

The Impact of Deposit Money Banks' Financing on Small and Medium Enterprises (SMEs) Performance in Nigeria: 1981- 2022

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Abstract

The study examined the deposit money banks financing, small and medium scale enterprises (SMEs) profit performance in Nigeria from 1981 to 2022 using autoregressive distributed lags techniques of analysis on data from the Central Bank of Nigeria and Bank of Industry. The research focuses on Deposit money banks credits, small and medium Scale enterprise profit performance in Nigeria. The credit to SMEs, aggregate deposit money banks loans, money supply, lending interest rate and inflation were the independent variables used for the study. Profit performance which was the dependent variable was measured using SMEs profitability. Regression results were used to test Hypothesis 1- 4. The results showed that credit to SMEs and aggregate deposit money banks loans were positive and significant at both short and long run. It was also found that money supply, lending interest rate and inflation showed varying level of significant relationships with the profit performance of small-scale business enterprises in Nigeria. The study recommends that the government should prioritize credit creation and administration strategies to SMEs in order to improve the profit performance of the SMEs in Nigeria. In addition, the monetary authorities and regulators should guarantee, re-invigorate and improve loans schemes by deposit money banks in Nigeria through appropriate credit policies. This of course will play the key role of loan creation, securitization and administration that will impact on the SMES in Nigeria.

Keywords: Small and Medium Enterprises, Deposit Money Banks, Financing, Interest Rate, Inflation.

Introduction

In Nigeria, available data from the commercial banks indicates that 90% of companies registered are micro, small and medium enterprises (Mensah, 2004). This target group has been identified as the catalyst for economic growth of the country as they are a major source of income and employment to many Nigerians. According to Mensah (2004) Small enterprises employ between 6 and 29 employees with fixed assets of \$100 Thousand with medium enterprises employing between 30 and 99 employees with fixed assets of up to \$1 Million, Hallberg (2001) put forward that SMEs account for majority of firms in an economy and a significant share of employment. Like other countries of the world, SMEs in Nigeria have the tendency to serve as sources of livelihood to the poor, create employment opportunities, generate income and contribute immensely to economic growth. Small firms are the engines for economic development of several developed countries such as the US and Japan (Halberd, 2001). Developing countries such as Zimbabwe have also identified

the potential of small firms to turn economies with negative growth into vibrant ones. For this reason, several governments in developing countries offer funding to small firms either directly or by guaranteeing the payment of such loans as lack of funding is cited as one of the major challenges faced by small businesses. Obert and Olawale (2010) argues that due to limited resources by governments, not all small firms receive funding from the government; therefore, the other option would be to go for bank loans Obert and Loadable (2010) Despite its increasing roles, access to credit by SMEs remains one major constraint to Nigerian SMEs.

According to Augusto et al (2008), most large companies usually start as small enterprises, so the ability of SMEs to develop and invest becomes crucial to any economy wishing to prosper. Although countries' definitions of what constitutes an SME for legal or statistical purposes are typically based on the number of employees, banks generally define SMEs in terms of average annual sale; an indicator that is more easily observable, a good proxy of an SME level of business activity, and, thus, more useful to banks' business and risk management purposes (Augusto et al 2008). Augusto et al (2008) further points out that the threshold of annual sales used by banks varies by country, according to the size of the economies and structure of their corporate sector. Augusto et al (2008) hints that in Argentina, a company is considered to be an SME when its average annual sales are approximately between 300,000 and 30 million US dollars. In Chile, the range goes from around 90,000 to 24 million US dollars.

In Colombia, banks consider SMEs those firms with annual sales between 400,000 and 13 million US dollars (although for most domestic banks the range is between 100,000 and 5 million. In Serbia, SMEs are typically defined as having annual sales between 500,000 and 10 million Euros. A vast amount of data on SMEs in Nigeria also suggest SMEs are more financially constrained than large firms. For example, using data from 10,000 firms in 80 countries, Beck et al (2006) showed that the probability that a firm rate financing as a major obstacle is 39% for small firms, 38% for medium-size firms, and 29% for large firms Mensah (2004) states that a major barrier to rapid development of the SME sector is a shortage of both debt and equity financing. However, Mensah (2004) postulate that equity shortage occurs because Equity investors seek highest return consistent with the risk of the investment and since SME investments are difficult to evaluate, their investments take time to mature and among others major institutional investors such as insurance companies are not allowed to invest in private SMEs. Hence there are many who believe that the single most important factor constraining the growth of the SME sector is the lack of finance. There are many factors that can be adduced for this lack of finance according to Mensah (2004). For instance, a relatively undeveloped financial sector with low levels of intermediation; Lack of institutional and legal structures that facilitate the management of SME lending risk; High cost of borrowing and rigidities interest rates.

Thus, because of the persistent financing gap, many interventions have been launched by governments and development partners to stimulate the flow of financing to SMEs over and above what is available from exiting private sector financial institutions. Karimunda and

Barometer (2006) put forward the fact that, there are several reasons why a SME need a loan such as the financing of new branches, of new projects and more. Companies do not always have the capacity for finance their own business that is why they have sometimes to turn to other financiers. However, when companies need new capital, they firstly resort to their internal generated funds. After these sources, SMEs turn to equity financing by addressing closely related investors. These sources exhibit very low costs and may be for example equity capital from the owner, family or friends. Despite these, there are others types of financing that one can use: external equity financing and external debt financing. For SMEs, possibilities for using external equity finance are limited since the majority of these companies are privately managed. Companies can also use venture capitalist as alternative means of equity financing. However, these possibilities are difficult for SMEs since most of them do not always meet the return expectations. They thereby become less attractive for this group of investors. Other alternatives to financing are private placements and corporate bonds. Unfortunately, these types of financing are too expensive for SMEs or have limited resources. Therefore, bank loans seem to be an appropriate way to finance SMEs' capital requirements and seem to be an appropriate way. As a result, SMEs prefer most frequently debt funding by bank loans.

The bank financing is tremendously attractive and seems to be realistic and a more reliable source to SMEs. Mensah (2004) states that recently, as banks and other financial institutions have sought to broaden their loan portfolio, SMEs have become an increasingly attractive customer group. Traditionally, however, financial institutions in Nigeria have been cautious with lending to SME groups because of high default rates and risks associated with the sector. Few banks have therefore developed an explicit policy for SME target groups taking the particular requirements and needs into consideration, an example is the development of customized financial products and appropriate credit management systems. Only few banks have SME specific loan products, and many of these are donor funded. Since SMEs are scarcely finance by equity due to risk in its operation amongst others, the last resort is thus debt financing and this is usually financed by financial institutions through the granting of loans. Debt financing according to Ayadi et al (2009) continues to be the primary source of financing for SMEs in Europe, much more important than venture capital. This implies, for one thing, that an efficient functioning of credit markets is of utmost importance for SMEs and the economy at large to think This problem seems to be wide spread particularly severe in transition economies, whose catching-up may suffer from continued wide-spreaders, are often relatively new and lack a consistent track record of profitability that would demonstrate the capability to repay a loan. In addition, many SMEs lack assets that could be used as collateral. SMEs are also more prone to financial distress and failure. Commercial banks, because of these factors, consider lending to SMEs a high risk. Therefore, commercial banks often deny loans or offer loans to SMEs at higher rates of interest to accommodate the perceived high credit risk of SMEs according Coleman and Cohn (2001). They are accessibility of debt finance to SMEs can further be attributed to information asymmetry.

Objectives of the Study

The broad objective of this study is to examine the impact on deposit money banks financing on small and medium enterprises performance in Nigeria. The specific objectives are

- i. To examine the impact of deposit money Banks financing on the small and medium Enterprises (SMEs) on performance in Nigeria.
- ii. To examine the influence of lending interest rate on small and Medium Enterprise Performance in Nigeria.

Research Questions

The following research questions were developed for the study:

- i. Does financing to SMEs have any impacts on small and medium Enterprise performance in Nigeria?
- ii. Does lending interest rate have any influence on Small and medium Enterprise Performance in Nigeria?

Research Hypotheses

The following null hypotheses are formulated in line with the objectives and research questions of the study:

Ho₁: financing to SMEs has no significant impact on the Small and Medium Enterprise profit Performance in Nigeria.

Ho₃: Interest rates have no significant effect on small and medium Enterprise profit performance in Nigeria.

Conceptual Review**Conceptual Small and Medium Enterprise**

The definition of SME is usually derived in each country, based on the role of SME in the economy, policies and programs designed by particular agencies or institutions empowered to develop SME. For instance, a small business in the developed economic of countries like Japan, Germany and United State of America (USA), may be a medium or large- scaled business in a developing economy like Nigeria. Moreover, the definition of SMEs also varies overtime from agencies or developing institutions to another, depending on their policy focus. The above variation notwithstanding, SME can be defined based on certain criteria including turnover, number of employees profit, capital employed, available finance, market share and relative size within the industry. The definition can be based on either some quantitate or qualitative variable. Quantitative definitions manly express the size of enterprises, mainly in monetary terms such as asset value, profit, turnover as well as quantitative index like number of employees. The World Bank (2019) classifies an enterprise as MSME when it meets any two of the following criteria namely, number of employees, size of assets, or annual sales as follows: microenterprises employ up to 10 employees, with total assets and annual sales of up to \$10,000; small enterprises employ up to 50 employees

with total assets and annual sales of up to \$3 million; and medium-sized enterprise employ up to 300 employees, with total assets and annual sales of up to \$15 million. It is therefore noted that there is no universal definition of SMEs, which applies to all countries. This is due to the fact that SMEs are not homogeneous; they differ from one country to the other and from one industry to the other.

Small and medium scales is one of the most important functions undertaken by DMBs in Nigeria. Banks play their intermediation role by sourcing funds through deposits from their numerous customers and such funds are given out as loan either on short-, medium- or long-term basis to government, corporate bodies, institutions and individuals to enable them embark on viable investment ventures. Based on the fact that their operations/ businesses are usually pivoted around the practice of lending hence the use of expertise and competent hands by the banks' management team in carrying out their business, Ayuba & Zubair, 2015; Ubesie et al., 2017. It is worthy to note that small and medium scale enterprises (SMEs) have no generally established definition. However, SMEs are businesses that are privately-owned and managed with a small number of employees. Likewise identifying its strengths and weakness (Bandar, 2016). Performance refers to ability of an organization to achieve high profit, quality product, large market share, good financial results and survival at pre-determined time (Zhiri, 2017). However, SMEs low performance in Nigeria has be attributed amongst others to lack of access to the much needed fund, unfriendly business environment, lack of access to modern technology and poor management skills (Akabueze, 2017).

The results of the study revealed that SMEs and selected macroeconomic variables have a long run relationship with SMEs output, time deposit and exchange rate have significant impact on SMEs output while commercial bank credit to SMEs, government expenditure and bank density has direct but insignificant impact on SMEs output and interest rate has adverse effect on SMEs output. Analyzing data collected from secondary data source through the use of studies.

Theoretical Review

This study is guided by a few theories on small and medium enterprises development and banks' lending behavior.

Keynesian Economic Theory

Abdesamed and Wahab (2014) propounded a theory known as Information Asymmetry. This theory identifies the relationship between variables and SMEs in the application of bank loans. Thus, this study adopts the information asymmetry theory to understand how firms apply for bank loan. The main formal financing source for SMEs is the bank. According to the European Central Bank (2011), 40% of respondent firms use their overdraft facilities or credit lines, and more than one-third of firms have used bank loans. Longenecker (2012) mentioned that commercial banks are the primary providers of debt capital to firms. Commercial banks prefer firms with proven track records and sufficient collateral in the

form of hard assets. Proven track records and collaterals are difficult to obtain for small businesses.

The lack of access to bank loans of SMEs is attributed to information asymmetry. Finance gap hypothesis suggests that SMEs suffer from a shortage of financing, which is caused by information asymmetry (Ed Vos 2007, Berger and Udell, 1998). Behr (2011) mentioned that lending in developing economies, specifically lending to micro and small enterprises, is particularly affected by information asymmetries between borrowers and lenders. Thus, startups and expansion potentials cause difficulties in obtaining intermediate external financing, which depend mainly on internal financing or informal external financing such as friends and family.

Schumpeter Theory of Innovation

The above theory adopted for this research work shows the relevance of information in the relationship between firms and banks. The banks require adequate information from the firms in order to be able to render assistance in terms of loans. But there are problems or obstacles in the way. This information is usually not readily available by the firms and also small businesses do not possess adequate collateral to offer the banks in exchange for loan. Voordeckers and Steijvers (2006), Degryse and Layseele (2000) and Harhoff and Korting (1998) find that collateral requirements decrease with increasing bank-borrower relationships. Borrowers with more concentrated and long-lasting bank relationships have less stringent collateral requirements. Moreover, given that such factors domiciled in the environment are external to businesses, an understanding of such factors becomes a *sine qua non* for efficient decision making, ultimately leading to an improved performance of businesses. Furthermore, Schumpeter sees entrepreneurs as agents of change, individuals creating chaos by unsettling the status quo, developing new products, ideas and driving the market forward. This theory contends that creativity and innovativeness are the *Fons et Origo* of entrepreneurship, which further defines business perform.

Loan Pricing Theory

This theory posits that in trying to adjust the lending rate, banks affect the pricing factors of such loans, which however affects the cost of funds available for lending. This ripple effect triggers the loan uptake by borrowers, which ultimately affect the lending capacity of the banks. This in turn would cause the banks to charge a lower interest rate on loans. However, the reverse signal arguments contend that banks only require more collateral for more risky firms.

Credit Market Theory

This theory ties the interest rate required on loans with the bank's income earned from lending activities. It postulates that there exist credit terms that clears the market. In assuming that loans and advances remains constant, the interest rate then becomes the price (credit term) that clears the market. However, a rise in loan demand given a certain

customer base level will spike a surge in interest rate, vice versa. Ewert, Szczesmy & Schenk (2000) contends that arise in the default risk by borrowers will necessitate an increase in the interest premium to cover against any occurring losses arising from default in the future. The main thrust of this theory rest on two major factors; bank's income and interest rate. A higher interest rate means more income for banks, but a rise in interest rate makes borrower prone to default risk. Consequently, any rate above the optimal interest rate may lead to possible losses and less income for banks.

Empirical Review

The Effect of Deposit Money Banks Credits on SMEs Performance

However, Ubesie et al. (2021) have a look at the impact of deposit cash banks' credit score on small and medium scale organizations increase in Nigeria for the duration of 1986 to 2015, the use of normal least squares regression approach to examine the facts. It became determined that DMBs credit score to SME has no enormous impact on SMEs increase in Nigeria.

Muhammad, Olusegun, and Sonny (2022) tested a comparative evaluation of possible SMEs financing in Nigeria. The look at hired Net Present Value (NPV) method to decide whether or not traditional banks usury is greater possible than Islamic financial institution modaraba. The effects discovered that Islamic financial institution modaraba has a effective and better NPV than traditional financial institution usury toward financial increase.

Ubesie, Onuaguluchi, and Mbah (2021) ascertained the impact of deposit cash banks' credit score on small and medium scale organizations increase in Nigeria. An ex- put up facto studies layout which hired secondary facts sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin 2015 and the National Bureau of data (NBS) for the length 1986 –2015 become followed. The normal least squares regression approach becomes used with the evaluation of the facts after carrying out a stationary check at the variables. The look at reveals out that deposit cash banks 'credit score to small and medium scale organizations has no enormous impact on small and medium scale organizations increase in Nigeria. Again, the end result suggests that deposit cash banks' credit score to the personal quarter has an enormous impact on small and medium scale organizations increase in Nigeria. The end result additionally suggests that financial institution hobby price has a extreme enormous impact on small and medium scale organizations in Nigeria.

Muhammad, Olusegun, and Sonny (2022) the look at provides a comparative evaluation of the greater possible SMEs financing in Nigeria. The look at incorporates the NPV method to decide whether or not traditional banks usury is greater possible than Islamic financial institution Mudarabah financing for SMEs increase and innovation ijariie.com 2930 Results primarily based totally at the distinction among the existing price of whole loans receivable and the discounted loans payable from 2000 – 2021 sampled periods confirmed that Islamic financial institution Mudarabah has an effective and better NPV for that reason it's miles a

long way higher and greater profitable for organizations to develop and innovate than the usury supply of finance.

Udobi-Owoloja, Iyiegbuniwe (2020) examined the impact that bank credit facilities have on agro-based SMEs' performance in Nigeria during the period of study (1982-2016). The regression result of the analyzed secondary data collated, showed that access to credit facility positively influence Agro-based SME this negativity affects the Gross Domestic Product (GDP) in the long run. The study recommended that adequate funding and conducive environment should be made available for Agro-based SMEs in Nigeria to grow facility positively influence Agro-based SMEs in Nigeria, but poor infrastructure negatively affects it. As a result, this negativity affects the Gross Domestic Product (GDP) in the long run. The study recommended that adequate funding and conducive environment should be made available for Agro-based SMEs in Nigeria to grow.

Bhola (2020) researched on the influence of Micro Finance Banks on SMEs' growth in Nigeria. Forty-One (41) out of the Fifty (50) copies of questionnaires that was administered were analyzed with Pearson's Chi-square statistic. The findings revealed that financial institutions have a role in enhancing the growth of MSMEs in Lagos State notwithstanding the low level of entrepreneur's patronage of microfinance banks due to the exorbitant interest rate. It was further established that the cut-throat lending conditions imposed by banks poses a major hindrance to entrepreneurs' willingness to patronize loan services of bank.

Using 30 Vietnamese commercial banks, Nguyen (2020) tested the impact of commercial bank development on economic growth in Vietnam. The research data were compiled using the WDI and the annual reports of commercial banks for the year 2017 to 2018. the results of the study show the critical role that commercial banks played during this period of Vietnam's economic progress.

Deposit Money Banks services and Economic Growth in Nigeria was investigated by Adebisi and Ewa (2020). Between 1984 and 2017, time series data were collected from the CBN statistic bulletin. It also showed low short- and long-term effect of interest -s long term effects of total bank deposit on the rate spread and negligible short -long term

Theoretical Framework

This section deals with some of the various theories relating's to the financial structuring of SMES. The theories discussed under here are the bank capital channel model, the loan pricing theory, and pecking order theory and agent reveal that in order to sustain increase participation of skill entrepreneurs .in the credit and other financial service delivery to the small and medium enterprises in the bank sector, central bank of Nigeria (CBN) is the forging ahead in its determination to develop a pool of articulate and well focus entrepreneurs through setting up one entrepreneurship development center (EDC) in each of the six geo- political zones in the country.

Pecking Order Theory

The proponents of the Pecking order theory contended that managers prefer financing from retained earnings, followed by debt, and then equity. It served as the underlying theory that used to reflect on the sourcing of Deposit money banks credit by SMEs in Nigeria. The proponents of the pecking order theory specified funding demands are within the limits of the accessibility of funds because the accessibility of funds is governed by different amount of information asymmetry and related agency costs included in the various sources of finance. Pecking order theory became one of the most influential theories of corporate capital structure (Degryse, Goeij & Kappert, 2010). SMEs seem to adjust their investment plans to the principles of the pecking order approach and could use a form

Capital Structure Theory

Debt is the component of capital loaned by other parties or investors and subject to repayment. Small businesses rely on internal sources for financing business projects (Kausar, Nazir & Butt, 2014).

Research Methodology

This section presents the methodology used for the study. It described the methodological framework used in attaining the stated objective of the study. The focus was on the research designs, which stated that, the survey design adopted by the study. and it was also described the instruments used for the collection of data, and the questionnaire, the identification of population for study and the sample size determination. The section described the sampling techniques used for the study, technique used to analyze the data collected, the validity of the research instrument.

Sources of Data

The data used for the study are secondary data covering the period 1981 to 2022. The data are sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin, 2021; various issues of CBN Annual Reports; the National Bureau of Statistics, 2021; and World Bank World Development Indicators (WDI), 2022.

Model Specification

This study applied bank lending theories for the validation of statistical result and uses multiple variable regression test in order to undertake an assessment of the effect of financing of SMEs profit performance in the Nigeria. The captured independent variables this work include; credit to SMEs, aggregate Deposit money bank financing of SMEs loans, money supply, lending interest rate, and inflation while the dependent variable focused on profitability is used as proxy for SMEs' performance.

The functional relationships of variables and the regression equation of the dependent and independent variables are stated below;

$$Y=F(Xa)$$

$$Y= F (X_1, X_2, X_3,..X_n)$$

$$SMEC =F (SMECR, DMBF, MS, INT, INFL) \dots\dots\dots (1)$$

$$SMEC = \beta_0 + \beta_1CRSME + \beta_2DMBF + M_2 + \beta_3M_2 + \beta_4INT + \beta_5INFL + \mu \dots\dots\dots (2)$$

Where;

$$SMEC= F (SMECR + DMDF + M_2 + LINT + INFL + \mu) \dots\dots\dots(2)$$

SMEC = SMEs profit

SMECR = Credit to SMEs

FSMEs = Aggregate Deposit money banks financing

M₂ = Money Supply

LINTR= Loan Interest rate

INFL= Inflation

B₀ = Constant Term

B₁- B₅- Coefficient

μ= Error Term

Prior Expectations: The research depended on bank lending theories for the validation of statistical result. It is expected that credit to SMEs money supply should be positive sign while interest rate should be negative.

β₁, β₂, β₃, β₄, β₅ are the relative slope coefficients and partial elasticity of the parameters.

ARDL Form of the Model

In its basic form, an ARDL regression model is specify thus:

$$\Delta y_t = \alpha_0 + \beta_i y_{t-1} + \lambda_k \sum_{k=1}^k \Delta SR_{k,t-1} + \sigma_k \sum_{k=1}^k LR_{k,t-1} + \mu_t \dots\dots\dots(3)$$

Where: Δ denotes first difference of variable, μ_t is a random "disturbance" term, _{is} the dependent variable, while SR is the short-run dynamics of explanatory variables, LR is the long-run dynamics of the explanatory variables. β, λ and σ are the parameters to be

estimated; α₀ is the constant parameter (Bahmani-Oskooee. & Fariditavana. 2016) and (Onyeoma & Ozor 2022)

The ARDL form of the model to explain the dynamic relationship between balance of payments and its determinants is specified as follows:

$$\begin{aligned} \Delta SMEP_t = & \alpha_0 + \delta_1 + \delta_2 DMBFs_t + \delta_3 M2_t + \delta_4 LINTR_t + \delta_5 INFL_t \\ & + \sum_{i=1}^{p-1} \psi_i \Delta SMEC_{t-i} + \sum_{i=1}^{q_1-1} + \sum_{i=1}^{q_1-1} \varphi_2 \Delta DMBF_{t-i} + \sum_{i=1}^{q_1-1} \varphi_3 \Delta M2_{t-i} \\ & + \sum_{i=1}^{q_1-1} \varphi_4 \Delta LINTR_{t-i} + \sum_{i=1}^{q_1-1} \varphi_5 \Delta INFL_{t-i} + \theta ECM_{t-1} \xi_t \end{aligned} \quad (4)$$

Where all the variables are as earlier defined.

Data Presentation and Analysis

Descriptive Statistics

The descriptive statistics of the variables of the study are presented in Table 4.1. The statistics include the mean (average), median, maximum, minimum values, Jarque-Bera statistics, amongst others.

Table 4.1: Descriptive Statistics of Variables

	SMEC	M2	LINTR	INFL
Mean	542.4432	5311597.	17.22055	16.82645
Median	314.0934	1457682.	17.38000	14.88503
Maximum	1974.272	16032174	29.80000	76.75887
Minimum	0.968600	15541.00	9.040000	0.224801
Std. Dev.	617.3969	6211122.	4.586710	12.97357
Skewness	0.872603	0.597139	0.376166	2.880716
Kurtosis	2.475514	1.534327	3.442459	13.07538
Jarque-Bera	5.811448	6.255365	1.333101	235.7377
Probability	0.054709	0.043819	0.513477	0.000000
Sum	22782.62	2.23E+08	723.2633	706.7107
Sum Sq. Dev.	15628337	1.58E+15	862.5544	6900.854
Observations	42	42	42	42

Source: Author's computations using EViews 9

Profit performance of SMEs statistic averaged N542.44 million and ranged between N0.97 million and N1.97 billion. The coefficient of skewness and kurtosis as well as the p-value of the Jarque-Bera which is close 0.05 indicates that the series is normally distributed. Mean (average) credit to SMEs within the period was N48.53. Its minimum value was N10.74 billion, while its maximum value was N123.93 billion. The p-value of the Jarque-Bera statistic (which is greater than 0.05) suggests that the series followed a normal distribution. Inflation rate (INFL) averaged 16.82% and ranged from 0.22% to 76.85%. The series is not normally distributed as indicated by coefficient of skewness, kurtosis and the p-value of the Jarque-Bera statistic which is less than 0.05. Money supply (M2) averaged N5.31 billion and ranged between N15.54 million and N16.03 billion within the period under consideration. The Jarque-Bera statistic with a p-value close to 0.05 indicate that the series is normally distributed. Lending interest rate averaged 17.22 % and ranged from 9.04 % to 29%. The Jarque-Bera statistic with a p-value higher than 0.05 indicate that the series is normally distributed.

Correlation Analysis

The pair-wise correlation coefficients of the variables are presented in Table 4.2. It shows the relationship between pairs of the variables. They however do not measure causal relationships or effects.

Table 4.2: Correlation Matrix

	SMEC	M2	LINTR	INFL
SMEC	1			
SMECR	0.496108			
M2	0.920609	1		
LINTR	-0.139639	-0.201002	1	
INFL	-0.141835	-0.133167	0.1342829	1

Source: Author's computations using EViews 9.

Table 4.2 shows that DMBF and M2 are positively correlated to SMEC, though the relationships between the pairs are of varying degrees as reflected by the correlation coefficients. The implication of the positive correlation coefficients is that the variables DMBF and M2 move in the same direction as SMEC. However, the correlation between SMEC and LINTR, SMEC and INF are negative, and weak. These suggest that these variables move in opposite direction with SMEC. All the variables of analysis are inversely correlated with lending interest rate and inflation. This suggests that within the period under consideration, decrease in INF and LINTR is associated with increase in SMEC.

Unit Root Result

As a preliminary step to empirically investigate the deposit money bank credit to SMEs and profit performance of SMEs in Nigeria, unit root test was conducted on our focus variables. An augmented Dickey Fuller (ADF) test unit root test was employed for this purpose. The results of the tests are presented in Tables 4.3.

Table 4.3: Unit Root Test Analyses Result

VARIABLES	ADF Test Statistics	5% Critical Value	Order of Integration
SMEC	-4.070740	-1.949609	I(0)
INF	-3.094009	-2.935001	I(0)
DMBF	-3.036865	-2.935001	I(0)
MS	-8.898646	-3.529758	I(1)
LINTR	-11.97424	-3.526609	I(1)

Source: Authors Computation using E-Views 9

From the unit root result summarized in the table above, credit to SMEs, money supply (MS) and lending interest rate (LINTR) are all stationary at first difference while SMEs profit

(SMEC), inflation (INF) and deposit money bank loans (DMBF) are stationary at level form judging from our decision rule since the ADF statistics is greater than the 5% level of significance in absolute value. Not having a stationarity time series data indicates not having a short run relationship among the individual series. Therefore, since the entire variables are not stationary at level form, there is a need to conduct a co-integration test to test for the long run relationship of the variables.

Conclusion

The study examined the deposit money banks financing and SMEs profit performance in Nigeria from 1981 to 2022 using autoregressive distributed lags techniques of analysis. The conclusion reached based on finding revealed indicate that credit to SMEs, aggregate deposit money banks financing, and lending interest rate have impact on the profit performance of SMEs in Nigeria. Thus, they are therefore suitable variables for capturing SMEs performance in Nigeria. Attention should be focused on the identified variables and policies geared towards effective implementation to boost SMES Penetration considering that Nigeria is a developing country. Again, money supply, lending interest rate and inflation should be targeted in the implementation of monetary policy to influence the level of economic activities to create the conducive atmosphere to develop the SMEs in Nigeria. Financial sector development and financial deepening should be encouraged by monetary authorities and regulators to re-invigorate and improve the development of deposit money banks in Nigeria. This of course play the key role of loan creation and administration that will impact on the SMES in Nigeria.

Recommendations

Owing to the findings of this study, the following policy recommendations have been proffered;

1. Evidence from the study reveals that credit to SMES has a role to play in determining the profit performance of the SMES; the government should prioritize credit creation and administration strategies to SMEs in order to improve the profit performance of the SMEs in Nigeria
2. Aggregate deposit money bank loans improved SMEs performance; the monetary authorities and regulators should guarantee, re-invigorate and improve loans schemes by deposit money banks in Nigeria. This of course will play the key role of loan creation, securitization and administration that will impact on the SMES in Nigeria.

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