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Financial Intermediation Spread and Financial Growth in Nigeria

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Abstract

This study examined financial intermediation spread and financial growth in Nigeria from 1991 to 2024. The objectives were to find out the relationship interest rate spread, lending rate and deposit rates have on growth of loans in Nigeria. Expost facto design was adopted. Data were collected from CBN statistical bulletin from 1991 to 2024. Analysis were carroed out using Ordinary Least Square method, Augmented Dickey Fuller, Johansen Co integration, Error correction model were employed. Findings in this study have shown that interest rate spread has no predictive influence on growth of loans in Nigeria. In fact, it negatively affected financial growth suggesting that a higher interest rate spread reduces the ability to create more credit facilities. In addition, deposit rate showed a negative and insignificant influence on financial growth while lending rate showed a positive and significant impact on financial growth. It made policy recommendation that will enhance the impact of interest rate spread on financial growth.

Keywords: Banking sector efficiency, Economic growth in Nigeria, Financial development, Financial intermediation spread, Interest rate spread.

1. Introduction

The financial systems of most developing nations have come under stress as a result of the economic shocks of the 1980s. The economic shocks largely manifested through indiscriminate distortions of financial prices which includes interest rates, has tended to reduce the real rate of growth and the real size of the financial system relative to nonfinancial magnitudes (Davidson & Gabriel, 2009). Loans which may be on short, medium or long-term basis is one of the services that deposit money banks do render to their customers. In other words, banks do grant loans and advances to individuals, business organizations as well as government in order to enable them embark on investment and development activities as a means of aiding their growth in particular or contributing toward the economic development of a country in general (Felicia, 2011). However, banks decisions to lend out loans are influenced by a lot of factors such as the prevailing interest rate (Owolabi, 2020).

Rasheed (2010), states that Nigerian economy saw different interest rates for different sectors in 1970s through the mid-1980s (Regulated Regime, 1960-1985). The preferential interest rates were based on the assumption that the market rate, if universally applied, would exclude some of the priority sectors. Interest rates were, therefore, adjusted periodically with 'visible hands' to promote increase in the level of investment in the different sectors of the economy (Adegbite, Akintola & Adedire, 2020). According to Nyong (2007), the Nigerian government has since 1987 been pursuing a market –determined interest rate which does not permit a direct state intervention in the general direction of the economy. In Nigeria, financial sector reforms began with the deregulation of interest rates in August 1987 as noted by. Prior to this period, the financial system operated under financial regulation and interest rates were said to be repressed. During this period, savings rate (deposit rate)-a major determinant of commercial banks deposit fund mobilization-averaged 7.66% in 1980-1985. This low rate resulted to a meager average of 12.77% in rate of deposits in commercial banks during the same period. Further implication of this is the low credit base and thus high interest rate charge on lending to the public; which do not improve economic growth as cost of borrowing is high (Alhassan, Fred & Erasmus, 2018). In January, 1994 there was another policy reversal. This time the government had rightly introduced some measures of regulating interest rate management. It was claimed that there were wide variation and unnecessarily high rate under the complete deregulation of interest rate. Immediately, deposit rates were once again set up at 12 percent per annum while a ceiling of 21 percent per annum was fixed for lending. The gap of interest rates introduced in 1994 was retained in 1995 with little modification for flexibility (Udoka & Roland, 2012). Udoka and Roland notes further that in October, 1996, interest rates were fully deregulated with the banks given freedom to determine the structure of the interest rate in consultation with their customers. The apex bank (CBN) however, retained the discretionary power to intervene in the money market to ensure orderly development in interest rates. It should be remembered that this policy on interest rates deregulation has been in force in Nigeria since 1997-2024 (Chandra, Yunika & Fibria, 2020; CBN, 2024; Olanrele & Angahar, 2025).

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Interest rate is a macroeconomic variable that banking industry uses for effective resource allocation in an economy (Obidike, Ejeh & Ugwuegbe, 2015; Eke, Adetiloye, Adegbite & Okoye, 2020). Clearly, the credit allocation role of banks from savings-surplus units to savings deficit units explains the bank lending channel of monetary policy transmission through supply of bank loan (Oyebowale, 2020; Al-Qudah, 2021). Ali- Momoh and Fajuyagbe (2022) opined that higher interest rate spread discourages potential savers and is an obstacle for a prospective investor; since the cost of intermediation between the saver and the investor have strong correlation and synergy in financial intermediation and capital mobilization. Inefficiencies associated with financial intermediation causes higher intermediation cost and increase loss of productive funs in the process of intermediation, this will further culminate to loss in savings, lending and profitability of the banks and by extension economic growth and development in that economy (Okon, Themeje, Yamta & Keyadi, 2020). Therefore, the focal point of this research work is to examine and analyze the basic effect of interest rate spread as it affects the credit system and deposits of commercial banks in Nigeria. The impact causes a direct effect by increasing the interest rates on borrowings than on deposits thus further widening the interest rates spread (Al-Qudah, 2021).

Commercial banks, just like other private sector firms in Nigeria are established basically for profit maximizations and depositors satisfaction. Profit maximization can be achieved through the process of financial intermediation; in other words, by receiving more for lending and paying less for savings between the borrowers and Depositors respectively and depositors' satisfaction is obtained when liquid is effectively planned and managed to meet customers need. Immediately, deposit :^:es were once again set up at 12 percent per annum while a ceiling of 21 percent per annum was fixed for lending. The gap of interest rates introduced in 1994 was retained in 1995 with little modification for flexibility (Okon, Themeje, Yamta & Keyadi, 2020). Since there exist, a relationship between interest rates and commercial banks credit-ability to satisfy to the credit needs of the economy, it is therefore imperative to find out the effect of interest rate spread on loans creation in Nigeria. The specific objectives of this study are:

1. To determine the relationship between interest rate spread and total loans in Nigeria.
2. To find out if there is any significant relationship between lending rate and total loans in Nigeria.
3. To assess the relationship between savings rate and total loans in Nigeria

2. Literature Review

2.1. Conceptual Framework

Interest Rate: Interest rates are rental payments for the use of credit by potential borrowers and return for parting with liquidity by lenders. Just like any price, interest rates perform a rationing function by allocating limited supply of credit among any competing demand on it CBN (1995). Interest rate is defined as the rental payment for the use of credit by borrowers and return for parting with liquidity by lenders (Otiwu, 2022). Like other prices interest rates perform a rationing function by allocating limited supply of credit among the many competing demands (Adofu, Abula, & Audu, 2010). Interest rate is the amount of interest paid per unit of time expressed as a percentage of the amount borrowed.

Interest Rate Spread: Interest rates spread is defined as the difference between average interest rate earned on interest earning assets (loans) and average interest rate paid on deposits (from savers) (Leonard, Chepkulei & Rop, 2013). Chandra, Yunika and Fibria (2020) defined interest rates spread as the difference (spread) between the interest rate that banks charge on loans and the interest rate they pay on deposits is a key financial bank variable, since it indicates the level of efficiency in financial intermediation. Interest rate spread is defined as the difference between the lending rate and savings rate. Lending which may be on short, medium or long-term basis is one of the services that deposit money banks do render to their customers. In other words, banks do grant loans and advances to individuals, business organizations as well as government in order to enable them embark on investment and development activities as a means of aiding their growth in particular or contributing toward the economic development of a country in general (Ugwuegbe, 2015). Literature shows that the actual spread which incorporates the pure spread is in addition influenced by macroeconomic variables including monetary and fiscal policy activities (Chandra, Yunika & Fibria, 2020). Another factor that affects banks interest spread is the market structure in which the banks operate.

Loans: According to CBN (2003) the amount of loans and advances given by the banking sector to economic agents constitute bank credit. Bank credit is often accompanied with some collateral that helps to ensure the repayment of the loan in the event of default. Credit channels savings into productive investment thereby encouraging economic growth. Thus, the availability of credit allows the role of intermediation to be carried out which is important for the growth of economy. The total domestic bank credit can be divided into two: credit to the private sector and credit to the public sector (Ahmed, Abdelaaty & Tamer, 2022). The role of finance in terms of bank credit was well acknowledged by researchers. The function of banks as financial intermediation involves channeling funds from the surplus unit to the deficit unit of the economy, thus transforming deposits into loans or credits. The role of bank credit in economic development has been recognized as credits are obtained by the various economic agents to enable them meet investment operating expenses. For instance, business firms obtain credit to buy machinery and equipment, farmers obtain credit to purchase machines such as tractors, seeds, fertilizers, and erect various kinds of farm buildings. Government bodies obtain credits to meet various kinds of recurrent and capital expenditures. Individuals and families also take credit to buy and pay for goods and services (Adeniyi, 2006).

2.2. Interest Rate Spread and Loan Growth

Interest rate plays a very important role in any economy as the signal that affects the channeling of funds (Mushtaq & Siddiqui, 2017). It is cogent to determining the strength of an economy and the economic well-being of its citizens (Wambari & Mwangi, 2017). Recognizing the importance of interest rate in an economy, various government have always been reluctant in allowing market forces to determine this rate but rather governments have used various mechanisms to control and manipulate prevailing interest rate (Ene, Atong, & Ene, 2015). The deregulation of interest rate, which is the removal of rules and regulations that constrains the operation of market forces and controls over interest rate, aims to allow interest rate to be set by the forces of demand and supply.

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According to Iyoha (1996) cited in Ene, Atong, and Ene (2015) the ultimate objective of the deregulation under SAP was to bring about improved financial intermediation by enhancing the role of banks in effectively mobilizing domestic savings and optimally allocating investable resources. Deregulation of interest rate provides a platform for greater competiveness in mobilization and utilization of fund, an efficient financial industry and more productive organizations within the financial industry. It has been advocated by many economists that interest rate deregulation helps to enhance savings, boost investment and consequently help to enhance economic growth.

2.3. Factors Influencing Interest Rate Spread

According to researchers in CBN (2025), the behaviour of interest rate is basically influential by:

a. Saving: Just as price of factors of production is determined by forces of demand and supply, savings constitutes the major source of credit while investment represents the main demand for credit. Consequently the amount of savings by individuals, businesses and government partly determine the level of interest rates. For instance, a fall in savings will lead to rise in interest rates and vice versa.
b. Inflation: According to CBN (2025), inflation reduces the nominal value of money. However, saving in financial institutions is encouraged when nominal interest rate is higher than expected inflation rate. The changing expectation about rate of inflation affects interest rate movements, even if demand and supply for capital is constant.
c. Investment Policy: The extent of investment proposed of government and firms will influence the level of interest rate. For instance, if the government and firms has made plans towards many projects to take-up within a period, their pressing need for capital or loanable fund especially where money supply is limited will cause interest rates to rise.
d. Government Activities: Some investors invest their funds in certain assets because of government and institutional directive. In such a situation, interest rate on the assets are not influenced by market forces. Government activities influence interest rate on both the demand and supply side of market for credit. It supplies credit by nurturing fiscal surpluses and demand credit to finance fiscal deficits.
e. Monetary Policy Stances: Monetary policy through expansion and contractions in money stock can influence interest rate movements. For instance, if demand supply increase, portfolio shift from cash to securities will lead to lower interest rate. Likewise, a restrictive monetary policy will lead to a rise in interest rate while an expansion monetary policy will lead to a reduction in interest rates.

Factors influencing interest rates are not limited to the above explained factors but also include other factors like-taxation, asset market characteristics, and term to maturity and risk (Ologunde, Elumilade & Asaolu, 2006).

3. Theoretical Review

For the purpose of this study, three (3) basic theories on interest rate were considered and they are:

3.1. The Liquidity Preference Theory:

The liquidity preference theory is a postulate of John Maynard who argued that interest is not only a compensation for savings but also for lending cash. Keynes defined the rate of interest as the reward of not hoarding but the reward of parting with liquidity for a specific period. It is not the price which brings into equilibrium the demand for resources to invest with the readiness to abstain from consumption; rather it is the price which equilibrates the desire to hold wealth in the form of cash. In other words, the rate of interest in the Keynesian sense is determined by the demand for and supply of money (Keynes, 1936).

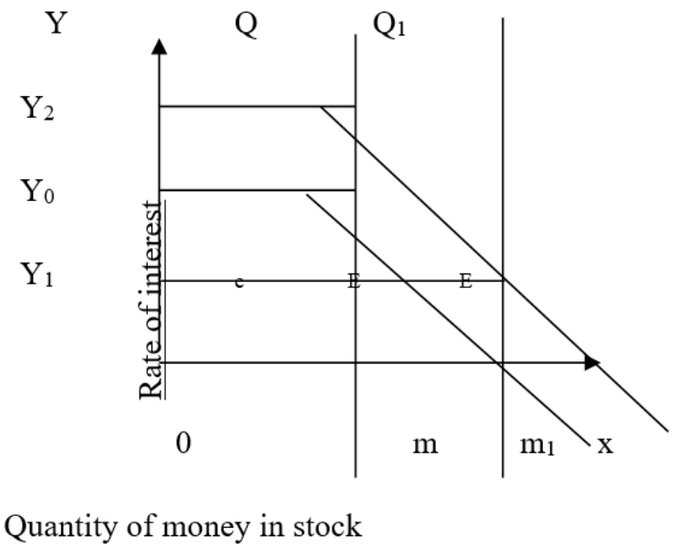

Figure 1. Liquidity preference theory of interest rate determination.

In the chart 2.1 above, Q (money supply) shows an interest rate while M (money demand) shows that an elastic rate point E shows that equilibrium interest rate (r_0) at which Q and m interest. If money supply moves from Q to Q_1. Given that M remains constant, then a new interest rate (yi) will be achieved where Qi intersects Mi at point ei. However, if Q is constant, an increase in money demand from M to M_1 will increase interest rate to (r_2) (Jhinghan, 2001).

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3.2. The Classical Theory

According to the classical theory, rate of interest is determined by the supply and demand of capital. The classical economists believe that supply and demand for loanable funds is determinants of interest rates. Hence, interest rate is the intersection of demand for savings and supply of capital is governed by the time preference and the demand for capital by the expected productivity of capital. Both time preference and productivity of capital depend upon waiting or saving or thrift (Jhinghan, 2001).

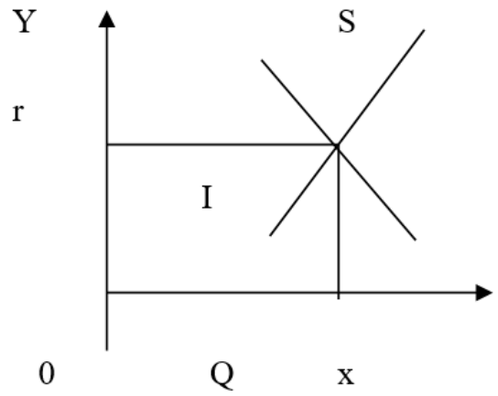

Figure 2. Classical theory of interest rate determination.

According to chart 2.2, the intersection of savings (S) and investment (X) determines the interest rate at r and Q respectively. Interest rate above r shows that loanable fund supply of loanable funds as the only determinant factor for supply and determinant factor for supply and demand for loans.

3.3. The General Equilibrium Policy

The general equilibrium theory is a compromise between the other two previous theories explained earlier. The proponents postulated that interest rate determination is an equilibrium matter which depends on monetary and non-monetary forced (Afolabi, 1991). By applying the IS-LM curves of both the Keynesian and classical schools which taken by themselves cannot tell us either about the level of income or the rate of interest. We can determine the rate of interest, that is, that point at which the IS and LM curves intersect.

3.4. Empirical Review of Studies

Ogbulu, Uruakpa, and Umezinwa (2015) investigated the nature of the relationship between deposit rates (disaggregated into various categories of deposit rates charged by DMBs in Nigeria) and deposit mobilization in Nigeria within the period 1981 and 2012 using annual data collected from the Statistical Bulletin published by the CBN. Using the OLS multiple regression, unit root tests, co-integration, error correction mechanism (ECM) and Granger causality tests, the empirical results report no significant relationship between all categories of deposit rates and total deposit liabilities of DMBs in Nigeria. The same results were also obtained with respect to the impact of deposit rates on time, savings and foreign currency deposits. In addition, the paper found no granger causality relationship between deposit rates and deposit liabilities.

Solomon (2016) examined the deregulation of interest rate and effects on deposit money banks' credit system in Nigeria. It aimed at finding out the impact of lending rate deregulation loan activities of commercial banks and effect of deposit rate deregulation on mobilization of deposits by the commercial banks. Data was collected from CBN statistical bulletin while regression analysis was applied. Findings revealed that Lending rate is negatively and insignificantly related to total loans and advances. Analysis also shows that savings rate is negatively and significantly related to total deposits. The study thus concludes that deregulation of interest rate favours lending activities of commercial banks.

Arikewuyo and Akingunola (2019) examined the relationship between interest rate deregulation and fund mobilisation of Deposit Money Banks (DMBs) in Nigeria between 1986 – 2016. Autoregressive Distributed Lag (ARDL) Bound Test technique was used to determine short and long run impacts of interest rate deregulation on fund mobilsation of DMBs. The result showed that interest rate had insignificant impact, in the short run but significant impact in the long run. Also, money supply and inflation rate were the key drivers of fund mobilisation of DMBs in both short and long run situation. The non-significance of government expenditure affirmed that fund mobilisation of DMBs is of monetary and not fiscal policy phenomenon in Nigeria. It concluded that interest rate impacted on fund mobilisation in the long run.

Okon, Themeje, Yamta and Keyadi (2020) analyzed the impact of interest rate spread on the efficacy of commercial banks' lending in Nigeria. Data were from Central Bank of Nigeria Statistical bulletin, International Monetary Fund, and International Financial Statistics. The study adopted unit root test and Unit root test and the Autoregressive Distributed Lag for analyses. Findings revealed that the variables were integration of 1(0) and 1(1). It also found that commercial banks' loans and advances has a positive and significant impact of interest rate spread in Nigeria. It concluded that interest rate spread had a positive impact on loans and advances of commercial banks.

Adebayo and Adofu (2021) examined the impact of the lending and deposit rates in the face of deregulation on the loans and advances of deposit money banks in the country covering the period of 1986 to 2019 using annual time series data. Using the Autoregressive Distributed Lag (ARDL) model, findings from the study revealed that the deregulation of interest rate in Nigeria encouraged the disbursement of loans and advances within the economy, but it was however not significant. In addition, the study found that the policy led to an inverse

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relationship between deposit rate and loans and advances in the country. Higher deposit rates significantly discouraged deposit money banks from granting loans and advances.

Obagunwa and Olusegun (2022) examined the effect of interest rate deregulation on Nigerian banking system. The study adopted Augmented Dickey-Fuller (ADF), Bound test and Autoregressive Distributed Lag (ARDL). The correlation result indicated that of the correlation matrix that all the explanatory variables (interest rate, lending rate and deposit rate) had effect on loan and advances. The results of the unit root test revealed that interest rate and lending rate were stationary at level 1(0) while loan and advances and deposit rate were stationary at first difference 1(1). Also the results of the bound test revealed that there exist long run equilibrium relationship among the variables. The result of the ARDL indicated that interest rate had significant effect on loan and advances while lending rate and deposit rate had an insignificant effect on loan and advances. It was concluded that banks should monitor the level of loan and advances in respect to major ratios for effective performance.

Ihegboro, Ofoedu, Uzochukwu and Okechi (2022) examined the impact of interest rate on deposit money banks performance in Nigeria for the period of 2010-2019. The interest rate was proxied by the monetary policy rate of the CBN while bank performance was proxied by row assets, total liabilities and total deposits of deposit money banks in Nigeria. Ordinary Least Square (OLS) simple regression technique was employed to analyze the data in order to determine the impact of the independent variable on the various dependent variables. Findings showed that Monetary Policy Rate had a positive and significant impact to the total asset and total liabilities of deposit money banks in Nigeria economy but has a negative and insignificant impact to total deposit was insignificant. The study concluded that monetary policy rate has significant relationship on deposit money bank performance in Nigeria.

Ademola, Alalade, Ogbebor and Aworinde (2023) examined the nexus between interest rate and real gross domestic product (GDP) growth in Nigeria. The research was based on ex-post facto research design using a time series data of 68 quarters from 2006Q1 to 2022Q4). The Autoregressive Distributed Lag (ARDL) model was utilized to assess the effect of interest rate on real GDP growth in Nigeria. The study found that interest rate has long-run significant cointegrating relationship with real GDP growth rate. The study concluded that interest rate is a significant factor influencing real GDP growth in Nigeria and that maintaining a stable lending rate is one of the basic requirements for developing countries to attain high level of economic growth.

Doddy, Citra and Zaafri (2024) examined the relationship between the term structure of interest rates of sovereign bonds in emerging nations and their macroeconomic indicators, specifically emphasizing its persistence and interaction with inflation, foreign exchange and fiscal conditions. Adopting the Mean Group Instrumental Variables (MGIV) technique, the study analyzes a monthly panel dataset from nine emerging economies spanning January 2010 to October 2021, totaling 1,278 observations. The findings revealed significant persistence in both slope and curvature, with a rising yield level linked to the term structure's flattening, while shifts in inflation and exchange rates correlate with its steepening.

Agama and Onum (2025) looked into the effect of interest rates on economic growth in Nigeria from 1990 to 2023. The results implied that interest rates have a negligible impact on economic expansion, suggesting that lowering interest rates could boost growth by encouraging investment. Therefore, the study suggested that interest rate policies that promote economic growth be put into place by Nigerian policymakers while concluding that adopting the right policies was essential to accelerating economic growth.

Ackaku (2025) explored the relationship between average savings deposit rates and average commercial banks' lending rates in Ghana from 2000 to 2020. Appreciating the connection is essential for developing successful policies that promote financial intermediation and economic growth. A quantitative research approach was adopted by utilising the ARIMA model to forecast trends in average savings deposit rates and analyse their future behaviour. The study controlled for macroeconomic factors such as inflation (INF) and inter-bank weighted average (IWA) to assess their impact on both savings and lending rates. The findings revealed a significant positive correlation between average savings deposit rates and average lending rates. Inflation negatively impacts lending rates. Additionally, IWA exerts a minimal but favourable influence on average savings deposit rates.

Berko, Hammond and Amissah (2025) investigated the effect of interest rate spread on economic growth using annual time series data from 1975 to 2018. The study used the Engel-granger two-step procedure which uses the OLS technique to establish both the long-run and short-run relationships between interest rate spread and economic growth. The study established that interest rate spread is a statistically important determinant of economic growth but it has a negative impact in the long-run.

Ogbuagu, Eze and Oriaku (2025) examined the impact of interest rate liberalization on the real sector output in Nigeria from 1987 to 2024. The method of data analysis was the Generalized Autoregressive Conditional Heteroskedasticity (GARCH) model. The empirical results showed that real interest rate liberalization has a negative and statistically insignificant impact on the manufacturing sector in Nigeria and similarly has a negative and non-significant effect on the agricultural sector in Nigeria.

Olanrele and Angahar (2025) investigated the macroeconomic effects of interest rate shocks in Nigeria using a rolling impulse response method within a structural vector autoregressive (SVAR) framework. The study provided an understanding how interest rate fluctuations affect key economic indicators, including GDP growth, inflation, and exchange rate (EXC), by assessing their reactions to interest rate changes over various time periods. Results indicated that interest rate shocks significantly influence GDP growth, inflation, and exchange rate initially, with these effects fading within 4-6 months.

Yua (2025) carried out a study on the effect of interest rates on economic growth in Nigeria. Using empirical data from Nigerian economic indicators over a specified period, this research explores how variations in interest rates impact GDP growth. The findings indicated a significant correlation between interest rate adjustments and economic growth, with higher interest rates often linked to reduced investment and slower growth, while lower rates may spur economic activity but pose inflationary risks.

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3.5. Summary of Literature Review and Gap

Literature has shown that interest rate spread is very important in the banking industry since it is what determines the amount of profit earned through loan creation. However, the effect of interest rate spread on banks has continued to receive attention from scholars. Yet very few studies exist on how interest rate spread impacts on deposit money banks deposits and loan creation. This implies that there is lack of depth in literature and empirical research on the subject matter of this study. This gap in literature has therefore necessitated this study.

4. Methodology

The research design used in this study is the quasi-experimental design also known as expost facto which involves use of documented data of an event that has already taken place. This is used because the study focuses on time series of events and correlation between two or more variables.

4.1. Sources of Data

The secondary source was mainly used in this study which was sourced from CBN Statistical Bulletin from 1991 to 2024.

4.2. Model

Regression deals with two or more independent variables given dependent variable. In regression analysis, the dependent variable (y) is sometime referred to as the response variable. The partial regression coefficient of an independent variable represents the increase that will occur in the value of Y from a 1-unit increase in that independent variable, if all other variables are held constant (Lind and Mason, 1996).

In actuality, the regression constant of a multiple regression model are population values and are unknown. These values are estimated by using simple information

$$Y = f(X_1, \ldots\ldots Xn) \qquad (1)$$

Where Y = dependent variable

X= Independent variable I

Xn = Independent variable N

The model is based on the assumption of a linear relationship form of

$Y = b_o + b_I x_I + \ldots bx_n + \mu$ ..... (2)

The b_o, b_I, b_n in the model represents the parameter, given a sample from the population.

Loan to assets ratio = F (Interest rate spread, Deposit rate, Lending rate)

The constructed model is given as

$LAR=b_0+b_1IRS_t+b_2DPR_t+b_3LDR_t+U_{1t} \ldots\ldots (3)$

4.3. Technique for Data Analysis

In other to comprehensively analyze the quantitative data to be used for the purpose of this study Ordinary Least Square method, Augmented Dickey Fuller, Johansen Co integration, Error correction model were employed. The need for an Error Correction Model in this works arises because when two or more non–stationery time series are cointegrated, then there exist an Error Correction Model (ECM). Cointegration is a necessary condition for ECM. ECM describes the long run equilibrium relationship between non – stationery series. Even though individuals series are non – stationery, when they are co-integrated, there is a long run equilibrium relationship, and ECM explains this relationship. If the cointegration regression suggests that the selected macroeconomic variables (IRS, DPR, LDR) and Gross Domestic Product (GDP) are cointegrated, then will arise the need for the adoption of an error correction model in our data analyses.

5. Result

This chapter covers the presentation of data, analysis and result presentation. Therefore, the objective of this research work is focused on the effect of interest rate spread on financial growth in Nigeria.

Table 1. Data for Analysis.

Year	LDR	DPR	IRS	LOANS	Loan growth (%)
1991	20.01	14.29	5.72	41.35	39.62
1992	29.80	16.10	13.7	58.12	40.56
1993	18.32	16.66	1.66	127.12	118.72
1994	21.00	13.50	7.5	143.42	12.82
1995	20.18	12.61	7.57	180.00	25.51
1996	19.74	11.69	8.05	238.60	32.56
1997	13.54	4.80	8.74	316.21	32.53
1998	18.29	5.49	12.8	351.96	11.31
1999	21.32	5.33	15.99	431.17	22.51
2000	17.98	5.29	12.69	530.37	23.01
2001	18.29	5.49	12.8	764.96	44.23
2002	24.85	4.15	20.7	930.49	21.64
2003	20.71	4.11	16.6	1,096.54	17.85
2004	19.18	4.19	14.99	1,421.66	29.65
2005	17.95	3.83	14.12	1,838.39	29.31
2006	17.26	3.14	14.12	2,290.62	24.60
2007	16.94	3.55	13.39	3,668.66	60.16
2008	15.14	2.84	12.3	7,899.14	115.31
2009	18.99	2.68	16.31	9,889.58	25.20
2010	17.59	2.21	15.38	10,518.17	6.36
2011	16.02	1.41	14.61	9,600.02	-8.73

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2012	16.79	1.70	15.09	13,293.64	38.48
2013	16.72	2.17	14.55	14,461.41	8.78
2014	16.55	3.38	13.17	16,753.00	15.85
2015	16.85	3.58	13.27	18,688.42	11.55
2016	16.87	3.75	13.12	21,025.24	12.50
2017	17.56	4.13	13.43	22,459.18	6.82
2018	19.33	4.07	15.26	22,646.33	0.83
2019	15.53	3.95	11.58	25,676.87	13.38
2020	12.32	3.22	9.1	29,030.01	13.06
2021	11.48	1.69	9.79	32,845.67	13.14
2022	12.33	2.34	9.99	39,012.34	18.77
2023	14.01	4.97	9.04	52,884.78	35.56
2024	18.56	7.51	11.05	64,071.92	21.15

Source: CBN Statistical Bulletins of Various Years.

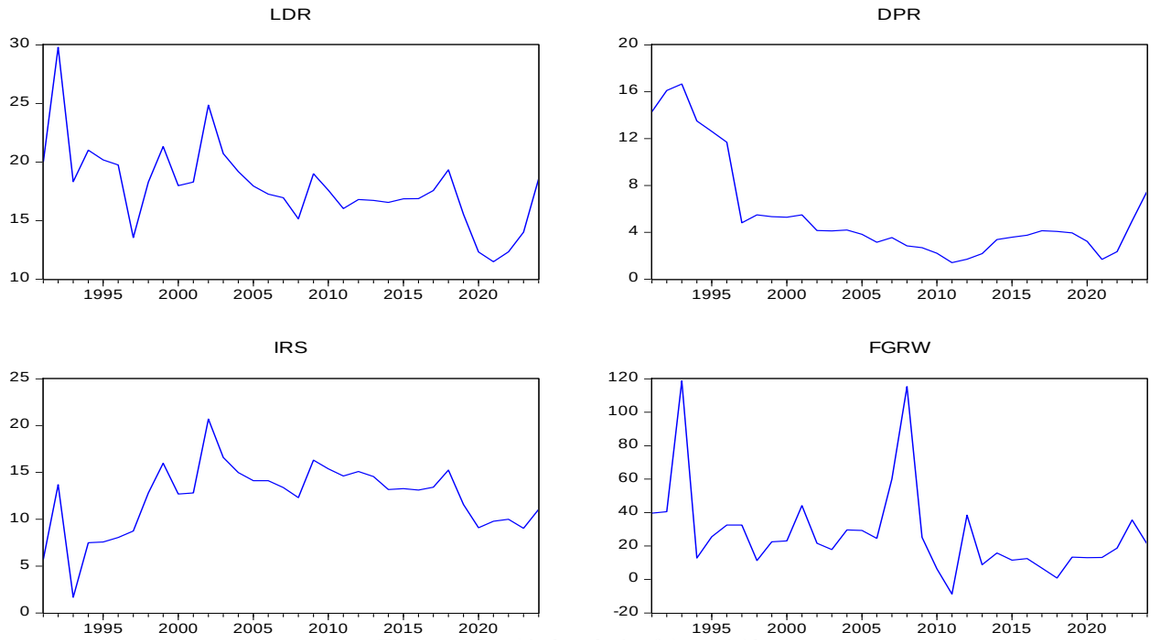

Figure 3. Graphical analysis of the variables.

The graphical representation shows that both lending and deposit rates have fallen over the years from 1991 while interest rate spread has risen within the same period. However, the growth rate of loans have shown inconsistency over the period under review.

Table 2. Descriptive Statistics and Normality Test.

Date: 08/26/25 Time: 12:40
Sample: 1991 2024

	LDR	DPR	IRS	FGRW
Mean	17.88235	5.582941	12.29941	27.48824
Median	17.77000	4.090000	13.14500	22.07500
Maximum	29.80000	16.66000	20.70000	118.7200
Minimum	11.48000	1.410000	1.660000	-8.730000
Std. Dev.	3.483200	4.280671	3.666907	26.51614
Skewness	0.993851	1.500397	-0.622510	2.249893
Kurtosis	5.763539	3.928268	3.906944	8.410528
Jarque-Bera	16.41648	13.97747	3.361215	70.15602
Probability	0.000272	0.000922	0.186261	0.000000
Sum	608.0000	189.8200	418.1800	934.6000
Sum Sq. Dev.	400.3786	604.6967	443.7248	23202.49
Observations	34	34	34	34

The descriptive statistics shows that lending rate (LDR) has a mean of 17.88% going as high as 29.8%. Deposit rate (DPR) has a mean of 5.58% going as high as 16.66%. Interest rate spread (IRS) has a mean of 12.30% going as high as 20.7% which shows high level of deviation between loan rate and deposit rates. The growth rate of loans showed a mean of 27.4% which went as high as 118.72%.

The Jarque-Bera result shows that LDR, DPR and FGRW have a prob value of 0.000272, 0.000922 and 0.000000 respectively which implies that they are significant but not normally distributed. However, IRS has a prob value of 0.186261 which is insignificant but normally distributed.

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Table 3. OLS result.

Dependent Variable: LOG(FGRW)
Method: Least Squares
Date: 08/29/25 Time: 10:34
Sample: 1991 2024
Included observations: 33

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.333504	2.727685	1.222100	0.2315
LOG(DPR)	-0.078755	0.551193	-0.142881	0.8874
LOG(LDR)	0.690845	1.483044	0.465829	0.6448
LOG(IRS)	-0.891510	0.644021	-1.384287	0.1768
R-squared	0.160966	Mean dependent var		3.024642
Adjusted R-squared	0.074170	S.D. dependent var		0.895578
S.E. of regression	0.861726	Akaike info criterion		2.653453
Sum squared resid	21.53456	Schwarz criterion		2.834848
Log likelihood	-39.78197	Hannan-Quinn criter.		2.714487
F-statistic	1.854525	Durbin-Watson stat		1.190362
Prob(F-statistic)	0.159432			

The OLS model in Table 3 is:

LOG(FGRW) = 3.33350408695 - 0.078755089903*LOG(DPR) + 0.69084497218*LOG(LDR) - 0.891510265462*LOG(IRS). In the model, a 1 % average change in DPR and IRS have -7.87% and -89.15% negative influence on FGRW while a 1% average change in LDR leads to 89.08% change in FGRW. This implies that deposit rates and interest rate spreads have negative but insignificant influence of growth of loans while lending rate has positive and insignificant influence financial growth. The Durbin-Watson static of 1.19 shows the presence of serial correlation, suggesting that we cannot rely on the model.

Table 4. Summary ADF Unit Root Test.

Variable	ADF Test Statistics				Stationarity	
	Level	Prob	1st Diff	Prob	Level	1st Diff
LDPR	-2.955166	0.0502	-4.616812	0.0008	none	I(1)
LLDR	-3.572958	0.0120	-9.572161	0.0000		
LIRS	-3.512712	0.0139	-6.349124	0.0000	none	I(1)
LFGRW	-4.478518	0.0012	-5.820067	0.0000	none	I(1)

Variables in 4 are stationary at levels and also stationary at 1st difference, i.e., they are integrated of order 1 or I(1). Because, all the variables are integrated of order 1, a Johansen Cointegration test was conducted to establish whether there is a longrun equilibrium relationship among the variables.

Table 5. Cointegration result.

Date: 08/29/25 Time: 10:31
Sample (adjusted): 1993 2024
Included observations: 29 after adjustments
Trend assumption: Linear deterministic trend
Series: LOG(DPR) LOG(LDR) LOG(IRS) LOG(FGRW)
Lags interval (in first differences): 1 to 1
Unrestricted Cointegration Rank Test (Trace)

Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None	0.582866	46.84326	47.85613	0.0621
At most 1	0.359938	21.48716	29.79707	0.0280
At most 2	0.187886	8.547627	15.49471	0.4089
At most 3	0.082985	2.512312	3.841466	0.1130
Trace test indicates 1 cointegration at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None	0.582866	25.35610	27.58434	0.0939
At most 1	0.359938	12.93954	21.13162	0.0357
At most 2	0.187886	6.035315	14.26460	0.6087
At most 3	0.082985	2.512312	3.841466	0.1130
Max-eigenvalue test indicates no cointegration at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

Trace test and max-eigen value test indicate 1 cointegration equations each at the 0.05% level, denoting rejection of the hypotheses at the 0.05 level. Because of the existence of long-run equilibrium among the variables, a short-run, ECM model was established.

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Table 6. Long Run Model.

Dependent Variable: DLOG(FGRW)
Method: Least Squares
Date: 08/30/25 Time: 07:36
Sample (adjusted): 33
Included observations: 32 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.426237	2.077528	0.686506	0.4987
DLOG(DPR)	-0.064821	0.402183	-3.161174	0.9833
DLOG(LDR)	-0.225211	0.002769	-3.339804	0.0368
DLOG(IRS)	0.175568	0.793755	0.221187	0.8267
ECT(-1)	-0.484583	0.193533	-2.503872	0.0192
R-squared	0.231736	Mean dependent var		1.271447
Adjusted R-squared	0.078083	S.D. dependent var		0.693111
S.E. of regression	0.665501	Akaike info criterion		2.195431
Sum squared resid	11.07228	Schwarz criterion		2.472977
Log likelihood	-28.02918	Hannan-Quinn criter.		2.285904
F-statistic	1.508181	Durbin-Watson stat		1.867483
Prob(F-statistic)	0.222986			

The error correction model result on Table 6 above gives the final and precise result as opposed to the OLS level series model.

The F-statistics shows a value of 1.508181 with a prob value of 0.222986 which implies that the model is poorly fitted and is of concern to use for policy actions. This problem is also reflected in the very low value of R^2 and adjusted R^{-2}. The r-squared showed a value of 0.23 or 23% which implies that the model is poorly fitted on the regression line. The adjusted coefficient of determination value of 0.078 shows that only about 7.8% of the variations in the dependent variable is explainable by the independent variables in the model. A relative change in FGRW is insignificantly affected by a combination of relative changes in DPR, LDR and IRS in the long run.

The result shows that deposit rate has negative and insignificant long run relationship with financial growth. It also shows that lending rate has positive and significant long run impact on financial growth. Moreover, interest rate spread showed negative but insignificant impact on financial growth.

The coefficient of the ECM term (-0.484583, or 48%), which measures the speed of the adjustment of the dependent variables at which equilibrium is restored is correctly signed (negative) and significant (prob-value=0.0192). The negativity of the ECT signals that the system is stable and is capable of converging to the long run equilibrium after some shocks/disturbances in the system at a significant adjustment speed of 48%. The overall goodness of fit of 23 per cent implies that the regressors only explained 23% of the variation in the regress and, a sign of poor goodness of fit.

The Durbin-Watson (DW) stat. of approximately, 2.0, shows that there is no serial autocorrelation in the residuals of the model. However, the presence of a lagged ECT among the regressors seems to weaken the DW of 2.0.

6. Conclusion and Recommendations

This study examined financial intermediation spread and financial growth in Nigeria from 1991 to 2024. Interest rate spread is the sum difference of banks lending rate and savings rate. It is usually considered as the profit made by the banks on cost of obtaining savings from customers and cost charged on borrowers of the same customer deposit. Using a time frame of 33 years, findings in this study have shown that interest rate spread has no predictive influence on growth of loans in Nigeria. In fact, it negatively affected financial growth suggesting that a higher interest rate spread reduces the ability to create more credit facilities. In addition, deposit rate showed a negative and insignificant influence on financial growth while lending rate showed a positive and significant impact on financial growth.

Based on the findings in this study, the following recommendations are made:

1. From the findings, there is need for review of savings and deposits rates to encourage more savings and deposits.
2. Financial institutions should provide more credit facilities with the going lending rates.
3. The interest rate spread should not only determine profitability of the banks, policy that will ensure it encourages loan creation should be put in place by the CBN.

References

Ackuaku, E. (2025). The relationship between average savings deposit rates and average commercial bank lending rates in Ghana. *F1000Research*, *14*, 222. https://doi.org/10.12688/f1000research.161068.1

Adebayo, F., & Adofu, I. (2021). Effect of interest rate deregulation on loans and advances of deposit money banks in Nigeria. *International Journal of Research and Innovation in Social Science*, *5*, 345–352. https://doi.org/10.47772/IJRISS.2021.5416

Adegbite, E. O., Akintola, A. F., & Adedire, A. A. (2020). Interest rates and return on assets of selected deposit money banks in Nigeria (2008–2017). *International Journal of Research and Scientific Innovation*, *7*(5), 243–250.

Ademola, O., Alalade, S., Ogbebor, P., & Aworinde, O. (2023). Interest rates and real economic growth in Nigeria: Empirical investigation from autoregressive distributed lag model. *International Journal of Economics, Finance and Management Sciences*, *11*(6), 300–310. https://doi.org/10.11648/j.ijefm.20231106.12

Adeniyi, O. M. (2006). *Bank credit and economic development in Nigeria: A case study of deposit money banks*. University of Jos.

Adofu, I., Abula, M., & Audu, S. I. (2010). An assessment of the effect of interest rate deregulation in enhancing agricultural production in Nigeria. *Current Research Journal of Economic Theory*, *2*(2), 82–86.

Afolabi, L. (1991). *Monetary economics* (1st ed.). Inner Ways Publication.

Agama, O., & Onum, F. (2025). The impact of interest rates on economic growth in Nigeria. *Socio Economy and Policy Studies*, *1*, 5–10.

Ahmed, M. M. Y., Abdelaaty, L. M. M., & Tamer, M. H. S. (2022). The impact of interest and inflation rates on deposits behavior of banks: The case of Egypt. *The Academic Journal of Contemporary Commercial Research*, *2*(1), 55–80.

Al-Qudah, A. M. (2021). The determinants of lending interest rates of Jordanian listed commercial banks. *Accounting*, *7*, 719–726.

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Ali-Momoh, B. O., & Fajuyagbe, B. S. (2022). Interest rate and financial performance of listed deposit money banks in Nigeria. *Journal of Accounting and Management, 12*(2), 77–93.

Alhassan, M., Fred, K. A., & Erasmus, D. G. (2018). The impact of interest rate spread on bank profitability in Ghana. *European Journal of Business, Economics and Accountancy, 6*(1), 27–39.

Arikewuyo, K. A., & Akingunola, R. O. (2019). Impact of interest rate deregulation on fund mobilisation of deposit money banks in Nigeria. *Izvestiya Journal of Varna University of Economics, 63*(2), 89–103.

Berko, D., Hammond, P., & Amissah, E. (2022). The effect of interest rate spread on economic growth: Ghana's perspective. *International Journal of Business and Management Review, 10*(2), 1–23.

Central Bank of Nigeria. (1995, April 11). *Guidelines and incentives on deregulation in the Nigerian banking industry.*

Chandra, W., Yunika, L., & Fibria, I. (2020). Determinants of interest rate spreads of conventional banks listed on the Indonesia Stock Exchange. *Banks and Bank Systems, 15*(4), 69–79.

Davidson, S., & Gabriel. (2009). Financial system regulation, deregulation and savings mobilization in Nigeria.

Doddy, A., Citra, A., & Zaafri, A. H. (2024). Term structure of interest rate and macro economy: An empirical study on selected emerging countries sovereign bond. *Journal of Capital Markets Studies, 8*(2), 195–211. https://doi.org/10.1108/JCMS-05-2024-0022

Eke, P. O., Adetiloye, K. A., Adegbite, E. O., & Okoye, L. U. (2020). A co-integration analysis of interest rate spread and corporate bond market development in selected African economies. In *Sustainable economic growth, education excellence, and innovation management through Vision 2020.*

Ene, E. E., Atong, A. S., & Ene, C. J. (2015). Effect of interest rates deregulation on the performance of deposit money banks in Nigeria. *International Journal of Managerial Studies and Research, 3*(9), 164–176.

Felicia, O. O. (2011). Determinants of commercial banks lending behaviour in Nigeria. *International Journal of Financial Research, 2*(2), 1–12.

Ihegboro, I. M., Ofoedu, M. I., Uzochukwu, A. C., & Okechi, O. A. (2022). The effect of deposit money banks performance on interest rates: Evidence from Nigeria. *International Journal of Advanced Finance and Accounting, 3*(4), 1–10. https://doi.org/10.5281/zenodo.7099078

Jhingan, M. L. (2001). *Poverty and development into the 21st century.* Oxford University Press.

Keynes, J. M. (1936). *The general theory of employment, interest and money.* Macmillan.

Mushtaq, S., & Siddiqui, D. A. (2017). Effect of interest rate on bank deposits: Evidences from Islamic and non-Islamic economies. *Future Business Journal, 3*(1), 1–8. https://doi.org/10.1016/j.fbj.2017.01.002

Nyong, M. (2007). Government size, political freedom and economic growth in Nigeria: 1960–2000. *Journal of Third World Studies, 24*, 87–93.

Obagunwa, O., & Akinwale, O. (2022). Interest rate deregulation and loans and advances of deposit money banks in Nigeria. *The International Journal of Business Management and Technology, 2*, 94–100.

Obidike, P. C., Ejeh, G. C., & Ugwuegbe, S. U. (2015). The impact of interest rate spread on the performance of Nigerian banking industry. *Journal of Economics and Sustainable Development, 6*(12), 131–139.

Ogbuagu, G. O., Eze, C. G., & Oriaku, C. E. (2025). Impact of interest rate liberalization on the real sector output in Nigeria: A generalized autoregressive conditional heteroskedasticity (GARCH) model. *Journal of Advanced Education and Sciences, 5*(1), 30–42.

Ogbulu, O. M., Uruakpa, P. C., & Umezinwa, C. L. (2015). Empirical investigation of the impact of deposit rates on fund mobilization by deposit money banks in Nigeria. *Journal of Finance and Bank Management, 3*(1), 77–89.

Okon, E. U., Themeje, J. C., Yamta, H. A., & Keyadi, B. (2020). Interest rate spread and the efficacy of commercial banks' loans and advances in Nigeria. *Journal of Accounting and Finance in Emerging Economies, 6*(3), 753–763.

Olanrele, I. A., & Angahar, J. S. (2025). Macroeconomic effects of interest rate in Nigeria: A rolling impulse response approach. *International Journal of Humanities, Education, and Social Sciences, 3*(1), 330–348. https://doi.org/10.58578/ijhess.v3i1.5009

Ologunde, A. O., Elumilade, D. O., & Asaolu, T. O. (2006). Stock market capitalization and interest rate in Nigeria: A time series analysis. *International Research Journal of Finance and Economics, 4*, 1–12.

Otiwu, C. K. (2022). Deregulation of interest rate in Nigeria and deposit money bank's performance (1996–2018). *Asian Journal of Economics, Business and Accounting, 22*(4), 12–22. https://doi.org/10.9734/ajeba/2022/v22i430553

Owolabi, A. (2020). Effect of lending rate on the performance of Nigerian deposit money bank. *Journal of Asian Economics, Accounting and Finance, 1*(2), 163–180.

Oyebowale, A. Y. (2020). Determinants of bank lending in Nigeria. *Global Journal of Emerging Market Economies, 12*(3), 378–398. https://doi.org/10.1177/0974910120961573

Rasheed, O. A. (2010). Interest rate determinants in Nigeria. *International Research Journal of Finance and Economics, 2*(3), 1–12.

Solomon, O. (2016). Real interest rate and the mobilization of private savings in Nigeria.

Udoka, C. O., & Roland, A. (2012). The effect of interest rate fluctuation on the economic growth of Nigeria, 1970–2010. *International Journal of Business and Social Science, 3*(20), 295–302.

Ugwuegbe, U. (2015). The impact of interest rate spread on the performance of the Nigerian banking industry. https://doi.org/10.13140/RG.2.1.2720.8800

Wambari, K. D., & Mwangi, M. (2017). Effect of interest rates on the financial performance of commercial banks in Kenya. *International Journal of Finance and Accounting, 2*(4), 19–35.

Yua, H. (2025). Effect of interest rate on economic growth in Nigeria, 335–354.

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