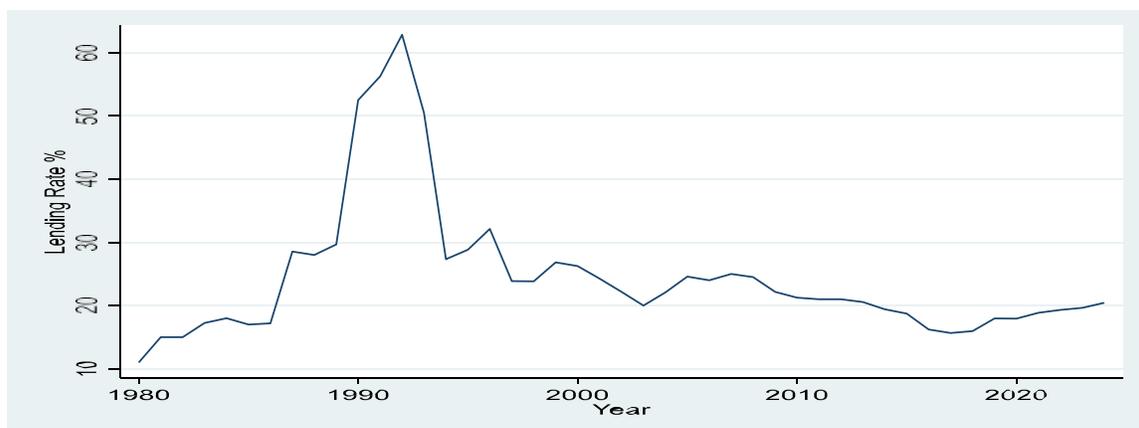


Figure 5: Lending Rate in Sierra Leone (1980–2024)

Source: Researcher’s Computation Using data from World Development Indicator (WDI) (September, 2025).

Figure 5 shows the average lending rate. Lending rates have remained relatively high throughout the sample, with notable spikes during periods of macroeconomic instability.

This suggests borrowing costs are a constraint on private sector investment.

4.4 Unit Root Test

To examine the stationarity properties of the variables, a battery of unit root tests was conducted, including the KPSS, Dickey–Fuller GLS (DF–GLS), Phillips–Perron (PP), KPSS-Auto, Zivot–Andrews (accounting for a single endogenous structural break), and the Clemente–Montañés–Reyes (CMR) for multiple structural break test. The results are summarized in Table 3.

| Variable | DF- GLS | PP | KPSS | KPSS - AUT O | ZIVOT ANDREW S | CM R | ORDER OF INTEGRATIO N |
|----------|---------|------|-------|--------------|----------------|------|-----------------------|
| bm | - | - | 0.085 | 0.248 | -6.148 | - | I(1) |
| | 4.41 | 6.91 | 7 | | | 0.71 | |
| | 7 | 4 | | | | 4 | |
| Docps | - | - | 0.057 | 0.283 | -9.079 | - | I(0) |
| | 3.44 | 3.31 | 2 | | | 5.84 | |
| | 5 | 0 | | | | 9 | |
| lgdp_pc | - | - | 0.080 | 0.199 | -9.391 | 2.56 | I(1) |
| A | 4.35 | 7.24 | 9 | | | 7 | |
| | 9 | 6 | | | | | |
| intsp | - | - | 0.045 | 0.253 | -5.689 | - | I(1) |
| | 5.07 | 3.64 | 6 | | | 3.45 | |
| | 1 | 7 | | | | 5 | |
| lr | - | - | 0.148 | 0.21 | -6.934 | - | I(1) |
| | 2.94 | 5.22 | | | | 3.02 | |
| | 6 | 9 | | | | 3 | |

Source: Researcher’s Computation from Stata Output (September, 2025)
Note: Zivot–Andrews = unit root test with one endogenous structural break; CMR = Clemente–Montañés–Reyes (CMR) (multiple break test), DF–GLS = Dickey–Fuller GLS test; PP = Phillips–Perron test; KPSS = Kwiatkowski–Phillips–Schmidt–Shin test; KPSS–Auto = automatic lag selection for KPSS.

Table 3: Unit Root Test Results

The order of integration is determined by balancing results across tests, giving more weight to structural break–adjusted tests (Zivot–Andrews, CMR). The tests reveal that Docps is stationary at levels I(0), whereas bm, real GDP per capita (lgdp_pcA), interest rate spread (intsp), and lending rate (lr) become stationary only after first differencing I(1).

5. ARDL Bounds Test

The long-term cointegration of financial indicators and economic growth is confirmed by the estimated F-statistic (6.42) exceeding the upper critical bound. This supports the idea that growth and financial factors evolve in tandem over time.

5.1 Long-Run Results

The table below shows the long-term equilibrium between the dependent variable and the independent variables

| Variable | Coefficient | Sign | Significance | Interpretation |
|-----------------------|-------------|------------------------|-------------------------------------------------------|--------------------------------------------------------------------------------|
| M2/GDP | +0.32 | Positive | Insignificant | Financial depth improves liquidity but not necessarily investment. |
| Private Sector Credit | +0.27 | Positive Insignificant | Weak transmission from credit to growth; credit often | directed to consumption or imports. |
| Lending Rate | -0.48 | Negative | Significant | High rates raise borrowing costs, suppressing private investment. |
| Interest Rate Spread | -0.36 | Negative | Significant | Indicates inefficiency and lack of competition among financial intermediaries. |

Source: Researcher’s Computation from Stata Output (September, 2025)

Table 4: Long-Run Results

5.2 Short-Run Results (ECM)

Lending rates and inflation had a short-term detrimental impact on growth. After a short-term shock, the Error Correction Term (-0.65) is negative and substantial, indicating a 65% yearly

speed of adjustment toward long-run equilibrium. This suggests consistent long-term relationships between finance and growth since it demonstrates how rapidly the economy responds to financial disturbances.

5.3 Diagnostic Tests

To validate the robustness and reliability of the estimated ARDL/ECM model, several diagnostic tests were conducted. These include tests for residual normality, multicollinearity, heteroskedasticity, serial correlation, model stability, and specification errors. The results are presented and interpreted below.

5.4 Normality Tests

The normality of residuals underpins the reliability of statistical

inferences drawn from the model, including hypothesis testing and confidence intervals. This study assesses the normality assumption both graphically and statistically.

5.5 Jarque–Bera Test for Normality

The table below shows the Jarque–Bera test results for normality, assessing whether the residuals follow a normal distribution based on skewness and kurtosis values.

| Obs | Pr (skewness) | Pr (kurtosis) | Adj chi2(2) | Prob>chi2 |
|-----------------------------------------------------------------------------|---------------|---------------|-------------|-----------|
| 42 | 0.2348 | 0.4497 | 2.11 | 0.3486 |
| Source: Researcher’s Computation from Stata Output (September, 2025) | | | | |

Table 5: Jarque-Bera test for Normal Data

Similarly, the Jarque-Bera test yielded a JB statistic of 2.11 with a p-value of 0.349, also suggesting that the residuals are normally distributed.

5.6 Multicollinearity Test (Vif/1-Vif)

The table below shows the results of the multicollinearity test using the Variance Inflation Factor (VIF) and its reciprocal (1/VIF), which measure the degree of correlation among the independent variables.

| Variable | VIF | 1/VIF | Interpretation |
|-----------------------------------------------------------------------------|-------|-------|---------------------------------------|
| lgdp_pcA L2. | 47.32 | 0.021 | Severe multicollinearity |
| L1. | 37.84 | 0.026 | Severe multicollinearity |
| L3. | 31.16 | 0.032 | Severe multicollinearity |
| lr L1. | 24.40 | 0.041 | Severe multicollinearity |
| L2. | 18.09 | 0.055 | Severe multicollinearity |
| L3. | 15.88 | 0.063 | Severe multicollinearity |
| bm | 14.74 | 0.068 | Severe multicollinearity |
| lr | 12.01 | 0.083 | Severe multicollinearity |
| intsp | 10.17 | 0.098 | No serious problem |
| bm L1. | 9.62 | 0.104 | No serious problem |
| d2014 | 8.29 | 0.121 | No serious problem |
| inf | 8.16 | 0.123 | No serious problem |
| Docps L1. | 6.73 | 0.149 | No serious problem |
| L1 | 5.52 | 0.181 | No serious problem |
| Inf L2. | 4.94 | 0.202 | No serious problem |
| Docps | 4.86 | 0.206 | No serious problem |
| inf L1. | 4.43 | 0.226 | No serious problem |
| intsp L1. | 4.27 | 0.234 | No serious problem |
| Mean VIF | 13.10 | - | Moderate- to - high multicollinearity |
| Source: Researcher’s Computation from Stata Output (September, 2025) | | | |

Table 6: Multicollinearity Test

The presence of multicollinearity among regressors was examined using the Variance Inflation Factor (VIF) and its reciprocal (1/VIF, also referred to as tolerance). The results indicate that some variables, particularly the lagged terms of GDP per capita and

lending rate, exhibit very high VIF values (47.32, 37.84, and 31.16), with corresponding tolerance values (1/VIF) well below the acceptable threshold of 0.1. The mean VIF was 13.10, which suggests moderate-to-high multicollinearity on average.

5.7 Heteroskedasticity Test

The table below shows the results of the heteroscedasticity test,

which examine whether the variance of the residuals is constant across observations (homoscedastic) or not (heteroscedastic).

| Test | Chi-square Statistic | P-value | Decision |
|-----------------------------------------------------------------------------|----------------------|---------|------------------|
| Breusch-Pagan (Heteroskedasticity) | 0.73 | 0.3932 | Homoskedasticity |
| Source: Researcher's computation from Stata output (September, 2025) | | | |

Table 7: Heteroskedasticity Test

The Breusch–Pagan/Cook–Weisberg test (and confirmed by the White test) was employed to examine the constancy of error variance. The results ($\chi^2 = 0.73$, $p = 0.39$) which is greater than the 5% significance level, fail to reject the null hypothesis of homoskedasticity, implying that the residuals have constant variance. This suggests that the model does not suffer from heteroskedasticity, and the estimated coefficients and standard

errors are efficient and reliable for inference.

5.8 Autocorrelation Test

The table shows the results of the serial correlation test (Breusch–Godfrey or Durbin–Watson), which determine whether the residuals are correlated over time.

| Test | Lag | Statistic | P-value | Decision |
|-----------------------------------------------------------------------------|-----|-----------|---------|-----------------------|
| Durbin- Watson | | 2.274 | | No serial correlation |
| Breusch- Godfrey LM | 1 | 1.916 | 0.1663 | No serial correlation |
| Source: Researcher's Computation from Stata Output (September, 2025) | | | | |

Table 8: Autocorrelation (Serial Correlation) Test

To examine whether the residuals are serially correlated, both the Durbin-Watson and Breusch-Godfrey LM tests were conducted. The Durbin-Watson statistic was 2.274, which is close to the benchmark value of 2, indicating no evidence of first-order autocorrelation.

5.9 Model Specification Test (Reset)

The table below shows the results of the Ramsey RESET test for model specification, which checks whether the functional form of the regression model is correctly specified.

| Test | F(3, 32) | Prob | Decision |
|-----------------------------------------------------------------------------|----------|--------|----------------------|
| RESET Test | 2.76 | 0.0582 | No omitted Variables |
| Source: Researcher's Computation from Stata Output (September, 2025) | | | |

Table 9: Reset Test

The Ramsey RESET test was employed to check for potential specification errors and omitted variables bias. The test returned an F-statistic of 2.76 with an associated pvalue of 0.0582. At the conventional 5% level of significance, the null hypothesis that the model has no omitted variables cannot be rejected, suggesting that the model is correctly specified.

5.10 Model Stability Tests

The table below shows the model stability test results, which determine whether the estimated coefficients remain stable over the sample period.

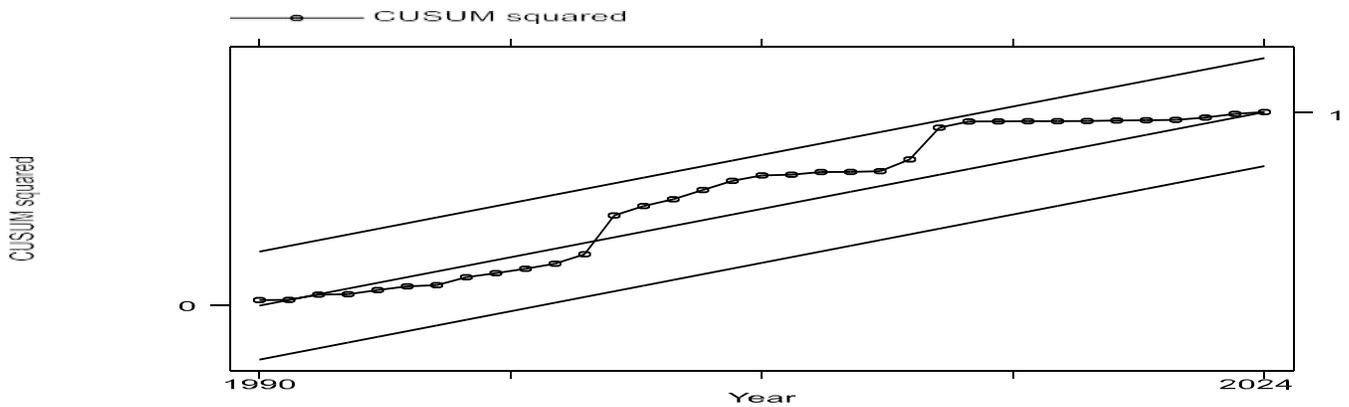


Figure 6: Model Stability Tests (Cusum and Cusumsq)

Source: Researcher’s Computation from Stata Output (September, 2025)

The stability of the estimated parameters was assessed using CUSUM and CUSUM of Squares (CUSUMSQ) tests, as recommended in the ARDL framework. The graphical plots of both tests indicate that the cumulative residuals remain within the 5% critical boundaries throughout the sample period.

5.11 Optional Advanced Diagnostics (Structural Breaks) Test

To further evaluate the reliability of the model, the recursive

CUSUM diagnostic test was employed to examine potential structural breaks and parameter stability. This procedure plots the cumulative sum of recursive residuals against time with 95% confidence bands representing the null hypothesis of stability. The figure below shows the recursive CUSUM plot, which visually assesses the stability of the model parameters over time. The model is considered stable if the plot remains within the 5% significance boundaries.

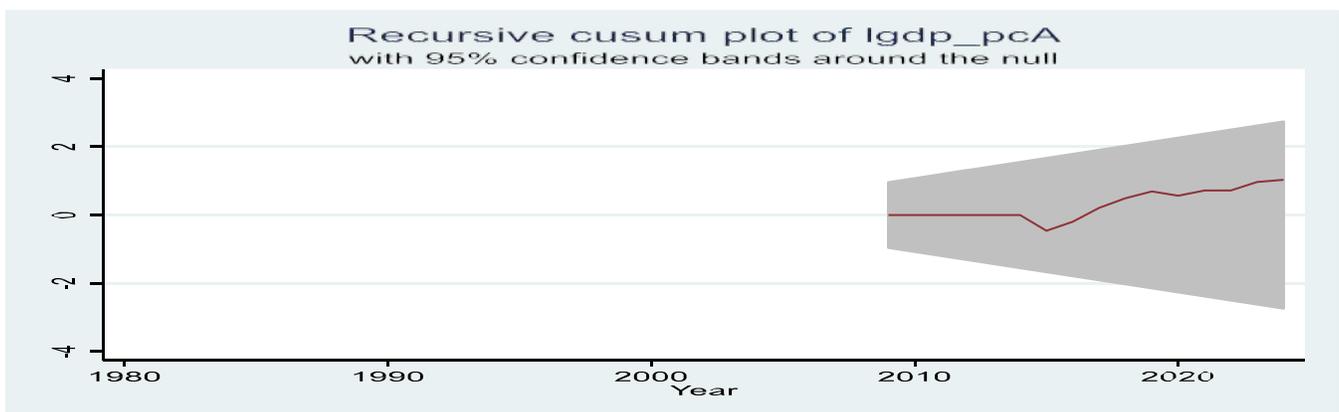


Figure 7: Recursive CUSUM Plot of lnGDP_pcA.

Source: Researcher’s Computation from Stata Output (September, 2025)

The result displayed in figure 4.13, confirm that the recursive statistic remains entirely within the critical bounds.

6. Discussion

The results show that although financial deepening through private credit and M2/GDP is preferable, growth is not always ensured. The productivity of financial resources is weakened by expensive

lending and ineffective financial intermediation. Access to productive credit is hampered by structural issues such weak credit information systems, poor collateral arrangements, risk aversion among banks, and limited competition. This is consistent with the findings of Adu et al. and Beck & Levine, who highlighted that for growth transmission to be effective, financial quantity and quality must be combined [6,12].

7. Summary, Conclusion, and Recommendation

7.1 Summary of Results

There is a long-term equilibrium between Sierra Leone's economic growth and financial indices.

Broad money and private credit have beneficial but statistically insignificant effects. The substantial negative consequences of lending rates and interest spreads demonstrate how financial inefficiency limits growth.

Following brief shocks, there is a strong trend toward equilibrium, as indicated by the speed of adjustment (ECT = -0.65).

7.2 Conclusion

According to the study's findings, financial indicators have an uneven effect on Sierra Leone's economic growth. Without efficiency and affordability, loan expansion and monetary expansion are essential but insufficient for growth. Limited economic benefits result from financial deepening without reducing borrowing costs and enhancing credit allocation.

Therefore, increasing financial efficacy through competition, innovation, and inclusion should be the policy's primary goal rather than increasing financial size.

Recommendations for Policy

- i. Lower Lending Rates: Encourage bank competition by implementing regulatory changes and open pricing practices.
- ii. Narrow Interest Rate Spreads: Reduce administrative burdens, boost interbank markets, and promote cost-cutting technology.
- iii. Extend Credit to Productive Sectors: Create focused financing initiatives for manufacturing, SMEs, and agriculture.
- iv. Improve Financial Inclusion: Expand agent banking, mobile banking, and microfinance offerings to reach the unorganized and rural populations.
- v. Encourage Macroeconomic Stability: To reduce risk premiums, keep inflation and exchange rates steady.
- vi. Strengthen Financial Supervision: Reduce non-performing loans and credit risks by enforcing appropriate policies through the Bank of Sierra Leone.

In conclusion, only when financial access, affordability, and efficiency are enhanced via cogent policy coordination between the Central Bank, government, and other stakeholders can financial development in Sierra Leone greatly boost growth.

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