

Commercial Banks' Credit Accessibility and Small and Medium Enterprises Growth in Nigeria(1980-2015): The Internal Factors Perspective

Odumesi, A. O¹. &Egwakhe, A. J².

Department of Business Administration and Marketing School of Management Sciences, Babcock University

Corresponding Author: Odumesi

Abstract: Small and medium enterprises (SMEs) are ingredients for poverty reduction, economic growth, and development. Despite the scholarly documented advantages, SMEs' contributions to economic development in Nigeria have remained muffled due to lack of access to finance. This study examined the effect of banks' internal factors to credit accessibility on SMEs' growth in Nigeria. Ex-postfacto research design was adopted and data were sourced from the Central Bank of Nigeria's annual statistical bulletins, banks' audited annual reports, and National Bureau of Statistics. Multiple regression equation was developed and data analyzed with findings revealing that banks' internal factors to credit accessibility had effect on SMEs growth in Nigeria but bank size ($\beta = 0.014 = 2.028, p < 0.05$) was significant. The study concluded that credits accessibility to SMEs growth is subject to banks' total asset hence, recommended strengthening banks' capital base as this increases the banks' size and improve their lending ability to stimulate SMEs' growth.

Keywords: Credit accessibility, Banks' internal factors, SMEs, SMEs growth

Date of Submission: 11-03-2019

Date of acceptance: 27-03-2019

I. Introduction

Small and medium enterprises are economic catalyst lubricating and driving many economies, particularly in developing countries with contributions revolving around 60% of total employment and 40% of national income in the formal sector according to World Bank Report (2015). The report further estimated 600 million jobs needed in the next 15 years to absorb the upward growth in global workforce emerging from Asia and Sub-Saharan Africa (World Bank Report, 2015) which will emerge from SMEs' activities. The significance of SMEs as engine of economic growth is however trivialized and truncated by credit inaccessibility (Afolabi, 2013), hence challenging their power to grow and sustain development in Nigeria. The issue is reoccurring and the debate is becoming Tom and Jerry-mentality as policy makers, banks, and SMEs' operators trade blames with references to credit availability, accessibility, and affordability.

As identified by Afolabi (2013), one of the problems faced by SMEs operators in Nigeria is financing which the work attributed to their non-inclusion in policy formulation as priorities are given to large organizations. Statistical records from Central Bank of Nigeria [CBN] (2015) shows that commercial bank loan to SMEs as a percentage of total credit to the economy was 48.8% in 1997 and decreases to 8.68%, 0.85% and 0.14% in 2002, 2007 and 2010, while 2012 and 2015 recorded 0.15%. Consequently, many SMEs in the country have continued to rely heavily on internally generated funds which, has limited/reduced their scope of operations (Imoughele & Ismaila, 2014). A deconstructive analysis of the context seems to indicate that banks' internal factors hindered their credit accessibility to SMEs which indirectly hampered the growth of SMEs.

Banks' internal factors of credit accessibility to SMEs towards engendering growth have become a global issue that has stirred up polarized constructive debates among academicians (Bean, 2017; Ejikeme, 2013; Wang, 2016) and policy makers (Decker, 2013; Soludo, 2004) for many decades. The debate elicits conservative perspective (Asuguo, 2012) and liberal approach regarding banks' size, credit risk (Decker, 2013), interest rate threshold (Crowley, 2007), and liquidity power (Ahokpossi, 2013). The argument is focused mainly on accessibility and affordability with reference to risk, rate, moral hazard, and size as seen in the work of Osano and Languiton (2016). Nyanzu and Quaidoo (2017) took the discourse to disparity between SMEs' investors with accessibility burden more pronounced than large firms which indirectly limits SMEs' operations and growth.

Nevertheless, a convergence exist with regard to commercial banks' functions; established to provide financial services by mapping, mopping deposits, disbursing or granting credit/loans, overdraft and other basic investment activities as economic agents of capital mobilization and distribution (Soludo, 2004). This act of mopping finance from areas of surplus and supply to zones of deficit is both economic and moral duty to sustain entrepreneurs. The act generates financial returns for banks through transactions which is considered the most

profitable and liquid asset to maintain their liquidity obligation to their numerous stakeholders (Malede, 2014). However, the loan amount dedicated to SMEs from deposit money banks is approximately 0.15% in Nigeria (CBN Statistical Bulletin, 2015). With reference to credit accessibility, CBN (2015) indicates that throughout the regulatory era, deposit money banks' loans and advances to the SMEs deviated persistently from prescribed minimum threshold. Further, following the financial reforms of the 1986, credits to SMEs as a proportion of total banking credits has not improved significantly.

There is no doubt that the main source of lending is deposit or money accepted from depositors. Nevertheless, the amount to be granted as credit is a function of certain percentage of the total deposit and the remaining is warehoused as cash reserved for liquidity maintenance. Imoughele and Ismaila (2014) however indicate that policy strategies designed to attract credits to the SMEs by government has remained unattractive for bank credits supply. This position is viewed from banks' internal factors which has not received enough scholarly attention. In view of the above, the problem this work addressed is banks' internal factors credit access and SMEs' growth in Nigeria 1980-2015. The work is thus structured along introduction, literature review, methodology, results presentation, and conclusion and recommendation.

II. Literature Review

This work sought scholarly positions on the constructs, theories, and findings to detailed insight on the variables of the study. The concept of bank size is fluid and subjective without a restricted construct definition pillared on total deposits or total assets (Al-Quadah 2013). In this regard, the number of branches, employees (Edmiston, 2010), and depositors were not considered as proxies for banks' size but total assets. In most finance literature (Ejikeme, 2013; Obasan, 2012; Wang, 2016), banks' total assets was used as a proxy for bank size. Banks' under capitalization was seen as a liability (Dilger, 2018), thus controlled the possibility that large banks are more likely to have greater product and loan diversification. Similar perspective was presented by Nyanzu and Quaidoo (2017) for large firms' ability to bargain more effectively, administer prices and in the end realize significant higher prices for their product. As such, the paper used bank size as the natural logarithm of total asset.

The utilization of bank size was to leverage on economies or diseconomies of scale (Wang, 2016) which controls for cost differential in product and risk diversification (Asuguo, 2012; Soludo, 2004). The theoretical assumption connects banks' size and bank profitability which provided a significant economies of scale (Bikker & Hu, 2002; Goddard, Molyneux, & Wilson, 2004) thesis with lending. The second assumption was a negative one, if increased diversification leads to lower credit risk and thus lower returns (Goddard et al., 2004), lending becomes unattractive. Other researchers however concluded that marginal cost savings can be achieved by increasing the bank's size, especially as markets develop (Berger, Hanweck & Humphrey 1987; Miller & Noulas, 1997).

Eichengreen and Gibson (2001) however cautioned that the effect of a growing bank's size on profitability may be positive up to a certain limit, beyond which the effect becomes negative due to bureaucratic and liability of size. Hence, the size-credit accessibility maxim may be expected to be non-linear since other latent factors influence lending decision. Moreover, small business loan interest rates depend more on market structure vis-à-vis the size of the bank providing the credit, with markets dominated by large banks generally charging lower prices (Berger, Rosen & Udell, 2001). In other words, market rate inform a bank's interest rate while the bank's size structure affect the way the banks compete to serve the loan demanded by SMEs.

The economics school of thought viewed interest as compensation received for deferring consumption, and or the cost of borrowing (Berger et al., 1987), or hedging against inflation and future value of money (Berger et al., 2001). This implies that savings rather than spending has implication, or the cost of consuming when resources are not available, which Obasan (2012) equated with credit card to make a purchase rather than first saving the money. Asuguo (2012) contributed to the concept clarification through an illustration that interest connotes a deliberate decision to spend immediately or save for the future which similarly affect decision in domain of financial deficit. The decision on spending, saving, borrowing, or refraining from spending is usually a complex one as some individual may require a greater incentive to save (Bean, 2017).

Sunday (2012) sees interest rate as the economic reward accrued to institutions who provided the funds with which capital goods are bought. From the financial perspective, interest rate describes the amount charged which is expressed as a percentage of principal, by a lender to a borrower for the use of assets (Crowley, 2007). As such, interest is charged by lenders as compensation for the loss of the asset's use. Higher interest rates cause appreciation, while cutting interest rates tends to cause depreciation. Interest rate is profit over time attributed to financial instruments (Asuguo, 2012; Bean, 2017). The interest rate is determined by the forces of demand and supply of capital and for the condition that demand and supply of funds are equal. As a result, interest level is arrived at by the intersection between savings and investment (Sunday, 2012).

Liquidity ratio is loan-to-deposit ratio (LTD) expressed in percentage (Nzioka, 2012). When a high ratio is recorded, it implies that banks may not be earning as much as they should. From the perspective of the bank, liquidity ratio assesses cash availability by dividing total loans by its total deposits (Nzioka, 2012). This enables banks' geographical expansion and probably determines the lending practices of financial institutions (Soludo, 2004; Decker, 2013). Upward review of liquidity ratio by monetary authority (Wang, 2016) implies an enhancement on the part of banks to make credit available to prospective borrowers while the reverse is the case when the rate is reduced (Ejikeme, 2013). However, since banks are not directed to benefit from such development, preference is accorded borrowers with high returns within a short period (Olokoyo, 2011).

Liquidity ratio connotes the ability of a company to pay off its current liabilities as they become due as well as their long-term liabilities as they become current (Nzioka, 2012). Qasim and Ramiz (2011) indicated that liquidity refers to the available cash for the near future, after taking into account the financial obligations corresponding to that period. Liquidity risk entails the probability of organization inability to make its payments to creditors (Bethune, 2017), as a result of the changes in the proportion of long/short term credits and or lack of correlation with the structure of organization's liabilities (Ahokpossi, 2013). Liquidity is particularly important to shareholders, long-term lenders and creditors, as it provides information about a particular business's safety margins afforded to creditors and its ability to repay loans (Decker, 2013). The levels of inventory, credit, accounts payable and cash that form part of the overall cash flow of a business affect the liquidity of the firm (Ahokpossi, 2013; Olokoyo, 2012; Maness, 1994).

According to Nzioka (2012), liquidity ratio measures a business' ability to meet the payment obligations by comparing the cash and near-cash with the payment obligations. If the coverage of the latter by the former is insufficient, it indicates that the business might face difficulties in meeting its immediate financial obligations. This can, in turn, affect the company's business operations and profitability (Decker, 2013). However, there are some contradictions observed in the liquidity tool application in spite of the effort of the monetary regulatory authority to stimulate lending to SMEs. Some other policies contradict this resulted into liquidity squeeze. Small and medium business finds it difficult to access credit, as banks prefer the interest paid by Central Bank which is tax free according to Chimucheka and Ellen (2011).

Risk is the probability or threat of damage, injury, liability, loss, or any other negative occurrence that is caused by external or internal vulnerabilities, and that may be avoided through preemptive action (Bethune, 2017). According to Faten, Chantal and Ado (2016), financial risk is decomposed into basic risk, capital risk, country risk, default risk, delivery risk, economic risk, exchange rate risk, interest rate risk, liquidity risk, operations risk, payment system risk, political risk, refinancing risk, reinvestment risk, settlement risk, sovereign risk, and under writing risk. A credit risk is the risk of default (Bethune, 2017; Decker, 2013) on a debt that may arise from a borrower failing to make required payments. In the first instance, the risk is that of the lender and includes lost principal and interest (Al-Quadah, 2013), disruption to cash flows, and increased collection costs (Crowley, 2007).

One of the stocks-in-trade of banks is to lend to customers (Soludo, 2004) depositors' or shareholders' money that can be called back at any time. Due to this business model, banks have to continuously make choices on whom to lend money in safer way, i.e. manage credit risk. Credit risk has a substantial influence on banks stability since it measures and controls hazard effects of uncertainty. Carling, Jacobson, Linde and Roszbach (2007) reported that macroeconomic variables should be included into credit risk analysis since they have considerable influence on the changes of credit risk at the aggregated level. Negative changes of macroeconomic variables are usually treated as external negative shocks (Decker, 2013). External negative shock can be interpreted as the negative difference between the real and expected value of macroeconomic parameters. Negative shock can be spurred by the change of any macroeconomic parameter (Carling et al., 2007).

Theoretically, supply-leading theory provided robust perspective as propounded by Schumpeter (1911) to explain the interactions between finance and economic growth. The theory assumes that financial development/deepening is the driver of economic growth (Berger et al., 1987). As such, the existence of financial institutions enables economic power to deepen the supply of financial instruments or assets, and or related financial services in advance of demand. Through such entrepreneurial behaviours of mopping and disbursing, banks provide efficient allocation of resources from surplus units to deficit units (Calderon & Liu, 2003), thereby leading the other economic sectors in their growth process (Patrick, 1966). The principal function of the financial sector is to mobilize and deploy financial resources between different units in the economy through the process of financial intermediation (Calderon & Liu, 2003; Gurley & Shaw, 1967; King & Levine, 1993; McKinnon, 1973).

Supply-leading theory's construct and content performs two functions; transfers resources from traditional sectors to organic sectors and stimulates entrepreneurial response (SMEs) in and to the organic sectors. Hence, this work presumed that financial institutions' activities serve as useful instruments for expanding and increasing the productive capacity of the SMEs in an economy. Pillared on this perspective, the countries

with better developed financial system tend to grow faster in this aspect provided the SMEs have access to finance. This position is similar to Schumpeter (1911) who supported finance led causal relationship between financing and small-medium enterprises economic growth.

However, Robinson (1952) pioneered a contradictory view that financial deepening is dependent on growth that occurs in the economy. This stance is embedded in the demand-following or growth-led finance hypothesis. The implication is that causality is from economic growth to financial development. Patrick (1966) came up with another dimension to the link between financial deepening and economic growth, which is referred to as stage of development hypothesis that incorporates the supply-leading and demand-following hypothesis. It is posited that the causal link between financial development and economic growth alternates as the economy develops. Thus, according to Patrick (1966), the supply-leading hypothesis holds in an economy in the early development stage, and as the economy grows, it fades away and the demand-following hypothesis prevailed. It should however be emphasized that the rationale for the supply-leading approach to the development of a country's financial system and overall economic growth, lies in its potential benefits to the economy in stimulating real economic growth/development through SMEs.

Analysts like Berger et al (1987), Calderon and Liu (2003) asserted that the supply-leading theory presents an opportunity to induce real growth by financial means. The development application is result-oriented at the early level of a country's development than later. Also, Gerschenkron (1962) stated that the more backward the economy relative to others in the same time period, the greater the emphasis on supply-leading finance. Several researchers have supported their findings using this theory, for example, McKinnon (1973) return on the marginal new investment, financial-led economic growth and as such access to finance becomes a necessary tool in encouraging the small-medium enterprises growth.

Empirically, scholars (Malede, 2014; Wang, 2016; Bean, 2017) have presented scientific but divergent perspectives with inconclusive results with reference to effect of internal factor of deposit money banks' credit accessibility on SMEs growth. The discourse varies along bank's size, interest rate, liquidity ratio, and credit risk to SMEs' growth. Salas and Saurina (2002) contributed to the debate that balance sheet robustness allows managers to invest in different geographical or business portfolios towards cushioning asymmetric shocks. This is also in line with Rajan and Dhal (2003) whose study indicated that, bank size has significant effect on occurrence of nonperforming loan. Furthermore, Malede (2014) found a positive statistically significant relationship between commercial bank lending and its size which is consistent with the finding of Cole (2004).

However, Olutoye (2015) revealed that there is no significant relationship between bank size and loan to SMEs in Nigerian Banking sector which contradicted previous submission (Salas & Saurina, 2002; Malede, 2014; Rajan & Dhal, 2003) having found an inverse relationship between bank size and the propensity of banks to lend to small and micro businesses. This supports the position of Yan, Mingao, Zhong and Ying (2009) that total bank asset is an insignificant factor for banks' decision on SMEs' lending, however, local lending authority transcends to more competition, incentive schemes, and stronger law enforcement encourage deposit money banks to lend to SMEs. Attesting to the above, the study of Shen, Xu and Bai (2009) found that bank size is an insignificant factor for banks' decision on SMEs lending.

The study of Fatoki (2014) found variability of bank profits with bank size. This was a contradiction to Shehzad, Haan and Scholtens (2013) that expanded the discourse with the interaction between size, growth and profitability of banks and found that bank size and profitability to be inversely related which Yan et al (2009) sustained. The studies (Shen, *et al.*, 2009; Paul, 2013) suggest that bank size does not necessarily need to decrease small enterprises. Similar to this assertion is the Nigeria banking reform that was carried out in 2015 which led to the emergence of large banks that resulted into new credit products development, yet SMEs were not favoured (Yamori, 2008). Berger and Udell (2001) also found that apart from bank size consideration, lending to SMEs may be difficult due to informational opaqueness, moral hazard and adverse selection problem (Ahokpossi, 2013). Sharing same view, Elyasiani and Goldberg (2004) suggested that large banks and small banks may have different comparative advantages in utilizing different lending technologies.

The aspect of interest rate was investigated by authors (Crowley, 2007; Obasan, 2012) in relation to SMEs growth. Cyril, Onuaguluchi and Mbah (2017) investigated the effect of interest rate on the development of SMEs and found that 73% of small firms in Libya depend on informal financial sources and only 11% of the firms are applying for bank loans. It becomes explicit that the imposed interests on loans by banks limit the application for formal loans by SMEs and this adversely affects their growth. Corroborating the finding of Cyril et al (2017) is the finding of Afolabi (2013), Dada (2014), Imoughelu and Ismaila (2014), and Onyeiwu (2012) that interest rate have adverse effect on SMEs' output. In congruence, Bello and Mohammed (2015) found that bank lending rate, exchange rate and monetary policy have positive and significant effect on SMEs' performance in Nigeria. Aligning with the findings of Bello and Mohammed (2015) is the work of Bawuah, Yakubu, and Alhassan (2014) that micro, small and medium scale enterprises resort to equity financing in order to avoid the high interest rate of banks which also conforms with the position of Badri (2016).

Finding of Akterujjaaman (2010) revealed that entrepreneur prefer informal loan providers due to high interest charged by banks which discouraged them from accessing bank loans. In similar position, Tsai and Chang (2012) shown that borrowing firm are disadvantaged by bank relatively high interest rate. This attested to Obasan (2012) position that interest rate has significant influence on the lending behavior of banks and the borrowing willingness of firms. This compliments the work of Psillakiet al (2010) that bank lending rate increases the risk of default by the borrowing firm. More so, the inability to increase interest rates for operational SMEs contributed to unwillingness of these banks to grow their SMEs portfolio.

While interest rate discourse is vital, the banks' liquidity ration cannot be trivialized. Eljelly (2004) empirically examined the relationship between profitability and liquidity, but confirmed a significant negative relationship between the firm's profitability and its liquidity level, as measured by current ratio. This however, becomes more pronounced for firms with high current ratios and long cash conversion cycles. Supporting the above finding, Ben-Caleb, Olubukunola and Uwuigbe (2013) found that current ratio and liquidity ratio are positively associated with profitability which negates the finding of Eljelly (2004), while cash conversion period is negatively related with profitability of manufacturing companies in Nigeria. Hence, Ben-Caleb, Olubukunola&Uwuigbe (2013) prescribed that the state of liquidity should be improved by establishing more realistic credit policy which would engender shorter cash conversion period (CCP), hence have a favourable impact on the profitability of the company.

Lamberg and Valming (2009) approach on liquidity management to profitability discovered that the adaptation of liquidity strategies do not have a significant impact on profitability measured by return on assets (ROA). In other word, frequent monitoring and forecasting on liquidity can provide gains in profitability. Bhunia, Khan and Mukhuti (2011) demonstrated that there exist a high positive relationship between liquidity and profitability, but working capital in terms of liquidity accounts for poor capacity; underutilization and poor consumption. The position of Bhuniaet al (2011) has sustained the work of Gill, Biger and Mathur (2010) that a positive significant relationship exist between cash conversion cycle and profitability among firms in the United States. Similarly, Olokoyo (2011) contributed to the discussions by showing that liquidity ratio has positive functional relationship with Deposit money banks loan and advances.

Bank's credit risk was factored into the internal components since a small number of customers can generate large losses which can lead to insolvency (Bessis, 2002). Although lending is the core functions of banks, assessing a borrower's credit worthiness has always been the only method of lending decision (Fight, 2004). Nigeria financial institutions are exposed to high risk of loans default and the higher accumulation of unpaid loans is unending. This implies that loan losses produce lower returns which Miller andNoulas (1997) observed. Chodecal (2004) therefore stressed that, banks' lending decisions is influenced by borrowers' relationship, trust, accurate understanding of borrower's business, and financial situation. Malede (2014) discovered a significant positive relationship between commercial bank lending and credit risk. This finding contradicted Misker (2015) who examined credit risk management impact on profitability of banks in Ethiopia with findings indicative negative relationship.

However, Adedeji, Ikumapayi, Taiwo and Akpevwe (2018) associated inadequate loan supervision and monitoring as the major cause of SMEs' bad debt. Among other risks faced by banks, non-performing loan (Ahmad & Ariff, 2007) credit risk plays an important role on banks' profitability since most banks' revenue accrues from loans are interest derived (Abid&Lodhi, 2015). However, interest rate risk is directly linked to credit risk (Bikker& Hu, 2002) which implies that high or increment in interest rate increases the chances of loan default. Credit risk and interest rate risk are intrinsically related to each other and not separable (Drehman, Sorensen, & Stringa, 2008), hence discouraged lending to SMEs.

III. Methodology

The study adopted an *ex-post facto* research design by collating and analyzing secondary data. The *ex-post facto* research design was chosen since it examines facts after their occurrence with interference. The thrust of the work was to determine the effect of the independent variables on the dependent variable so as to deepen insight. Data were gathered from CBN statistical bulletin and banks' reports for over a period (1980-2015) on bank size, bank's interest rate, liquidity ratio and credit risk and SMEs' growth was proxy by contribution to GDP. The validity of the data was ascribed to the legal framework that established the institutions and the audited financial reports of the banks which validate their dependability. The decision to focus on this period (1980-2015) was informed by political (military and democratic regimes) and economical (Structural Adjustment Programme, Bank Reform, Privatization and era of globalization) reasons. The data as sourced were subjected to pre and post diagnostic test. The data were log which Cameron (1994) suggested that when data are transformed into logarithmic form, then efficiency of the results improves. The work built an econometric model similar to Malede (2014) where banks' internal factors *DMBCA* (bank size, interest rate, liquidity ratio and credit risk) and *SMEG* represents SMEs' growth were structured into a multiple linear equation.

Y = SMEG (SMEs'Growth).

X = Money Deposit Banks' Credit Accessibility Factor (Internalfactors)DMBCA, Where:

x_a = Bank Size (BS)

x_b = Interest Rate (IR)

x_c = Liquidity Ratio (LR)

x_d = Credit Risk (CR)

DMBCA = (BS, IR, LR, CR)

$Y_t = f(x_{at}, x_{bt}, x_{ct}, x_{dt})$

$SMEG_t = f(\beta_0 + \beta_{BS_t} + \beta_{2IR_t} + \beta_{3LR_t} + \beta_{4CR_t} + e_t)$

$$SMEG_t = \beta_0 + \beta_{1BS_t} + \beta_{2IR_t} + \beta_{3LR_t} + \beta_{4CR_t} + e_t \dots\dots (eq.1)$$

Where: β_0 = Constant Term

β_1 = Coefficient of Bank Size

β_2 = Coefficient of Interest Rate

β_3 = Coefficient of Liquidity Ratio

β_4 = Coefficient of Credit Risk

e_t = Error Term

The research null hypothesis thus states that deposit money banks' internal factors of credit accessibility have no significant effect on SMEs growth in Nigeria between 1980 and 2015. This means that the *A priori* expectation is Reject if $\beta_i \neq 0$ and $p \leq 0.05$; otherwise do not reject. The treatment of the data was subjected to ethical considerations in areas of non-falsification and manipulation of data. The data were not mined to suit the research purpose, rather undergone treatment to establish their authenticity both in results and interpretations.

IV. Analysis, Results, and Findings

An overview on the data set is provided in Table 1 of the analysis, with an attempt to describe the main features of the data. The descriptions of the data series were based on mean, maximum, minimum and standard deviations of all the variables so as to deepen insights into the data. Table 1 describes the basic features of the real data for the variables used in the study.

Table 1: Descriptive Statistics of the Variables

	BS	CR	IR	LR	SMEG
Mean	5.563333	24.95556	18.17944	46.16667	14.30806
Median	4.240000	21.20000	18.75000	45.40000	14.23500
Maximum	16.10000	50.00000	36.89000	65.10000	17.60000
Minimum	2.200000	3.000000	6.000000	29.10000	11.62000
Std. Dev.	3.570569	14.99014	7.856896	9.828966	1.313451
Skewness	1.492052	0.184031	0.340207	0.314170	0.235915
Kurtosis	4.284826	1.690554	2.372221	2.468979	3.026078
Jarque-Bera	15.83347	2.775177	1.285603	1.015190	0.334957
Probability	0.000365	0.249677	0.525817	0.601941	0.845795
Observations	36	36	36	36	36

Source: Computation by the Researcher, 2018

The results from the table indicate that the averages of the variables are 5.563333, 24.95556, 18.17944, 46.16667 and 14.30806 for bank size (BS), credit risk (CR) interest rate (IR), liquidity ratio (LR) and SMEG respectively. Generally, the mean values of the variables indicate that there are no outliers in the series since the standard deviation of the series is less than their respective series. On the other hand, the maximum values of the variables are 16.10000, 50.00000, 36.89000, 65.10000, and 17.60000 for bank size (BS), credit risk (CR), interest rate (IR), liquidity ratio (LR) and SMEs' growth and minimum values of the variables are 2.200000, 3.000000, 6.000000 and 11.62000 respectively.

The standard deviation showed that credit risk (14.99014) was the most volatile variable in the time series thereby posing the highest risk. This is followed by LR (9.828966) while SMEG (1.313451) was the least volatile of the time series thereby posing the lowest risk. Furthermore, all the variables except credit risk (CR) recorded excess positive kurtosis, suggesting that they individually posed lesser risk of extreme values. The wide range in the credit risk suggests that demand for the domestic currency could have increased significantly during the period leading to an upward adjustment (depreciation) of the currency. This could also have

depressed the growth of SMEs. In addition, the variables had positive skewness which implies that their actual values were likely to deviate upwards from their mean values.

The Jarque-Bera (JB) statistic rejected the null hypothesis of normal distribution for bank size (BS), at 5% critical value and the JB statistics is very high, indicating non-normality of the series while credit risk (CR), interest rate (IR), liquidity ratio (LR), and SMEG are normally distributed, their Jarque-Bera statistic could not reject the null hypothesis of normal distribution at 5% critical value, as their JB probability is greater than 5%. Therefore, bank size (BS) is log-transformed to attain its normality before further analysis. The tested hypothesis was Banks' internal factors to credit accessibility have no significant effect on SMEs' growth in Nigeria from 1980-2015 and the results are presented in Table 2.

Table 2: Regression Coefficients of banks' internal factors of credit accessibility on SMEs growth in Nigeria

Dependent Variable: Log (SMEG)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.660736	0.014386	184.9586	0.0000
D(BS)	0.014837	0.007314	2.028491	0.0515
D(IR)	0.001733	0.002682	0.646155	0.5231
D(LR)	0.001215	0.001430	0.849615	0.4023
D(CR)	0.002744	0.001778	1.543320	0.1332
R-squared	0.230025	Mean dependent var		1.278212
Adjusted R-squared	0.127362	S.D. dependent var		2.272677
S.E. of regression	0.084836	Akaike info criterion		-1.964627
Sum squared resid	0.215915	Schwarz criterion		-1.742434
Log likelihood	39.38097	Hannan-Quinn criter.		-1.887926
F-statistic	9.240579	Durbin-Watson stat		1.796893
Prob(F-statistic)	0.048215			

Source: Researcher's Computation (2018)

Table 2 shows the regression results of bank size, interest rate, liquidity ratio, and credit risk on SMEs growth in Nigeria. The regression output shows that the explanatory variables (bank size, interest rate, liquidity ratio and credit risk) explained approximately 23 percent variations in SMEs growth in Nigeria between 1980-2015. The value of the F-statistic (9.240579) shows that the equation has a good fit, that is, the explanatory variables are good explainer of changes in SMEs growth. This means that the combination of bank size, interest rate, liquidity ratio and credit risk was significant in predicting SMEs growth in Nigeria. This was supported by low value of standard error of regression (0.084836). Also, the reported probability of (0.048215) is less than the conventional probability of (0.05). The Durbin-Watson statistic indicates the absence of autocorrelation among the variables as the value of the Durbin-Watson statistic is 1.796893 which indicates the absence of serial autocorrelation. This has been confirmed by the Breusch-Godfrey Serial Correlation LM test that the series do not suffer from serial autocorrelation problem.

Further, Table 2 shows that bank size had positive effect on SMEs growth and significant to SMEs growth at 5% level of significance since the $p < 0.05$. This indicates that bank size had positive significant effect on SMEs growth; it means that increased in bank size (total assets) translated into credit availability for SMEs investors to finance operational activities and growth was achieved. Furthermore, it showed that one unit increase in bank size would cause about 0.014837 unit increase in SMEs growth. Interest rate had positive effect on SMEs growth but it was statistically insignificant to SMEs growth at 5% level of significance since the $p > 0.05$. This indicates that the lending rate was attractive to SMEs investors but was not a determining factor for SMEs' growth. The insignificant value of the coefficients suggests that a large portion of bank loans to SMEs are rather short-term instead of long-term due to mismatch between tenor of bank deposits and loans being sought. Also implicit in the result is banks' display of reluctance to lend to SMEs owing to perceived risk associated with SMEs. The result reports that a unit increase in interest rate would increase SMEs growth by 0.014837 units.

The coefficient of liquidity ratio was positive ($\beta = 0.001215$) which means that liquidity ratio had positive effect on SMEs growth but insignificant at 5% level of significance. Most banks with high volume of loans or retained liquidity levels in excess of what is required by law have shown reluctance in extending loans to SMEs. This means that the contribution of liquidity ratio to SMEs growth in Nigeria will not be significant.

The result reports that a unit increase in liquidity ratio leads to 0.001215 increase in SMEs growth which is insignificant.

Furthermore, credit risk had positive effect on SMEs growth and insignificant at 5% level of significance since $p < 0.05$. The coefficient of credit risk is 0.002744 ($\beta = 0.002744$, $p > 0.05$). This shows that credit risk had made loans to SMEs very unattractive and insignificant contribution to the SMEs growth. The banks have not made adequate loan available to SMEs investors as SMEs are considered highly vulnerable with high credit risk. The result reports that a unit increase in credit risks leads to 0.002744 increase in SMEs growth which is insignificant. From the regression estimate, the internal factor that had positive significant effect on SMEs growth was bank size ($\beta = 0.014837$, $p < 0.05$) and was retained in the final model. The regression equation thus:

$$\text{SMEG}_t = 2.660736 + 0.014837\text{BS}_t \dots\dots \text{Eq. (ii)}$$

According to the regression equation, all factors into account (bank size, interest rate, liquidity ratio and credit risk) constant at zero, the SMEs growth will be valued at 2.660736. Thus, the a-priori expectation is that the intercept could be positive or negative, so it conformed to the theoretical expectation. It also implies that there are other factors which might still explain SMEs growth. The result reveals a unit change in bank size will cause about 0.014837 unit increase in commercial bank credit accessibility. This result shows that deposit money banks' internal factors of credit accessibility have significant effect on SMEs growth in Nigeria but with bank size. Therefore, the null hypothesis which states that Deposit money banks' internal factors of credit accessibility have no significant effect on SMEs growth in Nigeria between 1980-2015 was hereby rejected.

From the results presented, it is evident that banks' internal factors of credit accessibility had significant positive effect on SMEs growth in Nigeria with bank size from 1980-2015. This validated and added value or credence to the finding of Ben-Caleb, Olubukunola and Uwuigbe (2013) that found liquidity ratio and bank size positively associated with SMEs growth. The result also corroborated the findings of Badri, (2006) that adopted the descriptive statistics in evaluating interest rate, growth and development of small and medium scale enterprises. However, the findings contradicted studies (Akterujjaman, 2010; Bello & Mohammed, 2015; Olusanya et al., 2012) that discovered interest rate has significant influence on loans and Bawuah et al (2014) that micro, small and medium scale enterprises resort to equity financing to avoid the high interest rate of banks which negatively affects their growth. Roman and Rusu (2011) posited that unwillingness of these banks to grow their SMEs portfolio informed the decision to increase interest rates for SMEs.

V. Conclusion and Recommendations

This study investigated the effect of deposit money banks' internal factors credit accessibility on SMEs' growth in Nigeria covering 1980-2015. The study provides conceptual and theoretical, insight to support the empirical evidence that bank internal factors of credit accessibility have significant effects on SMEs' growth in Nigeria. It was established that bank size controlled by total assets had positive significant effect. On the basis of statistical evidence, it was recommended that reform is needed in Nigeria banking sector and recapitalisation of the banking industry in Nigeria is necessary. This strengthens banks' capital base that will invariably increase the bank size leading to positive lending decision to SMEs.

References

- [1]. Abid, S. F., &Lodhi, A. (2015). Impact of changes in reserve requirement on banks profitability: A case of Deposit money banks in Pakistan. *European Journal of Business and Management*, 7(31), 1-6.
- [2]. Adedeji, A.B., Ikumapayi, T., Taiwo, J.N., &Akpevwe, G. (2018). The Evaluation of credit management on the performance of small scale enterprises in Nigeria *Proceedings of INTCESS2018-5th International conference on Education and Social Sciences*5-7 February 2018-Istanbul, Turkey.
- [3]. Afolabi, M. O. (2013). Growth effect of small and medium enterprises (SMEs) financing in Nigeria. *Journal of African Microeconomic Review*, 3(1), 1-14.
- [4]. Ahmad, N.H., &Ariff, M. (2007).Multi-country study of bank credit risk determinants. *International Journal of Banking and Finance*, 5(1), 135-152.
- [5]. Ahokpossi, C. (2013). *Determinants of bank interest margins in Sub-Saharan Africa*, IMF Working Paper WP/13/34. International Monetary Fund, Washington, DC.
- [6]. Akterujjaman, S.M.A (2010). Problems &prospects of SMEs loan management: A study on mercantile bank limited, Khulna Branch. *International Journal of Finance and Accounting*, 6(5), 117-132.
- [7]. Al-Quadah, A. Q., &Jaradat, M. A. (2013). The impact of macroeconomic variables and banks characteristics on Jordanian Islamic banks profitability: Empirical evidence *International Business Research*, 6(10), 153-162.
- [8]. Asuguo, A. I. (2012). Empirical analysis of effects of commercial bank managers and acquisitions on small business lending in Nigeria. *International Journal of Advancement in Research & Technology*, 1(6), 1-15.
- [9]. Badri, A. E. (2006). The reality of small and medium-sized projects in Libya, a symposium on growth and development of small and medium-sized projects in Libya, Centre for Economic Research, Benghazi. *Banking and Finance*, 7(1), 12-22.
- [10]. Bawuah, B., Yakubu, A.S., &Alhassan, M. (2014). The effects of Interest rate on micro, small and medium enterprises financing decision in WA municipality of Ghana. *International Journal of Business Humanities and Technology*, 4(1), 3-5.
- [11]. Bean, M.A. (2017). *Determinants of interest rates*. Being a study note prepared by education and examination committee of the society of actuaries, financial mathematics study Note. 3.

- [12]. Bello, A., & Mohammed, Z. (2015). Impact of banking sector credit on the growth of small and medium scale enterprises in Nigeria. *Journal of Resources Development and Management*, 1(15), 131-153.
- [13]. Ben-Caleb, E., Olubukunola, U., & Uwuigbe, U. (2013). Liquidity management and profitability of manufacturing companies in Nigeria. *Journal of Business and Management*, 9(1), 13- 21.
- [14]. Berger, A.N., Hanweck, G.A. & Humphrey, D.B. (1987). Competitive Feasibility in Banking: Scale, Scope, and Product Blend Economics, *Journal of Monetary Economics* 20, 501-520.
- [15]. Berger, A.N., Rosen, R.J., & Udell, G.F. (2001). The Effect of Market Size Structure on Competition: The Case of Small Business Lending. Mimeo. Board of Governors of the Federal Reserve System. 520.
- [16]. Bessis, J. (2002). Risk Management in Banking, John Wiley & Sons.
- [17]. Bethune, P. (2017). Undertaking risk management and ISO standards quality digest <http://www.qualitydigest.com/inside/risk-management-article/understanding-risk-and-ISO-standards-071717.html>. Retrieved on August 14, 2017.
- [18]. Bhunia, A., Khan, I., & Mukhuti, S. (2011). A study of managing liquidity. *Journal of Management Research*, 3(3), 15-28.
- [19]. Bikker, J., & Hu, H. (2002). Cyclical patterns in profits, provisioning and lending of banks and procyclicality of the new base capital requirements, *BNL Quarterly Review*, 22(1) 143-175.
- [20]. Calderon, C. & Liu, L. (2003). The direction of Causality between Financial Development and Economic Growth. *Journal of Development Economics*, 2003, vol. 72, issue 1, 321-334.
- [21]. Cameron, K.S. (1994). Strategies for successful organizational downsizing. *Human Resource Management*, Vol. 33 No. 2, pp. 189-211.
- [22]. Carling, K., Jacobson, T., Linde, J., & Roszbach, K. (2007). Corporate credit risk modeling and the macroeconomy. *Journal of Banking & Finance*, 31: 845-868.
- [23]. Central Bank of Nigeria (2015), Understanding Monetary Policy Series No. 12. Inflation targeting as a monetary policy framework.
- [24]. Chimucheka, T. & Ellen, C. R. (2011). The impact of inaccessibility to bank finance and lack of financial management knowledge to small, medium and micro enterprises in Buffalo City Municipality, *South Africa Journal of Business Management* Vol. 5(14), 5509-5517.
- [25]. Chodecal, D. (2004). Impact of lending policy on banking industry in Nigeria. *Journal of Banking and Finance*; 7(1), 12-22.
- [26]. Cole, R. A., Goldberg, L.G. & L. White, L. J. (2004) Cookie-cutter versus character: The Micro Structure of Small Business Lending by Large and Small Banks. *Journal of Financial and Quantitative Analysis*, 39(1), 227-251.
- [27]. Crowley, J. (2007). Interest Rate Spreads in English -Speaking Africa. *IMF Working Paper*, 123 -45.
- [28]. Cyril, U. M Onuaguluchi, I. F & Mbah A. M. (2017). Effect of Deposit Money Banks Credit on Small and Medium Scale Enterprises Growth in Nigeria. *International Journal of Finance and Accounting*, 6(5): 117-132.
- [29]. Dada, R. M. (2014). Commercial banks' credit and SMEs development in Nigeria: An empirical review. *International Journal of Research*, 1(8): 305-319.
- [30]. Decker, A. (2013). An Empirical Analysis of the Liquidity, Solvency and Financial Health of Small and Medium Sized enterprises, *European Journal of Business Management*, 5(8) 1-15.
- [31]. Dilger, R. J. (2018). Small business size standard: A Historical Analysis of Contemporary Issues. Washington, DC; Congressional Research Service. Retrieved 30th December 2018.
- [32]. Drehman, M., Sorensen, S. & Stringa, M. (2008). The Integrated Impact of Credit and Interest Rate Risk on Banks: An Economic Value and Capital Adequacy Perspective", *Bank of England Working Paper* No.339
- [33]. Edmiston, K. (2010). The role of small and large business in economic development. *Economic Review*, (1), 1-93.
- [34]. Eichengreen, B., & Gibson, H. D (2001), Greek banking at the dawn of the new millennium. CEPR Discussion Paper 2791, London.
- [35]. Ejikeme. M.O. (2013). *Evaluation of credit risk management and performance of Nigerian banks*. Being a project submitted to postgraduate school of Ahmed in Bello University Zoria in Partial fulfillment of the requirement for the award of the degree of Masters in Business Admin.
- [36]. Eljelly, A. (2004). Liquidity-profitability tradeoff: An empirical investigation in an emerging market. *International Journal of Commerce and Management*, 14(2), 48- 61.
- [37]. Elyasiani, E. & Goldberg, L.G. (2004). Relationship lending: A survey of the literature. *Journal of Economics and Business*, Vol. 5. 315-330.
- [38]. Faten, B.B, Chantal, A., & Ado, L. (2016). Banking Governance, Performance and Risk-Taking: Conventional Banks Vs Islamic Banks. Published in Great Britain and United State by ISTE Ltd and John Wiley & Son, Inc.
- [39]. Fatoki, O. O. (2014). Factors influencing the financing of business start-ups by deposit money banks in South Africa. *Mediterranean Journal of Social Science*, 5(20), 94-100.
- [40]. Fight, A. (2004). Understanding International Bank Risk. *Wiley Finance*
- [41]. Gerschenkron, A. (1962) 1965. Economic Backwardness in Historical Perspective: A Book of Essays. New York: F. Praeger.
- [42]. Gill, A., Biger, N., & Mathur N. (2010). The Relationship between working capital management and profitability: Evidence from The United States. *Business and Economics Journal GJDS*. (2), 33-52.
- [43]. Goddard, J.A., Molyneux, P.M., & Wilson, J.O.S. (2004). Dynamics of growth and profitability in banking. *J. Money Credit Bank*. 36(6):1069-1090.
- [44]. Gurley, J., & Shaw, E. (1967). Financial structure and economic development. *Economic Development and Cultural Change*, 15(3), 257-268.
- [45]. Imoughele, L.E., & Ismaila M. (2014). The impact of the commercial bank credit on the growth of Small and Medium Scale Enterprises: Econometric evidence from Nigeria (1986-2012). *Journal of Educational Policy and Entrepreneurial Research (JEPER)* 1(2), 251-262.
- [46]. King, R.G., & Levine, R. (1993). Finance and growth: Schumpeter might be right. *Quarterly Journal of Economics*, 108(1), 717-738.
- [47]. Lamberg, S., & Valming, S. (2009). *Impact of liquidity management of profitability: A study of the adaptation of liquidity strategies in a financial crisis*. UMEA: UMEA School of Business.
- [48]. Malede, M. (2014). Determinants of deposit money banks' lending: Evidence from Ethiopian deposit money banks. *European Journal of Business and Management*, 6(20), 109-117.
- [49]. Maness, T.S. (1994). The Cash Flow Timeline and the Credit Manager. *Business Credit*, July/August
- [50]. McKinnon, R. (1973). *Money and capital in economic development*. Washington: The Brookings Institute.
- [51]. Miller, S., & Noulas, A. (1997). Portfolio mix and large-bank profitability in the USA. *Applied Economics*, 29, 505-512.
- [52]. Misker, B. (2015). Impact of credit risk on financial performance of banks in Ethiopia. Thesis submitted to department of Accounting and Finance College of Business and Economics in partial fulfillment of the requirements for the award of M.sc degree in accounting and finance. Addis Ababa University Addis Ababa, Ethiopia.

- [53]. Nyanzu, F., & Quaidoo, M. (2017). Access to finance constraint and SMEs functioning in Ghana. Retrieved from https://mpr.aub.uni-muenchen.de/83202/MPRA_Paper_No._893208, 10th December, 2017.
- [54]. Nzioka, C.N. (2012). *The effect of cash management and firm liquidity or share prices of companies listed at the Nairobi Security Exchange*. Being a research project report submitted in partial fulfillment of the requirements for award of degree of Master of Business Administration school of business, University of Nairobi.
- [55]. Obasan, K. A. & Arikewuyo, K. (2012). The effect of pre-post bank consolidation on the accessibility of finance to SMEs in Nigeria. *Business and Management Research*, 1(3), 108-120.
- [56]. Olokoyo, F.O. (2011). Detainments of deposit money banks' lending behaviour in Nigeria. *International Journal of Financial Research*, 2(2) 61-72.
- [57]. Olokoyo, F.O. (2012). The effect of bank deregulation on bank performance in Nigeria. *International Journal of Advances in Management and Economics*, 1(5), 31-36.
- [58]. Olusanya, S., Oyebo, A., & Ohedebere, E. (2012). Determinants of lending behaviour of deposit money banks. *A co-interpretation Analysis*, 5(5), 71-80.
- [59]. Olutoye, E. A. (2015). Effect of bank size on SMEs financing: Evidence from Nigeria banking sectors. *International Journal & Banking Finance Management & Development Studies*, 3(1), 3-14.
- [60]. Onyeiwu, C. (2012). Monetary policy and economic growth of Nigeria. *Journal of Economics and Sustainable Development*, 3(7), 62-70.
- [61]. Osano, H.M., & Languitone, H. (2016). Factors influencing access to finance by SMEs in Mozambique: case of SMEs in Maputo central business district. *Journal of Innovation and Entrepreneurship*, 5(13), 1-16.
- [62]. Patrick, H. (1966). Financial development and economic growth in underdeveloped countries. *Economic development and Cultural change*, 14(2), 174-189.
- [63]. Psillaki, M., Tsolas, I.E., & Margaritis, D. (2010). Evaluation of credit risk based on firm performance. *European Journal of Operational Research*, 201(3), 873-881.
- [64]. Qasim, S., & Ramiz, R. (2011). Impacts of liquidity ratios on profitability. *Interdisciplinary Journal of Research in Business*, 1(7), 95-98.
- [65]. Rajan, R. & Dahl, S. C., (2003). Non-performing Loans and Terms of Credit of Public Sector Banks in India: An Empirical Assessment. *Reserve Bank of India Occasional Papers*, 24(3), pp. 81-121.
- [66]. Robinson, J. (1952). *The generalization of the general theory in the rate of interest, and other essays*. London: McMillan.
- [67]. Roman, A. & Rusu, V.D. (2011). The access of small and medium size enterprises to banking financing and current challenges: The case of EU Countries. *Annales Universitatis Apulensis Series Oeconomica*, 14(2), 533-546.
- [68]. Salas, V., & Saurina, J. (2002). Credit Risk in Two Institutional Regimes: Spanish Commercial and Savings Banks. *Journal of Financial Services Research*, 22(3), 203-224.
- [69]. Schumpeter, J.A. (1911). *The theory of economic development: An inquiry into profits, capital, credit, interest and the business cycle*. Cambridge mass: Harvard University Press. Series 34.
- [70]. Shehzad, C., Haan, J., & Scholtens, B. (2013). The relationship between size, growth and profitability. Retrieved from <http://ideas.repec.org/a/taf/applec/45y2013i13p1751-1765>.
- [71]. Shen, Y., Shen, M., Xu, Z., & Bai, Y. (2009). Bank size and small-and medium-sized enterprise lending: Evidence from China. *World Dev.*, 37(4), 800-811.
- [72]. Soludo, C. (2004). *Consolidation of the Nigeria banking to meet the developmental challenges of 21st century*.
- [73]. Sunday, K.U. (2012). *The impact of interest rates on savings and investment in Nigeria*. Unpublished research project submitted in partial fulfillment of the requirements for the award of the Masters in Business Administration (MBA) degree in Banking and Finance Department, University of Nigeria, Enugu Campus.
- [74]. Tsai, E.T., & Chang, L. (2012). Bank lending decision and credit risk conduct performance of firms. *Journal of Financial Services Research*, 5(2), 150-165.
- [75]. Wang, Y. (2016). What is the biggest obstacles to growth of SMEs in developing countries? An Empirical evidence from an enterprise survey. *Borsa Istanbul Review*, (3), 167-176.
- [76]. World Bank (2015). Small and Medium Enterprises (SMEs) Finance Improving SMEs' access to finance and finding innovative solutions to unlock sources of capital. <https://www.worldbank.org/en/topic/sme/finance>.
- [77]. Yamori, N. (2008). Comparative Study of Regional Finance and Industrial Partnerships in Japan and South Korea - Comparison of the Taegu and North Gyeongsang regions of South Korea and the Tokai and Kansai regions of Japan based on corporate questionnaire surveys (Japanese). *Research Institute of Economy, Trade and Industry (RIETI)*.
- [78]. Yan, S, Minggao, S., Zhong, Xu, & Ying, (2009). Bank Size and Small- and Medium-sized Enterprise (SME) Lending: Evidence from China. *World Dev.* 2009 Apr; 37(4): 800-811.

IOSR Journal of Business and Management (IOSR-JBM) is UGC approved Journal with SI. No. 4481, Journal no. 46879.

Odumesi " Commercial Banks' Credit Accessibility and Small and Medium Enterprises Growth in Nigeria(1980-2015): The Internal Factors Perspective." IOSR Journal of Business and Management (IOSR-JBM), Vol. 21, No. 3, 2019, pp. -52-61