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SECTORAL LOANS AND BANK PERFORMANCE IN NIGERIA

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ABSTRACT: *The study examined the effect of Sectoral loans on commercial banks performance in Nigeria using time series spanned data over a period, 1990-2018. Secondary data were sourced from the central bank of Nigeria statistical bulletin 2018. Hypotheses were formulated and tested using Augmented Dickey-Fuller, co-integration, and the error correction mechanism tests. Specifically, the sectors looked into in this study are Agriculture/forestry, manufacturing, and mining/Quarry sector respectively, while interest rate was included as control variable. The result indicates that agriculture, manufacturing, and mining sectors have linear and insignificant effect on bank performance proxied by return on asset; while interest rate has negative effect on bank performance for the period under review. Furthermore, Johansen co-integration test result indicates the existence of four cointegrating long run relationship among variables selected in this study. It is proffered that Government should strengthen institutions that are charged with the responsibility of granting loans and advances to agriculture sector because of its associated benefit not only to the banks but the economy at large. The bank of industry (Boi) and the central bank of Nigeria should as a matter of urgency create enabling business environment for manufacturing companies to access cheap funds so as to enhance business growth and innovations. Interest rate for agriculture, manufacturing and mining sector should be reduced to a single digit so as to encourage these sectors to grow.*

KEYWORD: commercial bank, sectoral loans, agricultural, manufacturing, mining.

INTRODUCTION

The concept of borrowing is a common phenomenon in the conventional banking sector in Nigeria. Loans are offered for the stabilization of business in an organization. The constant assessment and developments of loans on the private sector has become particularly important since the onset of the financial tensions. In order to determine the extent of loan impact of the recent financial crisis on developments in bank loans, it is useful to look at developments in loans to individual institutional sectors, as they may have been affected differently by the specific factors at work during the crisis. Indeed, the discussion in this article will focus mostly on loans to some critical sector in the economy. Most private sector business and contracts are mostly sustained by loan issued out by banks. The banking sector that has stood out as a lending agency may also be sustained by the central banking system in terms of financial crisis. This sector may in often times; experience crisis that may have had only a limited impact on overall developments in loans to the private sector that depends mainly on banking sector. Review on

monetary policy measures used to counteract the negative impact of the financial crisis and the developments in loans to nonfinancial corporations as well as a major function of banking sector.

Banking reform also has given room for flexibility on borrowing as well as a saving system. Which has given room for development of sustainable programs through which loans are issued out to cooperate organization on investment grounds, cooperative society for development of projects, individuals on entrepreneurship programs and farmers for development of Agro. Products manufacturing and the Mining/query sector etc. has widen the exploration of the banking loan, reforms of the banking sector too have also expanded the content of financial increment and stability of the commercial banks. Observation show that aftermath of the financial crisis in the banking sector, which commenced around mid-2007 and subsequent collapse of Lehman Brothers, there has been a triggered offshoot in economic activity and bank lending rates in the country at large. While the impact of these movements is likely to explain a large part of the developments in loans during the financial crisis, other factors also played a role. For instance, in the early phases of the crisis and owing to the perceived risk of bank funding being more difficult to access, firms seem to have drawn down available credit lines and thus kept loan growth strong at a point when economic activity was already decelerating. Other "distortionary" effects include the effective closure of the securitization market and even "re-intermediation" effects. However, the upward impact of these on loan growth was more than offset by banks "retained" securitization activity, whereby they continued to securitize loans, not to sell them in the market, but in order to pledge the securities as collateral.

A number of studies have linked functions of the banking sector to economic growth (Akpansung & Gidigbi, 2014; Akpansung & Babalola, 2012; Bayoumi & Melander, 2008; King & Levine, 1993; Bencivenga & Smith, 1991). The roles played by the apex financial institution are very crucial because an abnormality in its policy could put the whole economy into severe and unbecoming situation. More so, a lot of studies argued that the structure of Nigeria's economy is bank based (Ujunwa, Salami, Nwakoby, & Umar, 2012), which means, anything wrong with the bank might spell doom for the whole economy.

Beginning from the 1960's, extensive government intervention characterized by financial sector policies. In the 1970's, the intervention was further intensified towards influencing resource allocation, credit and promotion of indigenization policy. In 1987, during the introduction of Structural Adjustment Programme (SAP), the interventions came in forms of financial liberalization, as a measure towards the enhancement of prudential regulations and tackling of bank distress. Post SAP era witnessed neglect of prudential regulation such as, quality of banks' loan portfolios, efficiency and competition, the efficiency of intermediation, public ownership of banks, government controls on financial markets among others. A series of studies such as Sanusi (2012), Anyanwu (2010) and Balogun (2007) had investigated the impact of banking reforms on economic growth and the financial institution. The essence of these reforms in the banking sector is to ensure the sector is strong enough grant loans to various critical segments of the economy to enhance growth and stability. Thus, it is believed that having a broad view of these effects will aid policy and further researches. Therefore, this study would pave way to ascertain the effect of loans to various economic sectors and performance of the banking sector in Nigeria from 1990 to 2018. The findings of this study

could also further inspire interest towards having outstanding financial institutions in the country.

Statement of the Problem

The problem of the study is that the observed trends in the financial market is not stable as the current global economy needs more innovation in terms of improved bank policy, creation of a robust financial base, establishment of good interaction between financial institutions and other sectors of the economy. Therefore, the study tends to evaluate the effect of sectorial loan to the manufacturing, agricultural and mining/ quarry sector of the economy. To ascertain if these loans over the years have actually shown an improvement on these critical sectors of the economy since they are contributors to gross domestic product in Nigeria.

Objectives of the Study

The study looked at sectorial loans and banks performance in Nigeria for the period 1990 to 2018. Specifically, the study intends to:

1. Determine effect of loans to the manufacturing sector on return of asset of banks in Nigeria.
2. Find out the effect of loan ~~of~~ to the agriculture/forestry sector on return of asset of banks in Nigeria.
3. To ascertain the extent to which loans ~~on~~ to the mining/quarry sector have effect on the return on asset of banks in Nigeria
4. To ascertain the effect of interest rate on return on assets of banks in Nigeria

Research Questions

The following research questions guided the study:

1. What is the effect of sectorial loan of manufacturing sector on return of asset in Nigeria from 1990 to 2018?
2. What is the level of improvement on sectorial loan of agriculture sector on return of asset across two decades from 1990 to 2018?

3 What is the effect of sectorial loan of mining & query sector on return of asset in Nigeria from 1990 to 2018?

4 What is the effect of interest rate on return of asset in Nigeria from 1990 to 2018?

Hypothesis

HO_1: Loans to the manufacturing sector have no significant impact on return on asset in Nigeria from 1990 to 2018.

HO_2: Loans to the agricultural sector do not significantly affect return on asset across two decades. That is, 1990 to 2018.

HO_3 There is no significant effect of loan to mining/query sector on return on asset in Nigeria from 1990 to 2018

HO_4 There is no significant effect of interest rate on return on asset in Nigeria from 1990 to 2018

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Significance of the Study

The study would be of benefit to the banking sectors and investors. The study would benefit the banking sector on the ground that adequate facts on industrial growth pattern would be known and served as a guide for the development of targets for financial investment.

Investors through the pattern studied from the data obtained from this study would be able to see the extent to which partnership and business development can be created through the bank and various sectors studied in this work.

Scope of the Study

The study was able to look at sectorial loans and banks performance in Nigeria from 1990 to 2018.

The study scope is limited to data gathered from manufacturing sector, agro/forestry sectors and mining/ query sector and return on asset as a measure for bank performance in Nigerian.

Review of Related Literature

Literature review

In the past the banking sectors in Nigeria as a experienced a lot of change in terms of business transaction, stability on financial base and internet banking. All these reforms have improved their influence in financial and monetary market. A lot of business investors through this innovation have established a good relationship and a reliable background to network with banking system in terms of loan disbursements and cooperate partnership. The main focus of bank capital reform is to reinforce the capacity of the banking sector to achieve the position of a key player in financial intermediation as well as its growth and development role required for enhanced productivity growth. This role is needed as most industries that are major financial generating organization needs stable banking system to enable them function and expand in business transaction. Bank capital is established a means of long-term fund for most banks and when preserved it gives that state an expected output to uplift the capacity of the banking sector to finance real sector activities like manufacturing. This makes the bank as source for financial reserve to most non-financial institution. Bank capitalization is an essential determinant of the credit passage system of a bank because equity capital entails the foundation of a bank's long-term borrowing mechanism.

This borrowing gives an opportunity for big business entrepreneurs to catch up with long time opportunities and still maintain a financial back up system. This transaction makes the bank to share in profit and create a good customer relationship between the industries and the bank. According to Soludo (2004), the inefficiency of Nigerian banks to play a lead role in the development of the Nigerian economy is as a result of weak capital base, poor corporate governance, and gross insider abuses and so on. Soludo further argues that low capitalization of banks in Nigeria do not only accounts for the sector's inability to finance the economy but also renders it vulnerable to unethical and unprofessional practices. This gives the reason why the collapsed of banks in the past decades.

The challenges faced by banks as highlighted by Soludo is one of the major reasons why industries experience low capital turn out from manufacturing and other sectors of the economy. There is no financial security and business reliability. Against the background of

weak capital base, the Central Bank of Nigeria, on July 6, 2004, raised minimum capital requirement for banks operating in Nigeria from N2 billion to N25 billion with a compliance period of 18 months. The establishment of a capital base gave room for non-financial investors to have a reliable background to invest and partner with banking system. To actualize the new regulatory minimum capital base formation, most banks depends on offer and sale of new shares to existing and/or new shareholders as well as series of mergers and acquisitions through bank consolidation mechanism.

This now give room for large merger system between banks. This method expanded the capital base of most banks. Contrary to the theoretical expectation that higher levels of bank capital promote banking sector performance, Okafor (2011) further argues that high bank capitalization does not systematically translate to an innovative bank risk management. It depends, rather on the improvement of standards on investment portfolio and mix generated by the expanded capital base. Also, Asedionlen (2005) opined that though recapitalization may enhance short-term liquidity levels, it does not assure a conducive macroeconomic base essential for the promotion of high asset quality and improved profit base.

The financial crisis, which started in mid-2007 and intensified in the aftermath of the collapse of Lehman Brothers, triggered sharp movements in economic activity and bank lending rates. While the impact of these movements is likely to explain a large part of the developments in loans during the financial crisis, other factors also played a role. For instance, in the early phases of the crisis and owing to the perceived risk of bank funding being more difficult to access, firms seem to have drawn down available credit lines and thus kept loan growth strong at a point when economic activity was already decelerating. Other “distortionary” effects include the effective closure of the securitization market and even “re-intermediation” effects. However, the upward impact of these on loan growth was more than offset by banks “retained” securitization activity, whereby they continued to securitize loans, not to sell them in the market, but in order to pledge the securities as collateral. Later on, in the crisis, the introduction of “bad bank” schemes in some countries also had a distortionary.

In the establishment theory of concentration Berger (2000) observed that banking consolidation promotes and improves returns through revenue and cost efficiency achievement. Heavers that consolidation may also reduce industry risk by eliminating weak banks from the system and creating better opportunities for diversification. These diversities create a more reinforced financial network within the country thereby providing an improve service delivery system. Allen & Gale, (2003) argues that banking consolidation with larger banks can diversify more profitably so that banking systems characterized by a few large banks tend to be less fragile than those with many small banks. Beck (2003)contend that a few large banks is easier and better to maintain than many small banks so that corporate control of banks will be more effective and reduce the level of risk on financial management.
Similarly, Nicolo, &Bartholomew, Zaman, & Zephirin(2003) opposition to this theory reveals that, banking concentration could raise banks’ propensity for risk-taking through increased leverage and off-balance sheet activities. They further argue that undue emphasis on economy of scale may create larger and more complex entities that may not be efficiently managed.

Beck, Demirgue-Kunt & Levine,(2004) further argues that concentration will intensify market power and political influence of financial conglomerates, stymie competition in, as well as access to, financial services, reduce efficiency and destabilize financial systems as banks become too big to discipline and use their influence to shape banking regulations and these policies may increase competition and more opportunities in the market.

Empirical Review

The study was able to look into some similar research carried out on this area. The researcher through this empirical review would be able to highlight some contenting issues surrounding Loans to the different sectors that contributes to gross domestic product in Nigeria Ranciere and Tornell (2016) carried out a research work on the financial liberation, debt mismatch, allocative efficiency, and growth in the United States (US) using a two-sector model. The model was able to make comparison on Schneider and Tornell (2004) elements of credit market game with a two-sector endogenous growth model. The findings gathered from the study reveals that financial liberalization increases growth, but give room to more crises and expensive bailouts. An additional finding from the study reveals that asserts liberalization preserves financial discipline and may increase allocation efficiency, growth, and consumption possibilities.

Another empirical work carried out by Aruomoaghe and Olugbenga (2014) showed that the capital investments financing in Nigeria using annualized data of 32 years from 1981. The study employed regression model as the analysis tool. It found that banks have contributed much in financing capital investment and stock market development in Nigeria. Maltha, (2008) stated that sectorial loans has the tendency to expand economic system and improve transactions across agricultural, mining and oil sector of the nation. In the same vain
Talford, (2007) avers that in a robust economic trend, there is a tendency for increased borrowing as a result of industrial and commercial consumption.

Oladapo& Adefemi (2015) examine the impact of sectoral allocation of Deposit Money Banks' loans and advances on economic growth in Nigeria. The results show that only the credit allocated to government, personal and professional have significant positive contributions on economic growth. However, bank credits generally do not contribute significantly to economic growth during deregulation. Introduction of guided deregulation appears to be a success as commercial bank's loans and advances to production and other subsector are both positive and significant in determining growth. Based on the empirical findings, it was recommended that Nigerian deposit money banks should be more favorably disposed to extending more credits to production and other subsectors namely agriculture, manufacturing, mining and quarrying, real estate and construction, government, personal and professional at reasonable interest rate. Finally, monetary authorities should ensure the continuance of guided deregulation as opposed to intensive regulation or total deregulation.
Courage& Leonard (2019) investigated effect of commercial bank sectorial credit to the manufacturing and agricultural sub-sectors on economic growth in Nigeria with time series data from 1981 to 2015, co-integration and error correction mechanism were used. Three equation model was specified to analyze this study, the variables include; real GDP, bank

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sectorial credit to manufacturing and agriculture subsectors, monetary policy rate, financial market development. The unit root test on the variable were stationary. The result revealed that commercial bank credit to the manufacturing and agricultural subsectors significantly affects economic growth in Nigeria both in the short run and in the long run. Furthermore, development of the financial sector enhances the growth effects of commercial banks credit to the manufacturing and agricultural subsectors of the economy. It was therefore recommended that the Nigerian apex financial authorities should encourage banks via deliberate policy to increase credits to these subsectors of the economy.

Paul & Emmanuel (2016) Examined the effect of commercial bank credit on the manufacturing sector output in Nigeria from 1980 to 2015 using Cochrane-Orcutt method, manufacturing sector output, inflation rate, interest rate, loans and advances and broad money supply were used in the study, inflation rate and interest rate were all found to be negative on manufacturing sector output, while loans and advances broad money supply are found to be positive to manufacturing sector output, the study recommends that policy formulation and implementation that will aim at reducing inflation and interest rate and increase both loans and advances as well as broad money supply in order to improve the manufacturing sector in Nigeria

Onyishi, Arene and Ifiorah (2015) examined the impact of interest rate reform on agricultural finance and growth in Nigeria. Descriptive statistics, Ordinary Least Squares regression technique and Autoregressive-Distributed Lag model were used for data analysis. The chow test revealed that there was a significant differential impact on the aggregate credit volume to agricultural sector between the regulated and deregulated regimes. Interest rate was an important determinant of aggregate credit volume to the agricultural sector in Nigeria, the study recommended that monetary authorities should ensure appropriate determination of interest rate level that will break the double-edge effect of interest rates on savers and investors.

This work tend to look at different sector that makes up the economy such as agriculture sector, mining/forestry, manufacturing sector, however interest rate is included in the model because loans are granted base on prevailing interest more so, this study will also try to evaluate the effect of these sectors as they contribute to gross domestic product in Nigeria from 1990 to 2018.

Meltha (2008) stated that sectorial loans has the tendency to expand economic system and improve transactions across agricultural, mining and oil sector of the nation. While Paul & Emmanuel (2016) has found manufacturing sector to be negative. However, this study will ascertain if these variables are found to have contributed positively or negatives to the banking sector for the period under review.

Methodology

Study Design

The study adopted ex-*post facto* research design methodology. This method was used because data were gathered from existing sectorial loan figure on manufacturing sector, agro/forestry, sector mining&quarry sector published by the central Bank of Nigeria and the Nigeria Deposit Insurance Corporation (NDIC) as it affects the performance of the banking sector in Nigeria from1990 to 2018 . The study tends to examine the effect of sectorial loan on manufacturing,Agro/forestry and mining/ Quarry sector on bank performance in Nigeria.

Population of the Study

The research work made use of data emanating from 1990 to 2018. The figure obtained makes it a total of 28 years all together. This data was gotten as a result of the preexisting data obtained through 1990 to 2018 on sectorial loan figure from agro/forestry, manufacturing sector and mining/Quary sector.

Sample

There was no need for sampling as all the population was used as sample for the study. This was considered adequate for the study.

SOURCES OF DATA

The pre-existing data obtained from sectorial loan across 1990 to 2018 ware sourced from Central Bank Bullettin 2018 Nigeria Deposit Insurance Co-operation Publication 2018 and other published works by researcher on the same phenomenon of the study. The data were analyzed to get the required information needed for the study.

MODEL DEVELOPMENT AND VARIABLES DESCRIPTION

A Model-Based Assessment of Developments of Sectorial Loans to Agro/Forestry and Manufacturing Sector

The level of the financial trends and economic downturn over the last few decades has shown a remarkable improvement on the relationship and interaction of loans between industries and banks. The adoption of Bayesian vector autoregressive (VAR) model containing some variables was able to captures some dynamic relationships between the macroeconomic, financial, credit and monetary variables in the last two decades (1990 to 2018). This model is used to check on the impact of loans to agro/forestry sector and manufacturing sector are accounted for from when they are been utilized. The model is drawn to know if there is a significant improvement on economic activities in the country.

The model also reflects chains of interaction and coordination between financial and non-financial sectors of the economy. In line with the positive development of the model, it is estimated that VAR parameters reflect the economic structure of the developing nation in terms of financial prosperity in agro and manufacturing sector of the economy.

Model Specification

The study utilized annual time series data for the period 1990-2018, obtained from Central Bank of Nigeria (CBN) statistical bulletin. The data used in the study includes, Sectoral loan on Agricultural, Manufacturing sector and mining /quary sector and Interest rate as independent variable while banking sector performance is proxied with one the performance variables Return on asset as dependent variable

The study adopts and modifies the model of Courage & Leonard (2019) they examined the impact of commercial banks credit to the real sector on economic growth in Nigeria, the model is stated thus

$Rgdp = \beta_0 + \beta_1 + BCAGR_t + \beta_2 BCMAN + \beta_3 FINM_t + \beta_4 MPR + U_t$

The model will be modified to reflect the current study

The model is stated thus;

ROA = {Man, Agro, min,Int} ……...1

$ROA_1 = \beta_0 + \beta_1 Man + \beta_2 Agro + \beta_3 Min + \beta_4 Int + \upsilon$

Where;

ROA = Return on asset (proxied as bank performance)

Man = Manufacturing Sector

Agro = Agricultural / forestry sector

Min = Mining/Quarry sector

Int = Interest rate

Data Presentation and Analysis

Table 1.1Descriptive Statistics

	AGR	INT	MIN	MAN	ROA
Mean	163.7251	112.5339	355.3078	685.4433	2.608929
Median	60.95000	82.40000	28.77733	342.0500	2.600000
Maximum	610.1497	770.0000	2155.900	2230.155	17.57000
Minimum	4.221400	3.400000	0.362400	7.883700	-9.280000
Std. Dev.	191.1608	154.6143	603.2958	734.3316	4.331591
Skewness	1.147424	2.952792	1.734166	0.960028	0.562393
Kurtosis	2.815529	12.89740	4.796178	2.635459	8.237762
Jarque-Bera	6.183753	154.9736	17.79817	4.456087	33.48250
Probability	0.045417	0.000000	0.000137	0.107739	0.000000
Sum	4584.302	3150.950	9948.619	19192.41	73.05000
Sum Sq. Dev.	986645.8	645450.8	9827079.	14559557	506.5923
Observations	28	28	28	28	28

Source: E-view 9 output

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Table 1.1 above shows the descriptive statistics of individual variables employed in the study. From the analysis, it is evidenced that manufacturing sector has the highest mean value of: 685.4433 with a highest associated standard deviation value of 734.3316. This implies that, manufacturing sector received the highest number of banks loans with the highest level of risk in respect to default in repayment that inhibit or affects the performance of banks negatively in Nigeria for the period under study.

Table 1.2 Unit Root Results

VARIABLES	ADFSTAT	CRITICAL VALUE @ 5%	ORDER OF INTEGRATION	REMARK
Man. Sect	-4.894937	-3.710482	1(1)	Stationary
Agric sect	-5.633015	-3.012363	1(1)	Stationary
Mining	-4.638475	-3.644963	1(1)	Stationary
Interest rate	-6.966836	-2.981038	1(1)	Stationary

Source: E-view 9 output

The above table 1.2 evidenced unit root test results of selected data in the study. The results revealed stationarity of data (integrated) at first difference, exhibited as: 1(1) at 5% significant level. This indicates that data have no unit root problem. Note, a data is said to have no unit root problem if the test statistics is greater than the critical value in absolute terms. This reveals that data employed can be used for meaningful decision making and forecasting.

Table 1.3 Johansen Co-integration Test Results

Date: 04/21/20 Time: 14:25
Sample (adjusted): 1992 2018
Included observations: 24 after adjustments
Trend assumption: Linear deterministic trend (restricted)
Series: ROA AGR MAN MIN INT
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.965647	198.5050	88.80380	0.0000
At most 1 *	0.859394	117.5994	63.87610	0.0000
At most 2 *	0.793047	70.51638	42.91525	0.0000
At most 3 *	0.640338	32.71001	25.87211	0.0060
At most 4	0.288461	8.167804	12.51798	0.2383

Trace test indicates 4 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values
Source: E-view 9 output

Table1.3 above evidenced the Johansen co-integration test result that indicates the existence of four cointegrating long run relationship among variables selected in this study. We arrive at this conclusion by comparing the trace statistic against the Critical Values at 5% significant level. Therefore, the error correction mechanism is relevant to test and estimate parameters in order to capture the short run shocks not captured in the previous year.

Table 1.4 Error Correction Mechanism (ECM) Test Results

Dependent Variable: D(ROA)
Method: Least Squares
Date: 04/21/20 Time: 14:36
Sample (adjusted): 1991 2018
Included observations: 26 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.859098	0.858973	-1.000145	0.3292
D(MAN)	0.001077	0.005361	0.200831	0.8429
D(MIN)	0.000229	0.001761	0.129777	0.8980
D(AGR)	0.012274	0.017106	0.717495	0.4814
D(INT)	-0.001241	0.003564	-0.348133	0.7314
ECM(-1)	-1.019612	0.187307	-5.443537	0.0000

R-squared	0.607195	Mean dependent var	-0.910000
Adjusted R-squared	0.508994	S.D. dependent var	4.850282
S.E. of regression	3.398681	Akaike info criterion	5.483826
Sum squared resid	231.0207	Schwarz criterion	5.774156
Log likelihood	-65.28974	Hannan-Quinn criter.	5.567431
F-statistic	6.183176	Durbin-Watson stat	1.984081
Prob(F-statistic)	0.001280		

Source: E-view 9 output

This table (1.4) portrays sectoral loans effect on banks performance in Nigeria. The t-test output will be used to test the hypotheses formulated in the study. The error correction term will tell us the speed with which our model returns to equilibrium following short run fluctuations not captured in the Johansen co-integration test. The ECM coefficient of -1.019612 indicates that ECM is of right specification and the diagnostic statistics are appropriate. The negative sign depicts the short run adjustment of the explanatory variables to the explained variable. The ECM term also shows 1% extreme slow speed of adjustment towards equilibrium. This implies that 1% of disequilibrium caused by exogenous shocks in the previous period is corrected in the current year.

Using the a priori criteria of estimating the parameters, all individual variables met a priori expectations hence fulfilling the economic criterion of the model.The results also show that the manufacturing sector (MAN), mining & quarrying sector (MIN) and the agricultural sector (AGR) are linear (positive) and statistically insignificant to return on assets (ROA) of banks in Nigeria, while, interest rate (INT) is non-linear (negative) and also statistically insignificant to

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return on assets of banks in Nigeria both in short and in the long run. Furthermore, the results of the test of the overall significance of the model using F-statistics shows that the entire model is statistically significant. We arrive at this conclusion because the F-statistics is greater than the F-probability. Coefficients of determination (R^2) indicate that approximately 61% of total variation of return on assets (ROA) of banks in Nigeria is explained by the selective sectoral loans in the model. This means that the model is of good fit. Finally, the Durbin-Watson statistics, is within the acceptable region thus, reveals the absence of first order autocorrelation.

Formulate and test hypotheses

Significance of the individual parameters was used to test the hypotheses. These tests were conducted at 5% level of significance

Test of Hypothesis One

Ho_1: Loan to manufacturing sector does not have any positive and significant effect on Bank performance in Nigeria.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(ROA(-1))	-0.707007	0.153259	-4.613149	0.0001[a]
LOG(MAN(-1))	0.480344	0.110932	4.330083	0.0002[a]

Table above shows that the p-value is less than the 5% critical value (0.0002>0.05) with the coefficient value of 0.480344, therefore the study accepts the alternative hypothesis and reject the null hypothesis. Hence, Loan to manufacturing sector have positive and significant effect on Bank performance in Nigeria.

Hypotheses Two

2. **HO_2**: Loans to agricultural sector does not have any effect on Banks performance Nigeria

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(ROA(-1))	-0.707007	0.153259	-4.613149	0.0001[a]
LOG(AGRO)	1.724619	0.534603	3.225979	0.0032[a]

Table above shows that the p-value is less

than the 5% critical value (0.0032>0.05) with the coefficient value of 1.724619, therefore the study accepts the alternative hypothesis and reject the null hypothesis. Hence, Loan to Agricultural sector have positive and significant effect on Bank performance in Nigeria

Hypotheses Three

3. **HO3**: Mining/Query sector loans does not have any significant effect on performance of the banking sector in Nigeria.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(ROA(-1))	-0.707007	0.153259	-4.613149	0.0001[a]
LOG(AGRO)	1.724619	0.534603	3.225979	0.0032[a]
MIN(-1)	-0.002431	0.002372	-1.025293	0.3140

Table above shows that the p-value is more than the 5% critical value (0.3140>0.05) with the coefficient value of -0.002431, therefore the study accepts null hypothesis and reject the alternative hypothesis. Hence, Loan to Mining/Query does not have positive and significant effect on Bank performance in Nigeria.

Discussion of Findings

The data analyzed above relates to the effect of sectoral loans on the performance in Nigeria proxied by Return on Assets as bank performance (dependent variable) while Agricultural/Forestry, Mining/Quary, Manufacturing sectors, (independent variables) Interest rate is including in the model because loans are granted base on interest rate. Theoretically the higher the interest rate the lower the demand for loans vice versa, the results above found

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significant positive relationship between manufacturing, Agriculture/forestry and mining/query sectors in Nigeria. The implication is that investment in these sector will assist in the reduction of some macroeconomic problems such as reduction of unemployment, increase the tax base of the economy and enhance innovation in these sector, more so, the banks will be the biggest beneficiaries of the performance of these viable sector because it will increase the profitability of bank and in turn the economy at large. The above result agrees with some recent studies conducted by Oladapo & Adefemi (2015) Courage & Leonard (2019) that investigated effect of commercial bank sectorial credit to the manufacturing and agricultural sub-sectors on economic growth in Nigeria with time series data from 1981 to 2015.The result revealed that commercial bank credit to the manufacturing and agricultural subsectors significantly affects economic growth in Nigeria both in the short run and in the long run. Furthermore, development of the financial sector enhances the growth effects of commercial banks credit to the manufacturing and agricultural subsectors of the economy

Conclusion

This study had set forth to provide an insightful understanding of the effect of sectorial loans on banks performance in Nigeria from 1990 to 2018. Looking at some critical sectors of the economy such as Agricultural/ forestry, manufacturing, mining/query sectors respectively as independent variables, while banking sector performance proxied by return on asset as dependent variable. The various unit root tests suggested that all variables where stationary at first difference denoted by 1(1)

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Recommendations

Base on the findings of the results there following recommendations are made.

1. Government should strengthen institutions that are charge with responsibility of granting loans and advances to agriculture sector because of its attendant benefit not only to the banks but the economy at large.

2. The bank of industry (Boi) and the central bank of Nigeria should as a matter of urgency create enabling business environment for manufacturing companies to access cheap funds so as to enhance business growth and innovation.

3.Interest rate for agriculture, manufacturing and mining sector should be reduced to a single digit so as to encourage these sectors to grow.

Contribution to Knowledge

The existing literature was updated in terms of variables used in the study. The study further contributed to expanding of data frame.

Suggestion for Further Study

Practically, this study provides empirical evidence for further research work and more study should be conduct ed with same variables and other methodology to ascertain the outcome of the result.

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