



# Financial Inclusion and Stock Market Capitalization in Nigeria

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**Abstract:** This study examined the relationship between financial inclusion and stock market capitalization in Nigeria over the period 1986-2023 using the Autoregressive Distributed Lag (ARDL) modelling technique with inference at 5% significant level. Financial inclusion was proxied by deposit levels of rural branches (DRB), number of bank branches (NBB), proportion of adults with bank accounts (LPAB), rural loans (LRB), and prime lending rate (PLR), while stock market capitalization as a percentage of GDP was used as the dependent variable. The findings reveal that in the long run, deposit levels of rural branches (DRB) ( $\beta = 0.00386$ ,  $p = 0.0072$ ), number of bank branches (NBB) ( $\beta = 0.5316$ ,  $p = 0.0080$ ), and rural loans (LRB) ( $\beta = 0.0011$ ,  $p = 0.0155$ ) have positive and statistically significant effects on stock market capitalization, indicating that improved rural financial intermediation and expansion of banking infrastructure enhance capital market development. Conversely, account ownership (LPAB) ( $\beta = -1.0499$ ,  $p = 0.0279$ ) exerts a negative and significant effect, suggesting that increased access to bank accounts may initially redirect savings toward deposit-based instruments rather than equity investments. In the short run, DRB ( $\beta = 0.001154$ ,  $p = 0.0001$ ), NBB ( $\beta = 0.1777$ ,  $p = 0.0246$ ), and LRB ( $\beta = 0.000271$ ,  $p = 0.0001$ ) maintain positive and significant impacts, while LPAB ( $\beta = -0.2342$ ,  $p = 0.0157$ ) continues to negatively influence stock market capitalization. The error correction term (ECT) ( $\beta = -0.6555$ ,  $p < 0.0001$ ) is negative and statistically significant, indicating a rapid adjustment to long-run equilibrium. Consequently, the null hypothesis that financial inclusion does not significantly affect stock market capitalization in Nigeria is rejected. The study concludes that financial inclusion is a key driver of financial sector development in Nigeria, supporting the supply-leading hypothesis that expansion of financial services stimulates financial deepening and capital market growth. Based on the findings, the study recommends the expansion of rural financial infrastructure through bank branches, agent banking, and digital financial services, alongside the development of accessible investment platforms to channel savings into the stock market. Additionally, targeted financial literacy and investor education programs are necessary to encourage active participation in equity markets and ensure that increased financial access translates into productive investment behavior.

## INTRODUCTION

Stock market capitalization is a central measure of capital market depth and a proven driver of economic growth. Stock market capitalization is a key indicator of stock market development, represents the total market value of all listed equities within a stock market. It reflects the size, depth, and overall performance of the equity market and serves as a critical barometer for assessing a country's financial and economic progress. A well-developed stock market enhances capital formation, facilitates efficient allocation of resources, promotes liquidity, and provides investment opportunities for both domestic and foreign investors. Consequently, increases in stock market capitalization are often associated with improved economic growth, industrial expansion, and financial system

stability, particularly in emerging economies. In Nigeria, the Nigerian Exchange Group (NGX) serves as the primary platform for trading equities and other securities. The stock market constitutes a vital segment of the broader capital market, which also includes the debt market, derivative market, and other long-term financial asset markets. For the purpose of this study, the stock market specifically refers to the equity segment of the capital market, with its performance commonly measured through stock market capitalization.

Stock market capitalization in Nigeria has been widely recognized as a key driver of economic growth, with several empirical studies confirming its significant and positive impact on real GDP (Francis & Henry, 2023; Olawale, 2024; Omenihu et al., 2024; Adegoke et al., 2025; Olusegun & Ajao, 2024; Nnakee et al., 2024; Nkwa et al., 2025; Okowa et al., 2022; Agunobi et al., 2024). This underscores its relevance as an indicator of the efficiency of the capital market in mobilizing savings, allocating financial resources, and facilitating risk diversification within the economy (Olawale, 2024; Omenihu et al., 2024; Adegoke et al., 2025; Nnakee et al., 2024; Nkwa et al., 2025; Okowa et al., 2022; Agunobi et al., 2024). However, despite its growth-enhancing potential, the Nigerian stock market continues to experience inconsistencies, as other performance indicators such as the All-Share Index, value traded, turnover ratio, and number of listed securities reveal mixed outcomes, suggesting persistent structural inefficiencies and limited market participation (Olawale, 2024; Omenihu et al., 2024; Adegoke et al., 2025; Olusegun & Ajao, 2024; Nnakee et al., 2024; Nkwa et al., 2025; Mohammed et al., 2025; Okowa et al., 2022; Agunobi et al., 2024). A major factor underlying these challenges is the relatively low and uneven level of financial inclusion in Nigeria, where a significant proportion of the population particularly individuals in rural areas, those with low income, and the less educated remain excluded from formal financial systems (Ojeaburu et al., 2024; Wezel & Ree, 2023; Nwambeke et al., 2024; Adekunle et al., 2025; Aruwa et al., 2025). This exclusion constrains savings mobilization, limits access to credit, and reduces participation in formal financial markets, including the stock market (B, 2024; M.O. et al., 2025; Ojeaburu et al., 2024; Wezel & Ree, 2023; Nwambeke et al., 2024; Adekunle et al., 2025; Aruwa et al., 2025). Although existing literature highlights that financial inclusion promotes poverty reduction, inclusive growth, and income equality through improved access, usage, and quality of financial services (Olusegun & Ajao, 2024; Ojeaburu et al., 2024; Ozili, 2022; Wezel & Ree, 2023; Nwambeke et al., 2024; Adekunle et al., 2025; Aruwa et al., 2025), there is still limited empirical evidence on how these channels translate into increased investor participation and, ultimately, enhanced stock market capitalization in Nigeria. This gap in the literature necessitates a more focused empirical investigation into the nexus between financial inclusion and stock market capitalization.

## **LITERATURE REVIEW**

### **Financial Inclusion**

Financial inclusion has been defined as an economic situation where individual consumers and business firms can use formal financial services such as payment mechanisms, savings accounts, borrowing facilities, and insurance on appropriate, sustainable, and affordable terms. In conceptual terms, financial inclusion entails more than availability of banking branches since it consists of three major components: access, use of services, and quality (Omar & Inaba, 2020; Gallego-Losada et al., 2022). Access pertains to ability to open and

maintain formal bank accounts, obtain relevant financial services, and receive the products without facing any form of discrimination or paying unnecessarily high costs; usage refers to frequency and effectiveness of use of these services; quality covers appropriateness and suitability of the financial instruments offered by institutions (Pesqué-Cela et al., 2021; Sharma & Changkakati, 2022; Omar & Inaba, 2020; Gallego-Losada et al., 2022). Socially, financial inclusion implies that nobody gets excluded from basic formal financial services on inefficient grounds, particularly the poorer and most vulnerable populations (Omar & Inaba, 2020; Ozili, 2020; Gallego-Losada et al., 2022).

### **Stock Market Capitalisation to GDP**

Stock market capitalization is defined as the aggregate market value of the outstanding shares of stock of a company. Generally known as "market cap," it is found by multiplying the total number of a company's outstanding shares by the current market price of one share (Evans, 2022). The market capitalization has been led by the rapid development of stock markets. The listed shares divided by GDP being added to the primary stock-flow measures used to represent the volume of the financial sector (Sene & Thiam, 2018). As the stocks of large companies dominate this measure, the number of listed companies and total value traded over GDP are amongst the secondary measures that were proposed to qualify the first measurement. If domestic credit is added to the private sector scaled by GDP to market capitalization, the measurement covers entirely the market value of publicly held firms.

### **Theoretical Review: The Supply-Leading Hypothesis**

The Supply-Leading Hypothesis posits that financial development precedes and stimulates economic growth by enhancing savings mobilization, efficient resource allocation, and investment. Rooted in the works of Gurley and Shaw, and further advanced by McKinnon and Shaw, the theory assumes that a well-developed financial system acts as an exogenous driver of growth by channeling funds from surplus to deficit units and supporting productive investments. Patrick (1966) further explains that financial development promotes growth through improved allocation of scarce resources, while empirical evidence suggests that countries with more advanced financial systems experience higher productivity, industrialization, and long-term growth (McKinnon, 1973; Shaw, 1973; King & Levine, 1993; Akintola et al., 2020; Muhoza, 2019). This perspective underscores the role of financial intermediaries in facilitating capital formation, attracting foreign investment, and ensuring efficient distribution of financial resources. However, the hypothesis has faced criticisms, particularly regarding the direction of causality between financial development and economic growth. Some scholars argue that economic growth may instead drive financial development, known as the demand-following hypothesis (Robinson, 1952), while others highlight the risks of excessive financial expansion without adequate regulation, which may lead to financial instability (Lucas, 1988; Akpansung & Babalola, 2011). Despite these criticisms, the theory remains relevant, especially in developing economies like Nigeria, as it provides a framework for understanding how financial sector expansion and financial inclusion can enhance investment, productivity, and economic stability. Nonetheless, its applicability depends on complementary factors such as strong institutions, sound regulation, and macroeconomic stability.

## Empirical Review

In examining the relationship between financial inclusion and stock market capitalization in Nigeria, several empirical studies have provided useful insights. For instance, Onaolapo (2015) investigated the relationship between financial inclusion and Nigeria's economic growth over the period 1982-2012. Using Ordinary Least Squares (OLS) estimation, the findings show that inclusive banking practices played a meaningful role in reducing poverty, even though their direct contribution to overall economic growth was comparatively limited. The results also point to the importance of financial intermediation, particularly through expanded branch networks, increased credit to rural areas, and support for small-scale enterprises, with roughly half of the variation in the model explained by these relationships. Babarinde et al (2022) examine the implications of financial inclusion on capital market liquidity in Nigeria. Vector Autoregression (VAR) technique findings reveal that deposit penetration, bank penetration and credit penetration have positive but non-significant impact on stock market turnover ratio in Nigeria. Furthermore, unlike deposit penetration which exerts negative and non-significant influence on the value of shares traded ratio; bank penetration and credit penetration have positive but non-significant impact on the value of shares traded ratio in Nigeria. The study posits that financial inclusion exerts no significant influence/implications on stock market liquidity in Nigeria.

Qamruzzaman and Jianguo (2019) investigated the magnitude of financial inclusion and stock market development towards capital flows in the economy considering a panel of 58 developing countries for the span of 1993- 2017. Findings from the Dynamic panel System-GMM estimation ascertain the asymmetric relationship between financial inclusion, stock market development, and cross-broader capital flows in developing countries. It also observed positive shock in financial inclusion and stock market development positive linked with cross broader capital flows. In particular, development in financial inclusion in the financial system encourages foreign capital flows in the form of FDI, on the other hand well developed and efficient financial market particularly stock market development encourage the positive trend in foreign portfolio investment. Mohammad (2018) examined the relationship between financial inclusion and financial stability in Jordan by using Fully Modified Least Squares (FMOLS) technique. The analysis is based on time series from 2006 to 2017. Jordanian financial inclusion index is developed to assess the level of financial inclusion, whereas financial stability was measured by Jordanian financial stability index proposed by Central Bank of Jordan. The results show a weak significant and positive impact of financial inclusion on the financial stability in Jordan. Additionally, five control variables are used in the study. The results showed a negative impact of domestic credit to private sector, income inequality, financial integration, and global financial crisis on financial stability. In contrast, real GDP per capita has a significant and positive impact. Francis and Henry (2023) looked into the effect of financial inclusion on economic growth in Nigeria between the period of 1990-2020. with the use of Ordinary Least Square Method (OLS), findings from the study reveals that financial inclusion has significant impact on economic growth in Nigeria. Mystere (2023) investigated the relationship between financial sector development (FSD), savings behavior (SB), and economic performance (EP). The study findings posit that FSD positively influences SB, subsequently enhancing EP indicators like GDP growth, income distribution, and employment. The discussion aligned findings with existing literature, emphasising implications for policymakers to prioritise FSD, enhance financial literacy, and incentivise savings. Adefioye et al (2025) examined the relationship

between financial inclusion, capital market development, and economic growth in Nigeria from 1980 to 2023. The findings indicate that both financial inclusion and capital market development positively influence economic growth, highlighting their crucial roles in fostering economic activities. Specifically, greater access to financial services and a well-developed capital market enhances the mobilization of savings, facilitate investment, and improve the allocation of resources, all of which contribute to economic growth. The study also found that macroeconomic stability, as reflected in low inflation and interest rates, is essential for sustaining economic growth. High inflation and interest rates negatively impact growth by eroding purchasing power and increasing borrowing costs, respectively. The exchange rate's no significant impact suggests that other factors, such as global economic conditions and trade policies, may also play significant roles in influencing economic growth.

### **RESEARCH METHODOLOGY**

This study adopts an *ex-post facto* research design. Ex-post facto design is appropriate because the study investigates relationships between financial inclusion indicators and financial sector development using historical time-series data, without manipulating the independent variables. The study utilise annual secondary data covering the period of 1986 to 2023. Data are sourced from the World Development Indicators (WDI), the Central Bank of Nigeria (CBN) Statistical Bulletin.

#### **Model Specification**

In order to investigate the relationship between financial inclusion and stock market capitalisation in Nigeria, the theoretical framework for this study is supply-leading hypothesis which posited that financial development drives economic growth by improving the efficiency of capital allocation and providing the necessary resources for investment. Output (economic growth) depends on investment. More so, the work of Francis and Henry whose study investigated the effect of financial inclusion on economic growth in Nigeria was adapted and modified to suit each of the objectives. Francis and Henry (2023) model is specified below:

$$GDPGR_t = f(MGDP_t, CPSP_t, DRC_t, LRC_t) \dots \dots \dots (1)$$

Where Real Gross Domestic Product Growth Rate (GDPGR) is the dependent variable, while proxies for financial development are Broad money ratio to GDP (MGDP), credit to private sector ratio to GDP (CPSP) and financial inclusion proxies are Deposits of rural branches of commercial banks (DRC) and Loans of Rural branches of commercial banks (LRC) are independent variables.

To capture the main model of this, the variables Broad Money Ratio to GDP (MGDP) and Credit to Private Sector Ratio to GDP (CPSP) were excluded, as they represent measures of financial development rather than indicators of financial inclusion. The revised econometric model is therefore specified economically as follows.

$$SMCGDP_t = f(DRB_t, NBB_t, PAB_t, LRB_t) \dots \dots \dots (2)$$

The Deposits of Rural Branches of Commercial Banks (DRB) are included to capture the depth of financial mobilization in rural areas, reflecting how effectively savings are

attracted from underserved communities. The Number of Bank Branches (NBB) serves as a key indicator of physical access to financial services, representing the outreach and penetration of the banking system. The Percentage of Adults with Bank Accounts (PAB) measures financial inclusion at the individual level, while the Loans of Rural Branches of Commercial Banks (LRB) reflect the extent to which mobilized deposits are transformed into credit to stimulate economic activity in rural economies. Conversely, variables such as the Number of ATMs and Internet Banking Transactions were not included due to limited long-term data availability, which constrains their ability to capture sustained effects over the study period.

by incorporating Prime Lending Rate (PLR) as a control variable. The inclusion of PLR accounts for the influence of stock market capitalization in the financial system. The model is specified as follows

$$SMCGDP_t = f(DRB_t, NBB_t, PAB_t, LRB_t, PLR_t)$$

Where:

SMCGDP = Stock Market Capitalisation as a percentage of GDP, DRB = Deposits of Rural Branches of Commercial Banks (value or volume), NBB = Number of Bank Branches, PAB = Percentage of Adults with Bank Account, LRB = Loan of Rural Branches of Commercial Banks. To complete the specification of the econometric model, we consider the form of algebraic or linear relationship among the variables. The corresponding econometric model is specified in linear form:

$$SMCGDP_t = \beta_0 + \beta_1 DRB_t + \beta_2 NBB_t + \beta_3 PAB_t + \beta_4 LRB_t + \beta_5 PLR_t + \mu_t \dots \dots (3)$$

Since the variables are in different measurements, regressing this nature of the variables leads to the problem of heteroskedasticity, therefore, in order to avoid the issue of heteroskedasticity, the variables shall be rescaled into ratio through logging them, thus the model was re-specified in a log linear form

$$SMCGDP_t = \beta_0 + \beta_1 \ln DRB_t + \beta_2 \ln NBB_t + \beta_3 \ln PAB_t + \beta_4 LRB_t + \beta_5 PLR_t + \mu_t \dots \dots (4)$$

Where:

$\beta_0$  = Intercept, which explains the average value of the Stock Market Capitalisation as the independent variables are held constant;  $\beta_{1,2,3,4,5}$  = Parameters of the independent variables. This measures the rate at which the Stock Market Capitalisation changes, giving that any of the dependent variables change by a unit.;  $t$  = Time period representing the specific year or observation in the data set;  $\ln$  = Natural logarithm, used to transform variables for scale reduction, variance stabilization, and elasticity interpretation.

$\mu$  = This is error term which account for other variables not included in the model

$t$  = time variant

prior to the pre-estimation test, the unit root observed to indicate a mix stationarity of level and first differences, hence, the study employs the Autoregressive Distributed Lag (ARDL) model developed by Pesaran, Shin, and Smith (2001). The ARDL specification is specified as thus:

$$\begin{aligned}
\Delta SMCGDP_t = & \beta_0 + \sum_{t-1}^N \beta_1 SMCGDP_{t-i} + \sum_{t-1}^N \beta_2 \Delta \ln DRB_{t-i} + \sum_{t-1}^N \beta_3 \Delta \ln NBB_{t-i} \\
& + \sum_{t-1}^N \beta_4 \Delta PAB_{t-i} + \sum_{t-1}^N \beta_5 \Delta \ln LRB_{t-i} + \sum_{t-1}^N \beta_6 \Delta PLR_{t-i} + \omega_1 SMCGDP_{t-1} \\
& + \omega_2 \ln DRB_{t-1} + \omega_3 \ln NBB_{t-1} + \omega_4 PAB_{t-1} + \omega_5 \ln LRB_{t-1} + \omega_5 PLR_{t-1} \\
& + v_t \dots \dots \dots (5)
\end{aligned}$$

Where  $\Delta$  represents the short-run change in the variables,

$\pi_0$  is the intercept.

$\pi_1$ - $\pi_6$  measure the short-run effects of the lagged dependent variable and changes in the explanatory variables

**Table 1: Variables, Description, Measurement and Sources**

Variable	Measurement	Source
Stock Market Capitalisation to GDP (SMCGDP)	Market cap as % of GDP	NSE, WDI
Deposits of Rural Branches of Commercial Banks (DRB)	Deposits of Rural Branches of Commercial Banks (₦ billions)	CBN
Number of Bank Branches (NBB)	Total commercial bank branches	CBN
Percentage of Adults with Bank Account (PAB)	Adult population (%) with bank account	Global Findex, CBN
Loan of Rural Branches of Commercial Banks (LRB)	Loan of Rural Branches of Commercial Banks (₦ billions)	CBN
Prime Lending Rate (PLR) (Control Variable)	Official prime/benchmark lending rate (%)	CBN

Source: Researcher's Compilation, 2025

## **RESULT AND DISCUSSION**

The result of the descriptive analysis results is presented in table 4.1a and table 4.1b.

**Table 2: Descriptive Statistics**

	Mean	Maximum	Minimum	Std. Dev.	Skewness
SMCGDP	0.169594	0.964930	0.000396	0.221742	1.757643
DRB	87.00491	670.3300	0.019723	165.7197	2.130709
LNBB	8.117174	8.667164	7.220374	0.468634	-0.219293
LPAB	5.922550	7.285102	5.364116	0.577420	1.023197
LRB	102.4392	988.5879	0.373600	218.0382	2.810053
PLR	18.05895	29.80000	10.50000	4.002849	0.767445

Source: Author's Computation (2026); Where: Stock Market Capitalisation as a percentage of GDP (SMCGDP), Deposit levels of Rural Branches of Banks (DRB), Number of Bank Branches (NBB), Proportion of Adults holding Bank Account (PAB), Loan of Rural Branches of Banks (LRB), and Prime Lending rate (PLR).

Table 2 presents the descriptive statistics of the variables used to examine the relationship between financial inclusion and stock market capitalisation in Nigeria. The (SMCGDP) shows a relatively low mean of 0.17, with a maximum of 0.96 and minimum close to zero (0.0004). The standard deviation (0.22) suggests substantial variability over time, while the high positive skewness (1.76) indicates that stock market performance was characterized by occasional sharp increases, possibly during boom periods, alongside prolonged low-performance phases. Financial inclusion indicators also show considerable variability. Deposit levels of rural branches (DRB) have a mean of 87.00, but with a wide range from 0.02 to 670.33 and a large standard deviation of 165.72. The high positive skewness (2.13) suggests that rural deposits were heavily concentrated in certain periods, indicating uneven financial penetration in rural areas. The number of bank branches (LNBB), expressed in logarithmic form, records a mean of 8.12 and a relatively small standard deviation of 0.47, indicating gradual and stable expansion of banking infrastructure. Its slight negative skewness (-0.22) implies a marginal concentration of values toward the higher end in recent periods.

The proportion of adults holding bank accounts (LPAB), also in logarithmic form, shows a mean of 5.92 with moderate dispersion (0.58). The positive skewness (1.02) suggests improvements in financial inclusion occurred more prominently in later years. Loans of rural branches (LRB) record a mean of 102.44, with a maximum of 988.59 and a minimum of 0.37, alongside a large standard deviation of 218.04. The very high skewness (2.81) indicates significant inequality in rural credit distribution across periods, with occasional spikes in rural lending activities. Lastly, the prime lending rate (PLR) has a mean of 18.06 percent, ranging between 10.50 percent and 29.80 percent, with a standard deviation of 4.00. The positive skewness (0.77) indicates that higher lending rates occurred more frequently than lower rates, which may have implications for credit accessibility and financial inclusion.

**Table 3: Correlation Matrix**

	SMCGDP	DRB	LNBB	LPAB	LRB	PLR	VIF
SMCGDP	1.0000						-
DRB	0.8922	1.0000					6.252159
LNBB	0.7095	0.4627	1.0000				5.046809
LPAB	0.9207	0.86610	0.7694	1.0000			3.163502
LRB	0.4597	0.2778	0.4721	0.5151	1.0000		4.158560
PLR	-0.5481	-0.4454	-0.3722	-0.5186	-0.2199	1.0000	1.387531
Mean							4.001712

Source: Author's Computation (2026); Where: Stock Market Capitalisation as a percentage of GDP (SMCGDP), Deposit levels of Rural Branches of Banks (DRB), Number of Bank Branches (NBB), Proportion of Adults holding Bank Account (PAB), Loan of Rural Branches of Banks (LRB), and Prime Lending rate (PLR).

Table 3 presents the pairwise correlation coefficients among the variables used to examine financial inclusion and stock market capitalisation in Nigeria. The results show strong positive relationships among the variable, depicting that improvements in one dimension of the financial system tend to be associated with improvements in others. The highest correlation coefficient among the variable is 0.86 among DRB and LPAB with the

minimum coefficient exist between LPAB and PLR. Despite the presence of several high pairwise correlations, multicollinearity does not pose a serious econometric problem in the model. A common rule of thumb is that multicollinearity becomes problematic when correlation coefficients exceed 0.90. The study further test for Variance Inflation Factor (VIF), in other to verify the severity of the multicollinearity. The VIF further display non multicollinearity as the mean VIF depicts 4.00 which is less than 10 (Gujarati & Porter, 2009; Hair et al., 2010). Therefore, since the VIF values are substantially below 10, this confirms the absence of severe multicollinearity among the explanatory variables.

## Inferential Analysis

**Table 4: Unit Root Test**

	Phillips-Perron Test			PPT
	level	First Diff.	Critical	
SMCGDP	3.7287	-3.6181	-2.948	I(1)
DRB	5.6039	-3.1907	-2.948	I(1)
LNBB	-1.7778	-4.9517	-2.948	I(1)
LPAB	2.9231	-5.0628	-2.948	I(1)
LRB	-3.5606	-	-2.948	I(0)
PLR	-4.1068	-	-2.948	I(0)

Source: Author's Computation (2026); Where: Stock Market Capitalisation as a percentage of GDP (SMCGDP), Deposit levels of Rural Branches of Banks (DRB), Number of Bank Branches (NBB), Proportion of Adults holding Bank Account (PAB), Loan of Rural Branches of Banks (LRB), and Prime Lending rate (PLR)

The stationarity properties of the variables were examined using the Phillips-Perron (PP) unit root test to determine their order of integration and to avoid the problem of spurious regression in the time series analysis. The results presented in Table 4 indicate mixed levels of stationarity among the variables. Specifically, stock market capitalization to GDP (SMCGDP), deposit levels of rural branches (DRB), number of bank branches (LNBB), and proportion of adults holding bank accounts (LPAB) were found to be non-stationary at level but became stationary after first differencing, implying that they are integrated of order one, I(1). Conversely, loans of rural branches (LRB), and the prime lending rate (PLR) were found to be stationary at level, indicating that they are integrated of order zero, I(0). The results show that the computed PP test statistics for the stationary variables are greater in absolute terms than the critical value of -2.948, confirming the rejection of the null hypothesis of a unit root at the respective levels. The mixture of I(0) and I(1) variables justifies the application of the Autoregressive Distributed Lag (ARDL) bounds testing approach for estimating the long-run and short-run relationships among the variables in the model. The ARDL model is particularly suitable in situations where the variables are integrated of different orders, provided none of them is integrated of order two, I(2).

Table 5 presents the ARDL bounds test result. The computed F-statistic of 6.2703 against the 5 percent upper bound critical value I(1) of 3.38. Since the calculated F-statistic (6.2703) is far greater than the upper bound value (3.38) at the 5 percent level, the null hypothesis of no levels relationship is rejected.

**Table 5: Bound Test Cointegration for effect of financial inclusion on Stock Market Capitalisation as a percentage of GDP in Nigeria**

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	6.270308	10%	2.08	3
K	5	5%	2.39	3.38
		2.5%	2.7	3.73
		1%	3.06	4.15

Source: Author's Computation (2026); Where: Stock Market Capitalisation as a percentage of GDP (SMCGDP), Deposit levels of Rural Branches of Banks (DRB), Number of Bank Branches (NBB), Proportion of Adults holding Bank Account (PAB), Loan of Rural Branches of Banks (LRB), and Prime Lending rate (PLR).

**Table 6: Model Assessing the effect of financial inclusion on Stock Market Capitalisation as a percentage of GDP in Nigeria.**

Panel A: Short Run Estimates				
Dependent Variable: SMCGDP				
Variable	Coefficient	Std. Error	t-Statistic	Prob
D(SMCGDP (-1))	0.058411	0.141227	0.413593	0.6871
D(DRB)	0.001154	0.000192	6.022915	0.0001
D(LNBB)	0.177669	0.068259	2.602870	0.0246
D(LPAB)	-0.234207	0.082087	-2.853140	0.0157
D(LRB)	0.000271	4.30E-05	6.300389	0.0001
D(PLR)	0.003590	0.001781	2.015474	0.0689
ECT (-1) *	-0.655548	0.129214	-5.073341	0.0001
Panel B: Long Run Estimates				
DRB	0.003862	0.001174	3.290045	0.0072
LNBB	0.531587	0.164467	3.232178	0.0080
LPAB	-1.049936	0.414698	-2.531809	0.0279
LRB	0.001145	0.000400	2.860110	0.0155
PLR	-0.002045	0.007648	-0.267349	0.7941
C	1.684442	1.257812	1.339184	0.2075
Panel C: Model Evaluation		Statistics	Prob.	
R-squared		0.906432	-	
Adjusted R-squared		0.812863	-	
F-statistic		5.516103	0.0000	
Panel D: Diagnostic Tests				
Serial Correlation LM Test	0.5382	0.6015		
Heteroskedasticity Test:	1.0351	0.4984		
Normality Test	2.3352	0.3111		
	CUSUM	CUSUMSQ		
Stability Test	Stable	Stable		

Source: Author's Computation (2026); Where: Stock Market Capitalisation as a percentage of GDP (SMCGDP), Deposit levels of Rural Branches of Banks (DRB), Number of Bank Branches (NBB), Proportion of Adults holding Bank Account (PAB), Loan of Rural Branches of Banks (LRB), and Prime Lending rate (PLR)

This provides strong evidence of a statistically significant long-run equilibrium relationship between financial inclusion variables (MSGDP, PCGDP, BLGDP, DRB, LNBB, LPAB, and LRB) and stock market capitalization in Nigeria.

Table 6 presents the long-run estimates examining the effect of financial inclusion on stock market capitalization as a percentage of GDP (SMCGDP) in Nigeria. Panel A presents the short-run dynamics of financial inclusion on stock market capitalization as a percentage of GDP (SMCGDP) in Nigeria. At the 5 percent significance level, changes in deposit levels of rural branches (D(DRB)) have a positive and highly significant effect ( $\beta = 0.001154$ ,  $p = 0.0001$ ), indicating that a unit increase in rural deposits raises stock market capitalization by approximately 0.12 percent in the short run. Similarly, changes in the number of bank branches (D(LNBB)) positively affect SMCGDP ( $\beta = 0.177669$ ,  $p = 0.0246$ ), suggesting that expansion in banking infrastructure increases market capitalization by about 17.8 percent over the short run. Loans of rural branches (D(LRB)) also exhibit a strong positive and highly significant effect ( $\beta = 0.000271$ ,  $p = 0.0001$ ), implying that increased rural credit enhances capital market development, though at a smaller rate of approximately 0.03 percent per unit increase. In contrast, changes in the proportion of adults holding bank accounts (D(LPAB)) have a negative and statistically significant effect ( $\beta = -0.234207$ ,  $p = 0.0157$ ), suggesting that short-run increases in account ownership may temporarily divert funds from capital market instruments, reducing stock market capitalization by roughly 23.4 percent per unit change. The prime lending rate (D(PLR)) shows a positive but marginally insignificant effect ( $\beta = 0.003590$ ,  $p = 0.0689$ ), indicating limited short-run influence of lending costs on market capitalization.

The error correction term ECT(-1) is negative and highly significant ( $\beta = -0.655548$ ,  $p = 0.0001$ ), confirming the presence of a long-run equilibrium relationship. Approximately 65.6 percent of deviations from long-run SMCGDP equilibrium are corrected within one year, indicating a rapid adjustment toward stability. In the long run, deposit levels of rural branches (DRB) have a positive and statistically significant effect on stock market capitalization, with a coefficient of 0.003862 and a probability of 0.0072. This indicates that a unit increase in rural deposits is associated with approximately a 0.39 percent increase in stock market capitalization in the long run, highlighting the positive contribution of rural financial activities to capital market development.

The number of bank branches (LNBB) also exerts a positive and statistically significant effect ( $\beta = 0.531587$ ,  $p = 0.0080$ ), suggesting that expanding banking infrastructure increases stock market capitalization by about 53.2 percent over the long run. This demonstrates that better banking accessibility encourages market participation and investment. In contrast, the proportion of adults holding bank accounts (LPAB) has a negative but significant long-run effect ( $\beta = -1.049936$ ,  $p = 0.0279$ ), implying that, counterintuitively, broader account ownership may initially divert savings from formal investment instruments to deposits, reducing capital market depth by approximately 1.05 percent per unit increase. Loans of rural branches (LRB) are positive and significant ( $\beta = 0.001145$ ,  $p = 0.0155$ ), indicating that increased rural lending slightly enhances stock market capitalization, with each unit increase in rural credit increasing SMCGDP by about 0.11 percent in the long run. Meanwhile, the prime lending rate (PLR) is negative but statistically insignificant ( $\beta = -0.002045$ ,  $p = 0.7941$ ), suggesting that lending costs do not have a meaningful impact on stock market development in the long term.

Panel C shows that the model has strong explanatory power, with an R-squared of 0.9064 and an adjusted R-squared of 0.8129, meaning over 81 percent of short-run variations in SMCGDP are explained by the financial inclusion variables. The F-statistic (5.516103,  $p = 0.000$ ) confirms that the model is statistically significant. Panel D diagnostic tests indicate no issues with serial correlation ( $p = 0.6015$ ), heteroskedasticity ( $p = 0.4984$ ), or non-normality of residuals ( $p = 0.3111$ ), and the CUSUM and CUSUMSQ tests show the model is structurally stable.

## **DISCUSSION OF THE FINDINGS**

The findings of the study reveal that financial inclusion indicators exert varying effects on stock market capitalization in Nigeria. Specifically, deposit levels of rural branches (DRB) and the number of bank branches (NBB) exhibit positive and statistically significant relationships with stock market capitalization, indicating that increased rural deposit mobilization and expansion of banking infrastructure enhance financial liquidity, accessibility, and participation in formal financial markets. Similarly, loans from rural bank branches (LRB) show a positive and significant effect, suggesting that rural credit supports productive economic activities that ultimately contribute to capital market growth. In contrast, the proportion of adults with bank accounts (PAB) demonstrates a negative but significant relationship, implying that increased account ownership may initially encourage savings in deposit-based instruments rather than equity investments. Meanwhile, the prime lending rate (PLR) shows a negative but insignificant effect, indicating that lending costs may not be a major determinant of stock market development in the long run.

These findings are largely consistent with existing empirical literature. Studies such as Ukoh (2025) affirm the positive role of financial deepening and inclusion in promoting economic growth and capital formation, while Nevin (2023), and Bernard and Nketiah-Amponsah (2022) emphasize that access to and effective use of financial services significantly enhance financial sector development and inclusive growth. However, the negative relationship between account ownership and stock market capitalization aligns with studies reporting mixed outcomes, including Elias and Nwankwo (2018) and Clifford et al. (2024), who highlight that financial inclusion may not always translate into improved financial market performance due to structural inefficiencies and the channels through which financial services are utilized. Additionally, the positive impact of rural lending corroborates the findings of Okonkwo and Nwanna (2021), underscoring the importance of rural financial intermediation in stimulating investment and strengthening the broader financial system.

### **Summary**

This study assessed the relationship between financial inclusion and stock market capitalisation in Nigeria from 1986 to 2023. An autoregressive distributed lag modelling was the estimation technique. From the results, it was revealed that stock market capitalization is positively influenced by financial inclusion variables. In the long-run period, deposit of rural branches (DRB), number of bank branches (NBB), and rural loan (LRB) have a positive and statistically significant impact on stock market capitalization. These results demonstrate that improved financial intermediation and expansion of banking systems in

rural areas contribute to capital market development. Account ownership (LPAB) negatively influences stock market capitalization. In the short-run period, DRB, NBB, and LRB continue to have positive and statistically significant impacts, but account ownership negatively influences stock market capitalization. The error correction term coefficient is negative and statistically significant, showing a quick adjustment towards long-run equilibrium position. Consequently, the null hypothesis ( $H_03$ ) that financial inclusion does not significantly impact stock market capitalization in Nigeria is rejected.

Study concludes that financial inclusion is a critical driver of financial sector development in Nigeria. Evidence from the analysis indicates that key financial inclusion variables such as rural deposits, bank branch expansion, account ownership, rural lending, and lending rates demonstrate significant relationships with major financial sector indicators, including money supply, private sector credit, stock market capitalization, and bank deposit liabilities. The findings lend support to the supply-leading hypothesis, implying that the expansion of financial services and increased access to banking institutions actively stimulate financial deepening, enhance credit availability, promote capital market growth, and improve savings mobilization, rather than merely responding to existing economic growth.

The study recommended the following:

1. Policymakers and financial institutions should intensify the expansion of bank branches, agent banking, and digital financial services in underserved rural areas, while simultaneously creating accessible investment platforms (e.g., simplified stock trading apps and collective investment schemes). This will ensure that increased rural deposits and credit availability are effectively channeled into the capital market, thereby enhancing stock market capitalization.
2. Government agencies and regulators should implement targeted financial education initiatives that go beyond account ownership to emphasize investment knowledge, particularly on equity market participation. This will help transform increased bank account penetration into active investment behavior, reducing the tendency to hold idle deposits and encouraging participation in the stock market.

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