

Banking Sector Consolidation: Possible Effects for Sectoral Credit Allocation and Economic Growth in Nigeria

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Abstract:

This study investigated possible effects of banking sector consolidation- credit allocation to selected sectors on the growth of Nigerian economy. utilizing time series data on growth rate of GDP, banking sector credit distribution to the agriculture, manufacturing, oil and gas/mining, commercial (export financing) sectors and bank size (number of Deposit money bank branches) for the period 1981 - 2015 and employing Vector Error Correction Model (VECM), the results indicate that only banking sector credit allocation to the manufacturing sector is positive and significant at 5 percent level. Banking credit to agriculture, oil & gas/mining, commercial and bank size were all insignificant at 5 percent level. This result revealed that funds allocated to the manufacturing sector spurred economic growth in Nigeria during the duration of this investigation. Other finding of study shows that the manufacturing sector has higher propensity for increasing investment, job creation and value addition hence attracts funds from the banks than other sectors. Based on these findings, the paper suggested creation of enabling environment and enactments of policies that will enhance higher credit allocation to manufacturing sector in particular and the real sector in general in order to spur investment, job creation and stimulate economic growth in Nigeria.

Introduction

The critical role of adequate capital base and bank size play in financial intermediation, investment and economic performance cannot be overemphasized. Higher capital base is an important element which increases confidence and allows banks to carry out business operations. Capital serves as a means of mitigating against losses and also provide a guard against operational losses, bankruptcy and forms the foundation for the growth of future asset. The increase in bank capital and assets invariably determine the extent to which retained earnings grows. If the rate of increase in retained earnings is low, it could be a symptom of poor profitability which may affect the performance of the banking sector in particular and the local economy.

Consolidation in the banking sector arises from the zeal to solving problems of financial distress in order to mitigate against systematic crises as well as to minimize nonperforming banks due to low capital base to clear or at least reduce losses incurred from insolvent investments. Increase in banking sector consolidation through mergers and acquisitions emanates from the presence of weak, unhealthy and undercapitalized banks. Importantly it should be noted that one of the factors attributed to the poor economic performance in Nigeria is the failure of the financial sector to perform its obligation of providing requisite funds for investment. Banking sector consolidation refers to the deliberate policy measure to grow the capital

base of banks with a view to making them safe, sound viable business entities.

Sanusi (2010) analysing the state of the Nigeria's banking sector from the Report on the survey of banks carried out by the Central Bank of Nigeria (CBN), explained that as at beginning of the year 2004, only 62 out of the 89 banks were considered as efficient and sound while 14 banks felled into the marginal category. The Report further shows that the number of inefficient banks increased from 9 at the end of 2003 to 11 banks by the end of May 2004. The author submitted that outside low level of capital, the banking sector had myriad of shortcomings which include: poor management, poor quality of assets, inaccurate reports of financial records and non-adherence to regulatory requirements coupled with massive impropriety emanating from rising nonperforming loans and absence of capacity to render aid to sectors with higher propensity of growing the Nigerian economy. Hence to the author, the reason for consolidation was to remedy the shortcomings of banks by increasing minimum paid-up capital to N25 billion, reducing dependence on public sector funds, adoption of risk based regulatory framework and strict adherence to banking sector corporate governance principles.

Following the surveillance report by the Central Bank, Ningi and Dutse (2008) observe that minimization in the weaknesses of pre-consolidation era is the only way the gains of consolidation would be realized in the banking

sector. The larger size of a consolidated bank, the greater customers' confidence and minimization of the phobia of bank insolvency in the mind of the public and customers (Ikpefan, 2012).

As a result of the consolidation in the banking sector in Nigeria, the spread of bank branches went up significantly from 3,247 in 2003 to 5,014 branches at the end of December 2009. Banks branches development further grew from 5,837 in 2010 to 5470 branches as at the end of the year 2015. The growth in the financial sector also extended to the capital market as a result of consolidation as many banks made serious breakthrough in their Initial Public Offers (IPOs). Consolidation also impacted significantly on the payment system due to the reduction in the number of banks which made it possible to employ the automated teller machine (ATM) and the new automated clearing system which have reduced the duration spent on payment of clearing cheques (Sanusi, 2011).

Despite the importance of the sectoral investment and credit delivery to the growth and development of an economy the growth in the financial sector seems not to improve the performance of the Nigerian economy over the years. Development finance institutions set up for specific purposes, such as agricultural finance, housing finance, trade finance, urban development banks, all appeared not to achieve their given mandates. Also, credit flow from the deposit money banks to the real economy has been grossly inadequate (Anyanwu, 2010).

A careful assessment of developments in the Nigerian economy show that the real and service sectors contribute over 60 percent to the national income (GDP), but attracts only about 40 per cent of total banking sector investment funds. Another source of concern is the agricultural sector which contributes over 40 percent to real income but attracts less than 2 per cent of total banks credit. Banks were reluctant to fund real sector activities for reasons such as poor managerial ability, ability to repay, unfavourable growth prospects in the sub-sector, inherent risk and insufficient requirements (Anyanwu, 2010).

In order to really analyse how bank consolidation: sectoral credit allocation has affected economic growth in Nigeria, the paper seeks to resolve the following questions through empirical investigation. (i) what is the level and trend in banking sector sectoral credit allocation in Nigeria? (ii) to what extent has the banking sector sectoral credit allocation impacted on economic growth in Nigeria? we continue the discussion in the paper by reviewing relevant literature and providing the methodological framework adopted in analysing the data. This was followed by the results, findings and concluding remarks.

Review of Literature

Among other reasons, achieving "price stability, full employment, high economic growth and internal and external sector equilibrium appears to be the major rationale for implementing banking reforms (Akpansung & Gidigbi, 2014, p.94). In the same vein, the 'bank consolidation' policy reform was intended for enhancing intermediation 'by the' financial institutions, stability 'of the' financial institutions, confidence in the financial system (CBN, 2012). The year 2004 was marked by inadequacies and weaknesses both in the structure and operations of banks in general in Nigeria. The preceding thus led to a reform aimed at revitalizing the banking sector role of financial intermediation. The recent consolidation is geared towards providing affordable credit to major sectors of the Nigerian economy, and making credit available and accessible by Small & Medium Scale Enterprises (SMEs) in Nigeria (Anyanwu, 2010).

The link between banking sector consolidation (sectoral credit allocation) and economic performance has been studied by many scholars. For instance, Akintola (2004) identified agricultural and manufacturing sector financing as the "traditional roles" of banks. It was further argued that the Central bank of Nigeria has been playing a leading and catalytic role by using direct control not only to control overall credit expansion but also to determine the proportion of banks' loans and advances to high priority sectors (Akintola, 2004). Akansung and Babalola (2008) also submitted that sectoral distribution of banks credits is often geared towards stimulating the productive sectors in order to enhance economic growth of a country.

Adopting a quasi-experimental research design, Bakare (2011) investigated the trend of banks consolidation and its implications for growth in the Nigerian economy. It was found that banks that were sufficiently and adequately capitalized exhibited less risk after the consolidation programme. that banks are more adequately capitalized and less risky after the programme. The paper also revealed that, though low, recapitalization significantly influenced growth in the Nigerian economy.

Kehinde and Kareem (2012) used ordinary least square (OLS) to compare SMEs' access to finance during the pre-consolidation and post-consolidation period. The study revealed that there is no significant difference in the competitiveness of SMEs and their ability to create jobs and wealth during the pre-consolidation and post-consolidation period of the Nigerian banking sector. This means that government intervention is needed to enable the SMEs play its role in the economy.

Avinash and Mitchell-Ryan (2009) employed VECM to investigate the dynamic relationship between banks' sectoral credit allocation, investment level and economic growth in Trinidad and Tobago. It was found that bank credit and growth are demand-sensitive. Moreover, it was also revealed that major sectors in the economy of Trinidad and Tobago

are characterised by "supply leading" nexus between credit allocation and growth.

In a study cited in Akpansung and Gidigbi (2014, p.98), Fadare (2010) used OLS econometric technique to estimate the relationship between consolidation of the banking sector and economic growth in Nigeria. "Interest rate margins, parallel market premiums, total banking sector credit to the private sector, inflation rate, size of banking sector capital and cash reserve ratios" predicted a high proportion of the changes and fluctuation in the growth of the Nigerian economy.

In a study that analysed the effect of consolidation of banks on the growth of the real sectors in Nigeria, Ningi (2013) discovered a remarkable rise in the volume of credits flowing from deposit money banks to the real sector in Nigeria post-consolidation of the year 2005. A significant increase was also recorded in the volume of bank credit to the trio of agriculture, manufacturing, and mining sectors between the year 2006 to 2010 as against the volume of credit to these sectors prior to the bank consolidation of the year 2005. It was then recommended that the central government through the apex bank should continue with and also implement improved bank consolidation programmes in the future.

In an attempt to ascertain the response of selected macroeconomic variables to the banks consolidation programme of the year 2005 initiated by the Nigerian government, Somoye (2008) revealed that financial stability and sustainable economic development is not necessarily an outcome of bank consolidation programmes in Nigeria. Furthermore, bank consolidation programmes has not impacted positively and significantly on banking sector performance as such programmes has not contributed significantly to the growth of the real sector and sustainable economic development.

Mohammed (2014), examines bank reforms and financial intermediation of Deposit Money Banks in Nigeria. The study found that recent bank reforms has not achieved the desired development in the intermediary function of Deposit Money Banks. It was recommended, among others, that relevant authorities should strive to create enabling environment for bank's smooth operations.

Using the error correction mechanism econometric technique, Shittu (2012) estimated the prediction of economic growth by financial intermediation variables in Nigeria. It was found that credits from deposit money banks significantly impacted on economic growth in Nigeria. A study by Yakubu and Affoi (2014) also share similar findings with the study by Shittu (2012).

In a study that used OLS econometric technique to estimate the impact of access to bank credit on output of different

sectors of the Nigerian economy between 1986 and 2010, Imoughele, Ehikioya, Ismaila, & Mohammed (2013) found that output from the agricultural, manufacturing, and service sectors increased significantly as credit to the sectors increased during the period covered by the study. The importance and relevance of the credit made available to these sectors was also emphasized in the study. The study recommended steady and uninterrupted access of the agricultural, manufacturing, and service sectors to bank credit; as this will induce output from these sectors and economic growth at large.

According to Osada and Saito (2010), credit development can foster economic growth by raising savings, improving efficiency of loan-able funds and promoting capital accumulation. The impact of consolidation in the banking sector has brought out different questions and concerns among the policy makers on how the borrowers can benefit from the consolidation. Since the consolidation of the banking sector, banking industry credit has assumed a new dimension. Economic agents' demand for credit is to enable them make up for production expenditure deficit (Nwanyanwu, 2008). Credit provisions based on consideration of specific sectors and price system can spur and increase economic growth and self-employment opportunities respectively (Ademu, 2006). Studies have concluded that banks' intermediary roles in the economy has contributed to the enhancement of economic development.

The influence of bank consolidation programmes on economic development was investigated by Emori et al (2014) with the estimation of a multiple regression model. The authors discovered that the capital base of banks proved to be a significant determinant of banks performance. Also, loans and advances from banks accounted for their profitability. Furthermore, investments activities of banks impacted positively on the development of the Nigerian economy.

Akinkoye and Oyelami (2014) investigated the relationship between bank recapitalization and performance of the real sector. The structural break test conducted on the estimated OLS regression line in the study shows that bank recapitalization policy resulted in a significant difference in the output of the real sector in the period before and after the recapitalization of banks. Moreover, capital base of banks significantly influenced output of the real sector in Nigeria.

Akpansung and Gidigbi (2014) used the OLS regression technique to investigate the implications of recent banking reforms for credit allocations to different sectors and aggregate output in Nigeria. It was found that, though there has been a significant reduction in the number of existing deposit money banks during the reform period, credit allocated to the activity sectors (agriculture, mining & quarrying, manufacturing, communication, and oil and gas) has improved significantly. Moreover, credit allocation to

mining & quarrying and oil & gas sector was found to have significantly increase economic growth by 52.4% for the period under review. Furthermore, a unit increase in credit allocated to the oil & gas subsector reduced economic growth 30.6%.

The review of past works done on the topic has exposed us to the methodologies and scope of studies done on the topic we are investigating. This paper though adopted the Vector error correction model, it differs from others in terms of scope. Specifically, the impact of banking sector credit allocation to the agriculture, manufacturing, mining/oil and gas, and commercial sectors on economic growth in Nigeria was investigated over the period 1981 – 2015.

Methodology

The theoretical foundation of this paper is based on the works of McKinnon (1973) and Shaw (1973). They argued that the financial sector can provide a major support to investment, and that it can serve as the major driver of economic growth and development if it can only be relieved of its own fetters. They argued that when there is a repression in the financial sector, then it can only respond passively to the needs of the economy and if the sectors are liberalized however, it can be the major drivers for economic growth. In support of the argument of McKinnon and Shaw, Williams and Mahar (1998) posit that if the financial sector is liberalized it can provide the basic apparatus for economic growth and development. In affirmation to the above argument, Levine et al (2000) argued that as the components of financial intermediation grow there seems to be positive growth in the sectors of the economy. In line with above theoretical framework some studies have been done in Nigeria to demonstrate that credit delivery and financial liberalization can drive economic growth. For instance, Akinkoye et al (2014) investigated Bank recapitalization and Real Sector Performance: empirical evidence from Nigeria using the Ordinary Least Square methods. Emori et al (2014) also investigated the Impact of Banking Consolidation on the Economic Development of Nigeria using the multiple regression technique. Akpansung and Gidigbi (2014) studied Recent Banking Reforms in Nigeria: Implications on Sectoral Credit Allocation and economic growth using the Ordinary least squares. This study shall expand on studies done in this area by extending the methodology to incorporate the cointegration/error correction mechanism and also extend the scope of other studies by incorporating variables like interest rate and inflation rate because of their implications on credit delivery, investment and economic growth. Based on the above analytical framework, the study, we specify a growth model thus:

$$GDP_t = f(BCA_t, BCM_t, BCGM_t, BCC_t, BSS_t) \dots(1)$$

Equation (1) above could be expressed in non-linear form thus:

$$GDP_t = a_0(BCA_t)^{a_1}(BCM_t)^{a_2}(BCGM_t)^{a_3}(BCC_t)^{a_4} (BSS_t)^{a_5}e^{U_t} \dots(2)$$

In order to estimate the above model using ordinary least squares, equation (2) is transformed into a linear form by taking the natural log of the variables thus:

$$\ln Gdp_{it} = a_0 + a_1 \ln BCA_{it} + a_2 \ln BCM_{it} + a_3 \ln BCGM_{it} + a_4 \ln BCC_{it} + a_5 \ln BSS + U_{it} \quad (3)$$

Where: Ln = Natural Logarithms; a_0 = Autonomous growth components; Gdp_t = Real GDP in Nigeria; BCA_t = banking sector credit to the agricultural sector in Nigeria; BCM_t = Banking sector credit to the manufacturing sector in Nigeria; $BCGM_t$ = Banking sector credit to mining and gas sector in Nigeria; BCC_t = banking sector to commercial sector in Nigeria; BSS = Banking sector size (total number of bank branches in Nigeria); and U_t = Random/disturbance term.

apriori theoretical expectations; $a_1 > 0$, $a_2 > 0$, $a_3 > 0$, $a_4 > 0$, $a_5 > 0$.

The theoretical implication above is that banking sector credit to the agriculture, manufacturing, mining/oil and gas, commercial sector and bank size (number of branches) are expected to be positively related to economic growth.

Results

We begin the presentation of results analysed in this study with the descriptive statistics. This result exposed us to the behaviour/trend in the variables under investigation. The descriptive statistics result as reported in table 1, indicates that growth rate of the Nigerian economy averaged 5.3 percent. GDP growth rate has a peak value of 20.8 percent, a minimum rate of -10.8 percent and standard deviation of 5.9 percent. Banking sector credit allocation to the agriculture sector has mean value of N84.6billion. The maximum credit allocation to the agriculture sector was N467.6billion with minimum credit allocation of N0.6billion and standard deviation of N124.9billion. Deposit money banks' credit allocation to manufacturing sector during the period under investigation was N369.5billion with maximum credit allocation of N1870.6billion, minimum credit allocation of N2.7billion and standard deviation of N504.2billion. The oil and gas/mining sector has an average credit allocation of N404.5billion from the banking sector. The sector has highest credit allocation of N2247.5billion, minimum credit value of N0.1billion and standard deviation of N687.0billion. The commercial sector (exports trade financing) got an average total credit allocation of N75.9billion with highest banking sector credit allocation of N1081.3billion, minimum credit value of N0.1billion and standard deviation of N223.7billion. The number of bank branches in Nigeria and abroad stood at an average of 2961

while the highest number of bank branches was 5809 and the least number of bank branches was 869 with a standard deviation of bank branches of 1599.

The rising trend of the variables should transcend to increase in economic performance in the country. Further analysis and result shall x-ray how banking sector sectoral credit allocations have influenced economic growth in Nigeria.

The illustration shows that all the variables under consideration has been rising except growth rate of GDP.

Table 1. Descriptive Statistics

Statistic	GDPR	BCA	BCM	BCGM	BCC	BSS
Mean	5.310265	84.60294	369.5265	404.4618	75.86765	2961.235
Median	6.388500	32.15000	106.2500	23.75000	22.35000	2363.000
Maximum	20.83800	467.6000	1870.600	2247.500	1081.300	5809.000
Minimum	-10.75200	0.600000	2.700000	0.100000	0.100000	869.0000
Std. Dev.	5.922225	124.9079	504.2108	687.0063	223.6915	1599.372
Skewness	-0.583976	1.820184	1.390027	1.568254	3.834389	0.637519
Kurtosis	4.735397	5.201189	3.894337	4.034132	16.25818	2.013769
Jarque-Bera	6.198926	25.63814	12.08209	15.45174	332.3350	3.681029
Probability	0.045073	0.000003	0.002379	0.000441	0.000000	0.158736
Sum	180.5490	2876.500	12563.90	13751.70	2579.500	100682.0
Sum Sq. Dev.	1157.401	514865.6	8389541.	15575264	1651250.	84413702
Observations	34	34	34	34	34	34

The graph in figure 1 show that growth rate of GDP and total banking sector credit to the economy have witnessed severe fluctuation during the period under study. The growth rate of GDP and bank credit were low during the early period of this study (1981 – late 1990s), they appear to rise from the year 2000. It is important to note that consolidation

/reforms in the banking sector was intensified in the 2000s and banks with low capital base were required to increase their capital base, merged or acquired by banks with strong capital base and managerial capacity. This development led to the rise in credit allocation to the economy. However, the implication of this improved credit allocation on economic growth is what we hope to resolve at the end of this study.

Figure 1. Graphs showing the Trend in Growth rate of GDP(GDPR), Banking credit to all sectors of the Nigerian Economy 1981 - 2015

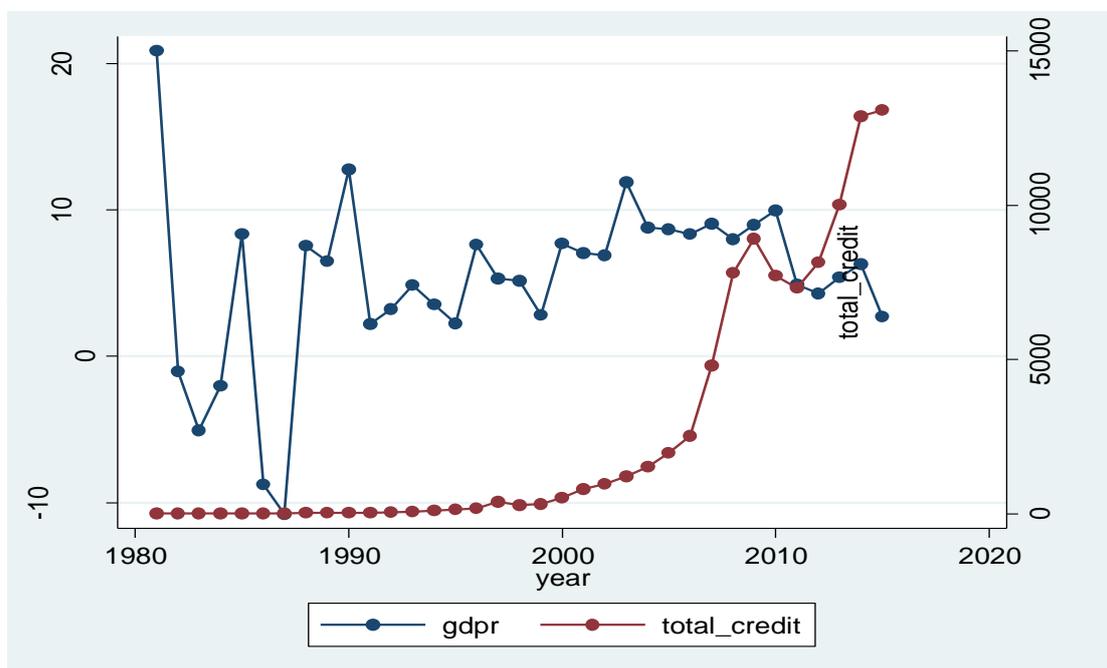


Table 2. Correlation Result

Variable	GDPR	BCA	BCM	BCGM	BCC	BSS
GDPR	1					
BCA	0.07436902	1				
BCM	0.14132223	0.94810352	1			
BCGM	0.076184784	0.95605863	0.96272199	1		
BCC	-0.013126931	0.746228245	0.707342626	0.615732358	1	
BSS	0.242077899	0.842482661	0.923680093	0.886644562	0.46075132	1

The correlation result reported in table 2 revealed that banking sector credit allocations to the agricultural sector (BCA), manufacturing sector (BCM), oil and gas/mining sector (BCGM) and total number of bank branches have positive but weak relationship with growth rate of GDP while banking sector credit to commercial sector (export financing) or (BCC) is negative and weak. This implies that

consolidation/banking sector credit allocation has very weak relationship with economic growth. However, all the explanatory variables were found to have positive and strong nexus with one another. The possible reason for this behaviour is that banking sector credit allocation though disaggregated are all from the pool of credit from the banking sector.

Table 3: Unit Root Tests Result

Augmented Dickey Fuller (ADF) Test Statistic						Philip-Perron (PP) Test Statistic				
Variable	ADF Statistic	1%	5%	10%	Decision	PP Statistic	1%	5%	10%	Decision
GDPR	-5.079129	-3.639407	-2.951125	-2.614300	I(0)	-5.108727	-3.639407	-2.951125	-2.614300	I(0)
Log (BCA)	-6.629970	-3.646342	-2.954021	-2.615817	I(1)	-7.244138	-3.646342	-2.954021	-2.615817	I(1)
Log (BCM)	-4.416192	-3.646342	-2.954021	-2.615817	I(1)	-4.416192	-3.646342	-2.954021	-2.615817	I(1)
Log (BCGM)	-6.226745	-3.646342	-2.954021	-2.615817	I(1)	-6.230740	-3.646342	-2.954021	-2.615817	I(1)
Log (BCC)	-8.320250	-3.646342	-2.954021	-2.615817	I(1)	-8.736637	-3.646342	-2.954021	-2.615817	I(1)
Log (BSS)	-4.229410	-3.646342	-2.954021	-2.615817	I(1)	-4.081107	-3.646342	-2.954021	-2.615817	I(1)

The test for unit roots of the variables/data was carried out using the Augmented Dickey Fuller(ADF) and Philip-Perron (PP) procedures. The results indicate that growth rate of GDP was stationary at level using the Augmented Dickey Fuller and Philip-Perron procedure while Banking sector

credit to agriculture (BCA), manufacturing (BCM), oil & gas/mining (BCGM), export financing (BCC) and total number of deposit money banks branches (BSS) were stationary at first differences.

Table 4 (a). Johansen Cointegration Test Result

Series: GDPR LOG(BCA) LOG(BCM) LOG(BCGM) LOG(BCC) LOG(BSS)				
Lags interval (in first differences): 1 to 2				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.831544	153.5070	95.75366	0.0000
At most 1 *	0.783885	96.51233	69.81889	0.0001
At most 2	0.518512	47.49015	47.85613	0.0541
At most 3	0.326731	24.10220	29.79707	0.1962

At most 4	0.258846	11.44267	15.49471	0.1857
At most 5	0.056384	1.857154	3.841466	0.1730
Trace test indicates 2 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.831544	56.99467	40.07757	0.0003
At most 1 *	0.783885	49.02218	33.87687	0.0004
At most 2	0.518512	23.38795	27.58434	0.1575
At most 3	0.326731	12.65953	21.13162	0.4840
At most 4	0.258846	9.585520	14.26460	0.2406
At most 5	0.056384	1.857154	3.841466	0.1730
Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

Table 4(b): Normalized cointegrating coefficients (standard error in parentheses)

GDPR	LOG(BCA)	LOG(BCM)	LOG(BCGM)	LOG(BCC)	LOG(BSS)
1.000000	-1.917464	-4.322826	4.266939	-0.814325	-5.603206
	(1.06402)	(1.99838)	(0.93211)	(0.51814)	(1.76602)

GDPR - 1.917464BCA – 4.322826BCM + 4.266939BCGM – 0.814325 – 5.603206 ... (4)

The results of the cointegration tests in table 4(a & b) show that the variables in the economic growth model in equation (1) tend to move together in the long run as stipulated by economic theory. That is according to Johansen/Joselius (1990) “if two or more series are related to form an

equilibrium relationship running through the long run, then even though the series on their own may not be stationary, they will move together closely over time and their difference will be stable”. Also according to Engle and Granger (1987) if non-stationary variables are cointegrated, then an error correction could exist. Hence given that the variables in the growth model are cointegrated, we therefore estimate the Vector Error Correction model (VECM).

Table 5. Parsimonious Result of the Vector Error Correction Model of Economic Growth

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.406178	1.400882	-1.003780	0.3264
DLOG(BCA(-1))	-4.055850	2.870973	-1.412709	0.1717
DLOG(BCM(-2))	13.57708	5.603837	2.422818	0.0241
DLOG(BCGM(-1))	2.614830	1.843142	1.418680	0.1700
DLOG(BCGM(-2))	-4.319769	2.216011	-1.949344	0.0641
DLOG(BCC)	-0.074741	0.603139	-0.123920	0.9025
DLOG(BSS(-1))	17.75876	8.909976	1.993132	0.0588
DLOG(BSS(-2))	-12.46391	9.035331	-1.379464	0.1816
D(GDPR(-1))	0.189932	0.156905	1.210494	0.2389
VECM(-1)	-0.830367	0.207350	-4.004664	0.0006
R-squared	0.690926	Mean dependent var		0.242188

Adjusted R-squared	0.564486	S.D. dependent var	5.813503
S.E. of regression	3.836533	Akaike info criterion	5.777322
Sum squared resid	323.8178	Schwarz criterion	6.235365
Log likelihood	-82.43715	Hannan-Quinn criter.	5.929150
F-statistic	5.464473	Durbin-Watson stat	2.440488
Prob(F-statistic)	0.000555		

The results in table 5 show that economic growth is negatively and insignificantly influenced by changes in banking credit to agriculture sector. This implies that banking credit to the agriculture sector has either been inadequate or misallocated/misappropriated hence has negative and less implication on the growth of the Nigerian economy. This result is not in tandem with the works of Imoughele at al (2013), Akinkoye and Oyelami (2014) and Akpansung and Gidigbi (2014). They all found credit allocation to agriculture sector to be positive and significantly related to economic growth. The agriculture sector in Nigeria is underdeveloped with high influence of weather and climate on productivity/output. These vagaries in weather has led to unpredictable output in the sector hence agriculture business is viewed as unprofitable business by the banks.

Growth rate of GDP was found be positively and significantly affected by changes in banking sector credit to the manufacturing sector. The result indicates that credit to the manufacturing sector stimulated economic growth in Nigeria during the period. This result is in consonance with the that of Imoughele at al (2013), Akinkoye and Oyelami (2014) and Akpansung and Gidigbi (2014). They all found credit allocation to manufacturing sector to be positive and significantly related to economic growth. Manufacturing business has high propensity for value addition and growth. It also attracts higher credit allocation from the banking sector. This is because investment and output of this sector could be predictable. These reasons may have influenced the behaviour of this variable.

The error correction result further shows that economic growth is positively influenced by changes in lag 1 of banking credit to oil & gas/mining sector and negatively affected by changes in lag 2 of credit to oil & gas/mining sector. Banking sector to this sector was also found to insignificant at 5 percent for both lags. This mixed effect and insignificance of banking sector credit to the oil and gas/mining sector revealed that the sector has less marginal impact on the growth of the Nigerian economy. Though oil and gas sector is the most prominent source of revenue to the government in Nigeria, its contribution to growth and employment has been marginal. The oil and gas sector is an enclave sector with less linkage effect with other sectors coupled with the high capital intensive nature of the sector These have reduce the multiplier effect of the sector in terms of job creation and national growth.

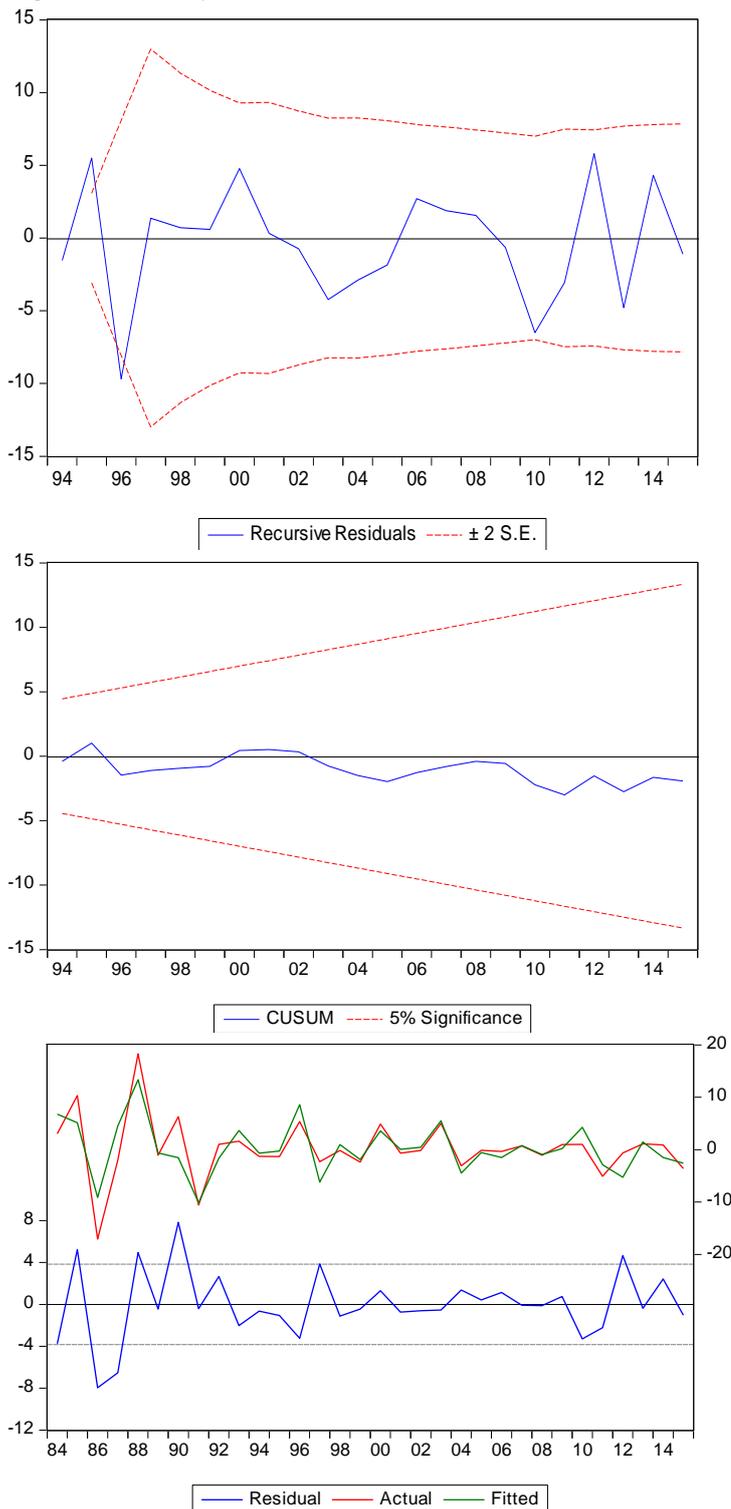
The result of the VECM also indicates that banking sector credit to the commercial sector (export financing) has negative and insignificant relationship with economic growth. This result deviated from the theoretical apriori expectation/theory. This implies that export financing by banks retarded economic growth. Nigeria has very weak export base due to low level of manufacturing and agriculture. With less than 30 percent capacity utilization in the manufacturing sector and high level of subsistence agriculture, Nigeria's export business cannot be attractive to banks hence the poor outcome of this variable.

Bank size (number of banks branches) positively affected economic growth in lag 1 and negatively influenced growth in lag 2. However, bank size is insignificant at both lags at 5 percent level. This indicates that bank size has less implication on economic growth. Financial spread/liberalization helps make financial services easy and accessible to the public/investors. In spite of the surge in bank size over the years, with rural communities are still without banking services. This has affected investment and growth in the rural sector.

The appropriateness of the sign of the error correction model and its significance at 5 percent level, indicates that the variables adjust speedily to long run dynamics. Also the goodness of fit of 0.57 shows that 57 percent of the total variation in economic growth is explained by consolidation/banking sector sectoral credit allocation in Nigeria. At 2.4, serial correlation is very marginal while the F-ratio of 5.5 shows that the growth model is statistically fit for prediction.

To ascertain the stability of the short run dynamics and the long run parameters of the growth model, the study adopted the Bahmani-Oskooee and Shin (2002) procedure and the cumulative sum of recursive residuals (CUSUM) to the residuals of the parsimonious model. For stability of the model, the recursive residuals and CUSUM lines must stay within the 5 percent critical bound. As depicted in figure 2 neither the recursive residual nor CUSUM plots across the 5 percent critical lines. We therefore conclude that the estimated parameters for the short run dynamics and long run of the economic growth model are relatively stable. This implies that a stable growth function exists over the entire period of this study. The actual, fitted and residual graphs also in figure 2 also lend support to the stability of the variables in the growth model.

Figure 2. Stability Tests



Concluding Remarks

This study investigated the banking sector consolidation: its implication for sectoral credit allocation and economic growth in Nigeria. utilizing time series data on growth rate of GDP, banking sector credit distribution to the agriculture, manufacturing, oil and gas/mining, commercial (export financing) sectors and bank size (number of Deposit money bank branches), the results indicate that only banking sector credit allocation to the manufacturing sector is positive and significant at 5 percent level. Banking credit to agriculture, oil & gas/mining, commercial and bank size were all

insignificant at 5 percent level. This implies that credit to the manufacturing sector improved economic growth in Nigeria over the period of this study. The manufacturing sector has higher prospects for investment, job creation, value addition and growth hence attracts funds from the banking sector than agriculture and oil & gas/mining. Based on these findings, the paper suggests creation of enabling environment and enactments of policies that will enhance higher credit allocation to manufacturing sector in particular and the real sector in general in order to spur investment, productivity and job creation in this sector and stimulate economic growth in Nigeria.

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Appendix A: Banking sector credit to the Agriculture sector (BCA), Manufacturing sector (BCM), Oil & gas/Mining sector (BCGM), Export Financing/Commercial sector (BCC), Bank size and Growth rate of GDP in Nigeria 1981 - 2015

Year	BCA (NB)	BCM (NB)	BCGM(NB)	BCC (NB)	BSS(000)	GDPR(%)
1981	0.6	2.7	0.1	0.1	869	20.838
1982	0.8	3.0	0.1	0.2	991	-1.053
1983	0.9	3.1	0.1	0.1	1108	-5.05
1984	1.1	3.1	0.2	0.1	1249	-2.022
1985	1.3	3.2	0.2	0.1	1297	8.323
1986	1.8	4.5	0.2	0.3	1367	-8.754
1987	2.4	5.0	0.2	0.5	1483	-10.752
1988	3.1	6.1	0.2	0.5	1665	7.543
1989	3.5	6.7	0.3	0.6	1855	6.467
1990	4.2	7.9	0.4	0.7	1939	12.766
1991	5.0	10.9	0.5	0.9	2023	2.206
1992	7.0	15.4	0.8	1.3	2275	3.209
1993	10.8	23.1	1.4	1.6	2358	4.835
1994	17.8	34.8	1.4	7.6	2403	3.552

1995	25.3	58.1	12.1	19.4	2368	2.236
1996	33.3	72.2	15.0	33.0	2407	7.606
1997	27.9	82.8	20.6	16.4	2407	5.298
1998	27.2	96.7	22.8	29.8	2185	5.15
1999	31.0	115.8	24.7	18.8	2185	2.8
2000	41.0	141.3	32.3	25.3	2193	7.701
2001	55.8	206.9	70.5	34.5	2193	7.035
2002	59.8	233.5	70.2	26.7	3010	6.898
2003	62.1	294.3	96.0	34.5	3247	11.889
2004	67.7	332.1	131.1	31.3	3492	8.791
2005	48.6	352.0	172.5	26.4	3233	8.677
2006	49.4	445.8	251.5	52.7	3233	8.327
2007	149.6	487.6	490.7	66.6	4200	9.061
2008	106.4	932.8	846.9	75.2	4952	8.014
2009	135.7	993.5	1,190.7	45.9	5436	8.971
2010	128.4	987.6	1,178.1	44.8	5809	9.969
2011	255.2	1,053.2	1,295.3	36.2	5454	4.887
2012	316.4	1,068.3	1,771.5	65.6	5564	4.279
2013	343.7	1,179.7	2,155.9	3.9	5639	5.394
2014	401.9	1,464.4	1,651.1	804.2	5526	6.31
2015	467.6	1,870.6	2,247.5	1,081.3	5470	2.7