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Bank Liquidity and Economic Growth of Nigeria

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Abstract
This study was carried out to determine the effect of bank liquidity on the economic growth of Nigeria. Consequently, three hypotheses were designed to guide the researchers and data were drawn from the Central Bank of Nigeria (CBN) statistical bulletin which covered a thirty three (33) years period between 1980 to 2013. The hypotheses were tested using ordinary least square regression analysis and the econometrics co integration test. The result revealed that; there is a positive and significant relationship between total bank credit ratio and economic growth of Nigeria; there is a positive and significant relationship between total bank deposits and gross domestic product of Nigeria; a negative but significant relationship exist between deposit credit ratio and economic growth of Nigeria. Based on the results, it was recommended that government should motivate banks to grant more loans and advances to the economy; laws should be instituted to prevent the diversion of loans to non-productive sectors of the economy; the monetary authorities should encourage the real sectors of our economy such as the agricultural and industrial sectors of Nigeria.
Keywords: Bank deposits; Bank liquidity; Deposit credit ratio Economic growth; Gross domestic product; Loans and advances; Loan ratios; Total bank credit ratio; Total bank deposit.

1.1 INTRODUCTION

Available literature agrees that bank liquidity drives economic activity in the various economies of the world. Banks grant loan to businesses that are used by organizations to facilitate their operations, it therefore follows that growth in liquidity is supposed to result in corresponding growth in the economy. Therefore, banks which constitute the greatest custodian of liquid asset in any economy are required by efficient bank management practices to always remain liquid enough so as to meet up with depositor's demand and by extension the whole economy's liquidity or financial requirement so as to be able to support all the financial transactions of such an economy and also earn depositors confidence.

Unfortunately, the above positive perception of what bank liquidity is expected to achieve (i.e positive economic performance) cannot be said to be true in most developing countries of the world in which Nigeria happens to fall into.

Okereke (2003) defines liquidity as "a situation in which one has cash or near cash instruments that can be converted to meet debt obligations". Nzotta (2005) also agrees with the importance of liquidity, when he states that "cash is the life blood of any business and the most important current asset of a firm. Cash resources confer a high level of liquidity to the corporate concern. When a firm has adequate cash resources (liquidity), it is in a position to meet its maturing obligations and also able to take advantage of new profitable ventures."

The place of liquidity in the economy cannot be down played, liquidity dictates the speed with which economic activities are carried out. Bank liquid asset assist business organizations to finance their transactions by borrowing from the bank. Profitability affecting both the creditor (i.e. the bank charging interest on the borrowed funds) and the debtor (i.e. the customer who employs the borrowed funds into some productive ventures) with other attendant multiplier effects is therefore attained. It is therefore not surprising when failures or unfavourable outcomes in the banking sector makes the whole economy to catch cold such as was witnessed in 2008 code named Economic meltdown. The effect of the serious depletion of Bank liquid asset is both visible and felt all over the world. From America to Europe passing through Asia not forgetting Africa the stories are the same. Unemployment, reduction in government or public expenditure, retrenchment of existing workers, low production of goods and services meaning low GDP etc is the present reality.

An apparent conclusion as a solution to avoid all the above mentioned vices of the economy will be a recommendation that banks ensure steady build up of their liquidity so that positive economic performance could be facilitated. Meanwhile, it is instructive to note that in spite of the positive significance of liquidity, it could also assume a negative impact on the economy when it is held in excess. This is consistent with the usual maxim that states "too much of everything is bad". It is therefore the intention of this work to find out how bank liquidity has assisted the Nigeria's economy to perform.

Available literature agrees that bank liquidity drives economic performance. Banks in the developed world do this by granting credits to the productive sectors of the economy. Nzotta (2005) posits that cash is the life blood of any business and confers a high level of liquidity to the corporate concern. When a firm has adequate cash resources, it is in a position to meet maturing obligations and also able to take advantage of new profitable ventures.

Oboh (2005) also states that extension of credit to the economy is the core link that banks have with the real sector, acting like a catalyst and contributing to the growth of the economy. Meanwhile, Ekundayo (1994) noted that the Nigerian banking industry has been playing a leading role in the development of the Nigerian economy by mobilizing and disbursing tremendous volumes of funds for the growth of the economy. The economic wellbeing of any economy is as important as life itself of its citizens. The various components of the economy must as a matter of necessity perform optimally if the economic wellbeing of the nation and by extension its citizens can be guaranteed. Sustainable national growth and development can only occur when economic activities perform creditably. It is only there and then that the necessities of life could be afforded. For this to be achieved, more financial resources are needed in the various sectors of the economy in the form of loan since no meaningful economic activity could be carried out without the availability of funds.

The pertinent issues that easily come to mind is whether banks have actually contributed enough and in the right proportion in order to stimulate positive performance of the Nigerian economy.

If there is so much liquidity and it cannot be established over a period of time that it had contributed to the positive performance (i.e. growth of the system) that means such bank liquid asset must have worked otherwise particularly against the economic wellbeing of the nation.

The problem which this study seeks to investigate is whether there exists any significant relationship between the value of loans and advances made by Nigerian banks to the economy and growth of gross domestic product in Nigeria. Also, whether deposit/loan ratios can affect the gross domestic product of Nigeria.

SCOPE OF STUDY

This research is an empirical analysis of the extent to which bank liquidity in Nigeria has impacted on economic growth. The study covered from 1980 to 2013.

THEORETICAL REVIEW

The role of bank liquidity in the economic performance of any economy is very significant, economic activities will almost be non-existent without cash. Agriculture for instance, which is a very integral part of any economy, will need funding from time to time either in the form of loan or grant. Also, in the industrial sector of the Nigerian economy, which is highly capital intensive, the contribution of bank liquidity towards its effective performance cannot be downplayed.

From the manpower development to the actual procurement of farm implements in the case of agriculture and machinery in the case of the industrial sector, bank liquid asset (cash) is the medium through which these transactions are made. Meanwhile, it is also instructive to note that bank liquidity could also assume some negative tendencies i.e. bringing about negative performance of the economy. Notable among them could be inflation, extreme low rate of interest on deposit with money deposits banks as well as militating against effective policy implementation and financial sector development.

According to Sanusi (2008), lack of bank liquidity slows down economic performance of the Nigerian economy. They posited that "at the microeconomic level the country has a challenging business environment. It has high poverty rates, limited access to finance, poor physical infrastructure and high corruption levels". From the quote above one can quickly discover why at the microeconomic level we are not doing well even when according to the report of Nigerian banks assets and deposits increased at about 30% P.A. Limited access to finance (bank liquidity) stand out to be the missing link hence they recommended that the government need to facilitate the expansion of the banking footprint beyond the middle class.

THE IMPACT OF NIGERIA'S FINANCIAL SERVICES ON THE POPULACE

According to Sanusi (2008), "Nigeria has the second largest financial services sector in sub-Saharan Africa, after South Africa. It is fast growing and at the cusp of expanding internationally. Nigeria is well on its way to establish itself as a regional financial services center and has the opportunity to become an influential player for providing financial services in low income countries. The domestic macroeconomic background is favourable, Nigeria has the largest population in Africa and is among its fastest growing economies mainly due to growth in the oil sector. However, at the microeconomic level, the country has a challenging business environment. It has high poverty rates, limited access to finance, poor physical infrastructure and high corruption levels. These barriers to economic growth have to be addressed quickly to ensure future growth. The government needs to make Nigeria a more attractive place to invest and it needs to diversify the economy by accelerating development of the non-oil sector.

The financial services cluster has benefited from recent reforms and from increasing Foreign Direct Investment into Nigerian financial institutions. Nigerian banks' assets and deposits are rising at about 30% P.A; and these locally owned banks are expanding internationally. However, the sector needs to improve on risk management and increase the skill base of its employees to maintain its current growth level. The government also needs to facilitate the expansion of the banking footprint beyond the middle class and into other countries.

Social context: compared to its neighbours, Nigeria has lower human and social development indicators. 70% of the population lives below $1 a day and 92% of the population lives below $2 per day. The UNDP ranks Nigeria as a low human development country at 158 out of 177. Despite its oil wealth, Nigeria remains a highly unequal society with a gini coefficient of 0.43. The government introduced universal basic education (UBE) in 1999; however, education standards continue to fall with the combined enrollment ratio at only 56% and a literacy rate of 69%. Government spending on education as a percentage of GDP is 3% which is well below the level of spending in South Africa (5.4%), Ghana (5.4%) and Kenya (6.7%). Health remains a challenge, despite the low prevalence rate of HIV at 3.9%, other health indicators remains challenging. Public expenditure on health is only 1.4% of GDP.

Economic Performance

Nigeria is sub-Saharan Africa's second biggest economy with nominal 2006 GDP of $235bn behind South Africa's $600bn. It has also been one of its fastest growing economies, outpacing South Africa, Kenya, Ghana and most of its neighbours with a CAGR of 7% over the past 10years. However, its growth has been more erratic due to the high reliance on natural resources. Despite the fast pace of growth and the strong resource endowment, Nigeria has so far not increased its GDP/capita beyond that of its smaller and resource-poor neighbours. Its GDP/capita is below that of Cameroon, Ivory Coast, Kenya and it is only 12% that of South Africa. Poverty and the rural nature of Nigeria puts pressure on financial services institution to innovate and to reach out to poor customers.

Composition of the Economy

Nigeria's economy is heavily reliant on the oil and gas sector, Nigeria's economy seems not to have benefited significantly from its bank liquidity by way of credit to other sectors of the economy such as agriculture, industries, culture and tourism, transportation etc. The oil and gas sector makes up more than 40% of the GDP and accounts for virtually 100% of exports and 80% of budgetary revenues for the government. Nigeria is the world's 12th largest producer of oil, mainly supplying the U.S. Next to natural resources the most important sector is agriculture, accounting for approximately 35% of GDP. A large portion of this is subsistence farming with declining productivity. Why is the agricultural sector predominantly subsistent farming when Nigeria has vast arable land and optimum population to exploit these resources with such an intimidating rate of unemployment? Perhaps it will not be unconnected with lack of capital for mechanized farming.

Exchange Rate and Interest Rate

Predictability and stability of the exchange and interest rates are highly important in the development of a strong financial service industry which will bring about positive economic performance. Nigeria's exchange rate has slowly appreciated against the dollar over the past 10years, and in 2007 the Central Bank of Nigeria allowed the Naira to appreciate. Today the difference between the official and parallel exchange rates is set to be quite manageable, a sign for a liberalization of the exchange rate regime. The CBN is proactively intervening in the market to stabilize inflation such as with the increase of the monetary policy rate from 8% to 9.5% in late 2007. Because bank liquidity can also assume a negative position on the economy, the government controls liquidity from time to time just as it did in 2008, and is currently implementing through the recent cashless economy campaign.

HISTORY AND THE 2002 BANKING SECTOR REFORMS

The Central Bank of Nigeria (CBN) began operation in 1959. From 1968 to 1999, the CBN lost autonomy to the Federal Government, and Nigeria was plagued by loose monetary policy. In 1999, the last military government granted the bank legal autonomy in exercising regulatory and monetary policy functions.

The history of the banking sector goes back to 1892 when the colonial British opened the first bank. After the independence in 1960 and until the early 1980s, three big banks (Union Bank, First Bank and United Bank for Africa) dominated the industry. In 1986, the government deregulated the banking sector and lowered barriers to entry. As a result, many new firms entered the market and the number of banks increased to over 100. Many new entrants were weakly capitalized and poorly managed. There was also weak regulatory supervision. This led to the collapse of some of the new banks, and to several banking crises in the 1990s. As a result, across the industry approximately 20% of the loan portfolio was non –performing by the early 2000s. Because of the banks' weak balance sheet, they were not able to provide long-term financing to the private sector. Recall that the economy need bank liquidity in form of loan for positive performance and growth. Financing became one of the key bottle necks for the economic growth. However, in 2002, the government forced recapitalization of weak banks to a minimum of N2bm ($15m). From 2004 to 2005, further reforms occurred. Minimum capitalization of banks was increased to N25b ($200m) by the end of 2005. Autonomy and accountability of the CBN was increased and the CBN started to monitor banks based on risk focus and rule-based regulations. This reform led to the consolidation in the industry. Only strong banks survived. The number of the banks decreased from 89 in 2004 to 25 in 2005 and currently to 22 as at June 2013.

(a) Restructuring of the Banking Sector in 2004 – 2005

At the end of 2004, the underdeveloped Nigerian Banking System was highly fragmented and included 89 money deposit banks with 3,100 branches predominantly located in urban centers. The ten largest banks accounted for over 55% of aggregate assets and deposits, and 45% of aggregate advances. The remainder of the industry consisted primarily of undercapitalized small banks, which were weighed down by high overhead costs and limited financial flexibility. In addition to deposit banks, the system extended to encompass 5 discount houses, 774 community banks as well as 6 specialized development banks and mortgage institutions.

The government's ambitious bank consolidation program resulted in the emergence of 25 "mega banks" in 2005 representing 75% of the original 89 banks, and 93.5% of industry deposits. In 2005, the banking sector was flooded with funds, during the 18 months consolidation period, the industry's aggregate capital base nearly doubled from around $3bn to $5.9bn. Foreign Direct Investment (FDI) amounted to $500m.

(b) Improved Lending Practice

The rationale behind or that necessitated in the first place the recapitalization of banks is a strong testimony of the pride of place bank liquidity occupies in the economic rejuvenation of a nation. One of the main weaknesses of the Nigerian banking sector was the poor quality of its loan portfolio with an average of 21% of net non-performing loans in 2002. This was due to a combination of weak skills (credit scaring risk assessment) and ethical issues (corruption, lending to friends/relatives).

The transformation of the industry has enabled the restructuring of the weakest loan portfolio of the failed banks and the merger of weak banks with large and better managed ones. Consequent upon the above reforms, the Nigerian banking sector and by extension the economy has been growing extremely since 2006. This strong growth is a product of the trust created by the transformation of the industry both with investors and clients.

EMPIRICAL REVIEW

Gurley and Shaw (1955), Goldsmith (1969) and McKinnon and Shaw (1973) show that financial system in an economy is important for faster economic growth.

Gurley and Shaw (1955) show that bank liquidity provision is important for growth process. They argue that development of financial intermediaries in developed economies is minimal. Investments are financed out of self-finance or by direct finance and financial intermediaries are not involved. However, as the economy grows, financial institutions start to emerge. They obtain financial assets from savers and allocate the funds obtained to investors. Moreover, banks to help to reduce illiquidity. Thus the development of financial enterprises and issuing debt promotes real growth.

A study by Goldsmith (1969) assesses the correlation between financial development and economic growth. He studied 35 countries over the period 1860-1963. Using the ratio between the value of financial intermediary assets and GNP as a proxy for financial development, he shows a strong positive relationship between growth and financial intermediaries. However, his analysis had some weaknesses since the study is limited to only 35 countries and the close association between financial intermediaries and growth is not able spot the direction of causality. Thus, Goldsmith's contribution is important but incomplete.

McKinnon (1973) studies the relationship of financial system and economic development in Argentina, Brazil and other countries. He reports that investments in less developed countries is self financed. Hence, small size firms generally face lack of finance. Moreover, developing countries have restricted competition in the financial sector because of government interventions. This sector discourages both savings and investments due to low rate of returns. Thus financial intermediaries do not operate to their full capacity and fail to channel savings to investments efficiently, hence hindering development in the overall economic system. McKinnon (1973) argues that the success or failure of the economic system depends on the monetary sector. Monetary reforms can stimulate growth by raising saving propensities.Thus, better functioning of financial systems support faster economic growth.

McKinnon (1973) and Shaw (1973) stated that financial intermediation would contribute most significantly to economic growth, if monetary authorities did not interfere in the operations of financial institutions.

Following the influential studies of McKinnon (1973) and Shaw (1973), there has many studies on the effects of financial sector development on economic growth.

METHODOLOGY

The main source of data explored in this research is the secondary source, collected from the Central Bank of Nigeria (CBN) statistical bulletin.

To analyse the data, the researcher used the method of Ordinary Least Square due to its BLUE (Best Linear Unbiased Estimator) property. Sequel to that, the researcher conducted co integration test to determine the long-term relationship between the various. Further, the researcher conducted Augmented Dickey-Fuller tests to

determine if the variables have unit root. Granger causality test was also conducted to determine the nature of the cause between the variables.

Finally, based on the OLS method, the researcher carried out the apriori test, statistical tests (t-tests, f-tests) and econometric test using Durbin-Watson (d) statistic to determine if there is the presence of serial autocorrelation among the independent variables.

MODEL SPECIFICATION

In order to show the relationship that exists between the dependent and independent variable, we specify our model in the following forms:

The functional form of the model is:

GDP = F (TBCR, DCR, TBD)

$GDP = b_0 + b_1TBCR + b_2\ DCR + b_3\ TBD + U_1$

Where:

GDP = Gross Domestic Product in period t

$TBCR_t$ = Total Bank Credit Ratio in period t.

TBD_t = Total Bank Deposit in period t

DCR_t= Deposit Credit Ratio in period t

U_i = Disturbance Term (It captures all other variables that affect GDP but were not included in the model)

4.0 DATA ESTIMATIONZ, ANALYSIS AND INTERPRETATION OF RESULTS

Co integration Test

The co integration test, as pointed out by Gujarati (2009), is a pre-test before the regression test itself. It tests whether the variables have a long-term relationship or not. This establishes whether we will be using the variables together or not.

Komolafe (1996), believes that co integrating technique is superior to the traditional partial adjustment model for the following reasons. First, it is central to econometric modelling of integrated variables as well as investigation of long-run relationship among variables. Secondly, it assists to overcome "Spurious" regression. Finally, data consistency is achieved given that the variables will be in the same order.

Therefore, the Johansen Co integration Test, using the value of the *Trace* Statistic values, reveals that the variables are co integrated. They have a long-term relationship. The model shows that the variables are co integrated and therefore, we conclude that there is a long-term relationship between the dependent variable and the independent variables.

Table 4.1 Co integration Table

Unrestricted Co integration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigen value	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.752348	70.07420	47.85613	0.0001
At most 1	0.485331	28.20232	29.79707	0.0755
At most 2	0.217749	8.275363	15.49471	0.4364
At most 3	0.029813	0.907979	3.841466	0.3407

Trace test indicates 1 co integrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Co integration Rank Test (Maximum Eigen value)

Hypothesized No. of CE(s)	Eigen value	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.752348	41.87189	27.58434	0.0004
At most 1	0.485331	19.92695	21.13162	0.0730
At most 2	0.217749	7.367384	14.26460	0.4466
At most 3	0.029813	0.907979	3.841466	0.3407

Max-eigen value test indicates 1 co integrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values
Source: Authors Computation using E-view (7.1)

Augmented Dickey-Fuller Tests

As one of the tests for unit roots, ADF tests whether the variables are stationary or not. If they are not stationary, there is need to lag the variables in order to obtain a stationary time series.

The results shows that all the variables used were stationary both at levels and first differencing. We proceed to the regression analysis. The ADF test result is shown in the table below:

Table 4.2 Table showing ADF Values

Coefficients	Critical Value at 5%	ADF t-value	Comments
GDP	-2.9339	-3.647811	Stationary
TBCR	-3.5279	-6.761183	Stationary
TBD	1.275434	-1.425780	Stationary
DCR	-3.5247	-4.935787	Stationary

Computed by the researcher using E-view 7.1

The table above shows that the variables are stationary at 5% level and therefore, are appropriate to be used for the regression analysis.

Granger Causality Test

The relationship between two variables does not necessarily determine the causality between the variables. Therefore, the Granger Causality Test, tests the direction of cause that may exist between variables used in the analysis. The result shows that in the model, TBCR Granger Causes GDP at (F= 3.43115); TBD Granger causes GDP at (F = 3.91558) and; DCR does not Granger cause GDP at (F = 0.84597) while GDP does not Granger Cause TBCR (F = 1.26853); GDP does not Granger cause TBD (F = 0.30282) and; GDP Granger causes DCR (F = 10.0720) at 5% level of significance.

Results Presentation and Discussion of Findings

Presentation of the Model Results

GDP = -14.085 + 0.057TBCR + 0.008TBD– 1.937DCR
t-value = (-0.149) (-3.094) (1.284) (-6.529)
Std error = (52.581) (0.613) (0.380) (1.267)
f-value = 7.946
$R^2 = 0.995$
Durbin-Watson (d) = 2.014

Statistical and Econometric interpretations

Explanation of some terms.

1. Coefficient of determination (R^2) measures the percentage change in the dependent variable that is explained by the independent variables. It measures the goodness-of-fit of the regression line. The higher the R^2, the better the regression line which shows that a greater percentage of the changes in the dependent variable is explained by the changes in the independent variables.
2. t-value tests if the values of the independent variables are statistically significant. The rule of thumb is: reject $H_o$if $/t/>t^{\alpha}/_2$ (and $/t/ \geq 2$) at 5% level of significance, otherwise, accept H_o. Where /t/ is the calculated t-value and $t^{\alpha}/_2$ is the tabulated t-value. We will base our rule of thumb on $/t/ \geq 2$: we accept the alternative hypothesis. Tabulated t-value = 2.136.
3. f-value tests the overall significance of the independent variables taken together. The rule of thumb is: reject H_o if $/f/>f\alpha$ (and $/f/ \geq 2$) at 5% level of significance and accept H_1, otherwise, accept H_o. Where /f/ is the calculated f-value and $f^{\alpha}/_2$ is the tabulated f-value from the f-table. As in t-value, f-value will be based on $/f/ \geq 2$: we accept the alternative hypothesis.
4. Durbin-Watson (d) statistic helps to detect the presence of serial autocorrelation of the first order among the independent variables used. It helps to detect whether the independent variables have a serial relationship with one another in the previous years (e.g. $TBCR_t = TBCR_{t-1}$). The closer the (d) is to 2, the absence of serial autocorrelation of the first order.
5. Multicollinearity is observed if there is high R^2 while there are insignificant t-values.

The result shows that $R^2 = 0.995$ which indicates that 99.5% of the changes in the dependent variable (GDP) are explained by the changes in the independent variables. Further, the huge f-value of 7.946 shows that the variables are significant when taken together at 5% level of significance using the rule of thumb (2) while the Durbin-Watson (d) statistic equally shows an absence of serial autocorrelation of the first order at 2.014. Unfortunately, the result also shows a mild multicollinearity: high R^2 with some insignificant t-values.

Starting with Total Bank Credit Ratio (TBCR), the regression result shows that part of the major factors affecting the GDP has been poor TBCR in the country. Although, table 4.1 shows that TBCR has been increasing over the period, this increment has not been felt in the overall economy. The regression result shows that TBCR is positively related to the GDP, which is expected a priori. Further, the result shows that a unit

increase in TBCR increases GDP by 0.057 and vice versa. This effect is low compared to what is expected of a private-driven economy. Of course, there is still a lot to be done in the area of encouraging private investments in the country in other to make the economy a truly private investment driven through bank lending. A policy towards making bank loans easily accessible to the business community is urgently needed to make the economy a private-led economy. Finally, the result reveals that TBCR is statistically significant at 5% level using t-test. We therefore reject the null hypothesis and conclude that there is a significant and positive relationship between TBCR and economic growth (GDP).

Nigeria's experience over the review period has been very poor in terms of productive capital for investments. It is clear that Total Bank Deposit affects GDP through bank loans and lending policies. As stated earlier, the easier the access to the capital needed for businesses, the more the economy grows. The easy access to capital is made possible based on the TBD. If the bank has more, it lends more and vice versa.

In fact, the regression result reveals that TBD, as much, has positive but insignificant influence on GDP which is also expected a priori. Therefore, a unit increase in TBD increases GDP by 0.008 and vice versa. As stated earlier, capital loans play a very important role in the life of any economy.

The result further shows that TBD is statistically insignificant at 5% level using the t-test (2-tailed). We therefore accept the null hypothesis and conclude that there is no a significant relationship between TBD and economic growth. The government should therefore encourage banks and other financial institutions in building up their Total Bank Deposits. This can be done through the provision of enabling environment in which the banks do not have to spend huge sums in running their businesses. A reduction in the cost of doing business by will increase bank lending and this will lead to the economy being a private driven economy.

Finally, the regression shows that Deposit Credit Ratio has its part to play on GDP, unfortunately, in a negative way. Investment is basic in any economy. In the past years (1981-2000), investments, especially by the government, have been fluctuating due to the oil boom/glut and the Dutche Disease. Deposit Credit Ratio determines what the bank is statutorily required to give out as loans. If the DCR is low, the interest on loans will sky-rocket and vice versa and this may scare private investors away as well as end up putting more pressure on the government to provide all the goods and services and basic amenities the society needs, which would have been provided by the private sector.

The regression result shows that DCR is negatively related to GDP. This shouldn't come as a surprise as it is expected to be the case because Nigeria is yet to fully embrace the banking culture. More so, there is still a very high cost of running banking businesses in Nigeria. A unit increase in DCR decreases GDP by 1.937 units. Again, we observe that DCR is statistically significant at 5% level using t-test ((-6.529) on a 2-tailed test. We accept the alternative hypothesis and conclude that there is a significant relationship between DCR and GDP.

5.0 CONCLUSIONS AND RECOMMENDATIONS.

This study investigated bank liquidity and economic growth of Nigeria, the study revealed that deposit money banks contributes to the economy in the form of financial intermediation, deposit mobilization, and advancing credit to borrowers. Hence, the researcher concluded that the banking industry plays a very important and vital role in determining the economic growth of Nigeria.

The study revealed that there is a significant relationship between total bank credit ratios and economic growth of Nigeria. This implies that an increase in total bank credit ratio will lead to an increase in GDP and consequently, economic growth of Nigeria. Specifically our study revealed that, a unit increase in total bank credit ratio increases gross domestic product by 0.057 unit and vice versa. Again, total bank credits ratio is statistically significant at 0.05 level of significance based on the t-test of -3.094. We therefore rejected H_{01}, accepted H_{A1} and concluded that there is a positive and significant relationship between total bank credit ratios and economic growth of Nigeria.

The results obtained also showed a positive but insignificant relationship between total bank deposit and gross domestic product. This means that an increase in total bank deposit will increase output (GDP) significantly. Specifically, our study revealed that, a unit change in the value of total bank deposit positively changes gross domestic product by 0.008 unit and vice versa. However, total bank deposit is statistically insignificant at 0.05 level of significance based on the t-test value of 1.284. We therefore accepted H_{02}, rejected H_{A2} and concluded that there is no significant relationship between total banks deposit and gross domestic product of Nigeria.

Finally, the result of the test of the third hypothesis revealed a negative but significant relationship between deposit credit ratio and gross domestic product. Thus, a unit increase in the deposit credit ratio of the deposit money banks will rather result in a decrease in gross domestic product by 1.937. This is an indication that the banks are not creating as much loans as they can, giving their volume of deposits at their disposal. However the test of significance revealed that deposit credit ratio is significant at a 0.05 level of significance based on the t-test value of -6.529. We therefore conclude that there is a negative but significant relationship between deposit credit ratio and gross domestic product of Nigeria.

Based on the discussions above, it is logical to conclude as follows;

i. There is a positive and significant relationship between total bank credit ratio and economic growth of Nigeria.
ii. There is a positive and insignificant relationship between total bank deposit and economic growth of Nigeria.
iii. There is a negative but significant relationship between deposit credit ratio and economic growth of Nigeria.

Recommendations.

In view of the above conclusions, the researchers thus recommend the following: the government of Nigeria should motivate banks as a matter of policy to grant more loans and advances to the economy; diversion of loans to other non-productive purposes should be discouraged by the Nigerian government by enacting laws to sanction defaulters; basic infrastructures that will promote economic activities such as good roads, electricity etc should be provided by the government; since excess bank liquidity could assume a negative effect on the economy, the regulatory authorities should cause the deposit money banks to follow strictly, the prudential guideline in their operations, also hoarding of liquidity should be discouraged; the deposit money banks should be advised on the need why loans should be provided for priority areas of the economy.

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APPENDIX

Dependent Variable: GDP

Method: Least Squares

Date: 11/11/14 Time: 20:58

Sample(adjusted): 1981 2013

Included observations: 36 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-14.08521	52.58110	-0.149102	0.0000
TBCR	0.005701	0.61302	-3.09411	0.0144
TBD	-1.937011	0.38002	1.28408	0.6024
DCR	0.008121	1.26711	-6.520908	0.4752

R-squared	0.954827	Mean dependent var	12.15885
Adjusted R-squared	0.830127	S.D. dependent var	0.652478
S.E. of regression	0.145713	Akaike info criterion	-0.886111
Sum squared resid	0.658200	Schwarz criterion	-0.666178
Log likelihood	20.95000	F-statistic	7.9463
Durbin-Watson stat	2.013788	Prob(F-statistic)	0.000000

Granger Causality Test

Pair wise Granger Causality Tests
Date: 11/11/14 Time: 21:00
Sample: 1981 2013
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Probability
GDP does not Granger Cause TBCR	33	1.26853	0.29422
TBCR does not Granger Cause GDP		3.43115	0.65326
DCR does not Granger Cause TBCR	33	2.72853	0.19534
TBCR does not Granger Cause DCR		0.50733	0.60735
TBD does not Granger Cause TBCR	33	1.14992	0.32867
TBCR does not Granger Cause TBD		1.82993	0.17587
DCR does not Granger Cause GDP	33	3.91558	0.03124
GDP does not Granger Cause DCR		0.30282	0.74104
TBD does not Granger Cause GDP	33	0.84597	0.43773
GDP does not Granger Cause TBD		10.0720	0.00035
TBD does not Granger Cause DCR	33	8.86347	0.00099
DCR does not Granger Cause TBD		0.83996	0.44196

Johansen Co integration Test

Date: 11/13/14 Time: 19:52
Sample (adjusted): 1981 2012
Included observations: 30 after adjustments
Trend assumption: Linear deterministic trend
Series: GDP TBCR TBD DCR
Lags interval (in first differences): 1 to 1

Unrestricted Co integration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigen value	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.752348	70.07420	47.85613	0.0001
At most 1	0.485331	28.20232	29.79707	0.0755
At most 2	0.217749	8.275363	15.49471	0.4364
At most 3	0.029813	0.907979	3.841466	0.3407

Trace test indicates 1 co integrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Co integration Rank Test (Maximum Eigen value)

Hypothesized No. of CE(s)	Eigen value	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.752348	41.87189	27.58434	0.0004
At most 1	0.485331	19.92695	21.13162	0.0730
At most 2	0.217749	7.367384	14.26460	0.4466
At most 3	0.029813	0.907979	3.841466	0.3407

Max-Eigen value test indicates 1 co integrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Co integrating Coefficients (normalized by b'*S11*b=I):

GDP	TBCR	DCR	TBD
1.13E-05	-1.92E-05	1.22E-07	-0.003609
1.36E-05	-3.58E-05	-7.77E-09	-0.061694
-1.03E-05	1.30E-05	1.40E-07	-0.172275
1.17E-05	3.29E-06	-3.52E-07	-0.138450

Unrestricted Adjustment Coefficients (alpha):

D(GDP)	-7790.896	-15812.04	-2084.390	1174.206
D(TBCR)	5985.383	11728.51	-10060.93	3406.154
D(DCR)	1363674.	-568386.2	-37704.96	7605.436
D(TBD)	0.107927	0.319223	1.551667	0.316463

1 Co integrating Equation(s): Log likelihood -1236.941

Normalized co integrating coefficients (standard error in parentheses)

GDP	TBCR	DCR	TBD
1.000000	-1.698413	0.010761	-319.4191
	(0.27128)	(0.00366)	(2356.95)

Adjustment coefficients (standard error in parentheses)

D(GDP)	-0.088022
	(0.05655)
D(TBCR)	0.067623
	(0.07818)
D(DCR)	15.40688
	(2.61554)
D(TBD)	1.22E-06
	(8.8E-06)

2 Co integrating Equation(s): Log likelihood -1226.978

Normalized co integrating coefficients (standard error in parentheses)

GDP	TBCR	DCR	TBD
1.000000	0.000000	0.031173	7304.651
		(0.00817)	(8880.93)
0.000000	1.000000	0.012019	4488.937
		(0.00401)	(4360.52)

Adjustment coefficients (standard error in parentheses)

D(GDP)	-0.302288	0.715475
	(0.06750)	(0.15538)
D(TBCR)	0.226554	-0.534664
	(0.11455)	(0.26368)
D(DCR)	7.704788	-5.822375
	(3.53443)	(8.13612)
D(TBD)	5.55E-06	-1.35E-05
	(1.4E-05)	(3.2E-05)

3 Co integrating Equation(s): Log likelihood -1223.294

Normalized co integrating coefficients (standard error in parentheses)

GDP	TBCR	DCR	TBD
1.000000	0.000000	0.000000	23210.34
			(10209.8)
0.000000	1.000000	0.000000	10621.22
			(4612.30)
0.000000	0.000000	1.000000	-510232.3
			(306007.)

Adjustment coefficients (standard error in parentheses)

D(GDP)	-0.280864	0.688457	-0.001116
	(0.07764)	(0.16210)	(0.00071)
D(TBCR)	0.329961	-0.665074	-0.000771
	(0.12576)	(0.26258)	(0.00114)
D(DCR)	8.092324	-6.311108	0.164932
	(4.08744)	(8.53415)	(0.03714)
D(TBD)	-1.04E-05	6.62E-06	2.28E-07
	(1.5E-05)	(3.0E-05)	(1.3E-07)

Augmented Dickey-Fuller Test on GDP

ADF Test Statistic	-2.714781	1% Critical Value*	-3.5973
		5% Critical Value	-2.9339
		10% Critical Value	-2.6048

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation
Dependent Variable: (GDP))
Method: Least Squares
Date: 16/11/14 Time: 08:04
Sample(adjusted): 1981 2013
Included observations: 41 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP(-1))	-0.346298	0.127560	-3.647811	0.0100
GDP(-1)))	0.106709	0.159549	0.668818	0.5078
C	3.888600	1.407014	2.763724	0.0089
@TREND(1981)	0.020680	0.007824	2.643057	0.0120

R-squared	0.168742	Mean dependent var	0.063531
Adjusted R-squared	0.101343	S.D. dependent var	0.122580
S.E. of regression	0.116203	Akaike info criterion	-1.374487
Sum squared resid	0.499617	Schwarz criterion	-1.207309
Log likelihood	32.17698	F-statistic	2.503618
Durbin-Watson stat	1.973739	Prob(F-statistic)	0.074224

ADF Test Statistic	-0.583090	1% Critical Value*	-3.5973
		5% Critical Value	-2.9339
		10% Critical Value	-2.6048

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test on TBCR

ADF Test Statistic	-6.761183	1% Critical Value*	-4.2092
		5% Critical Value	-3.5279
		10% Critical Value	-3.1949

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation
Dependent Variable: TBCR
Method: Least Squares
Date: 16/11/14 Time: 08:03
Sample(adjusted): 1981 2013
Included observations: 39 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TBCR(-1))	-0.046164	0.026212	-6.761183	0.0869
TBCR(-1)))	0.327587	0.157828	2.075597	0.0453
C	0.515212	0.208127	2.475467	0.0183
@TREND(1981)	-0.007695	0.002746	-2.801749	0.0082

R-squared	0.560030	Mean dependent var	0.009787
Adjusted R-squared	0.522318	S.D. dependent var	0.196743
S.E. of regression	0.135978	Akaike info criterion	-1.055734
Sum squared resid	0.647150	Schwarz criterion	-0.885112
Log likelihood	24.58681	F-statistic	14.85027
Durbin-Watson stat	1.900246	Prob(F-statistic)	0.000002

Augmented Dickey-Fuller Test on DCR

Augmented Dickey-Fuller Test Equation
Dependent Variable: DCR
Method: Least Squares
Date: 16/11/14 Time: 08:08
Sample(adjusted): 1981 2012
Included observations: 32 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DCR(-1)	-0.202411	0.141965	-4.935787	0.1643
DCR(-1))	0.205394	0.201635	1.018643	0.3165
C	1.101201	0.536562	2.052329	0.0490
@TREND(1981)	0.064321	0.050431	1.275434	0.2119

R-squared	0.094205	Mean dependent var	0.282266
Adjusted R-squared	0.003626	S.D. dependent var	0.437547
S.E. of regression	0.436753	Akaike info criterion	1.291234
Sum squared resid	5.722601	Schwarz criterion	1.470806
Log likelihood	-17.95098	F-statistic	1.040026
Durbin-Watson stat	1.792644	Prob(F-statistic)	0.389064

Augmented Dickey-Fuller Test on TBD

ADF Test Statistic	-4.935787	1% Critical Value*	-4.2023
		5% Critical Value	-3.5247
		10% Critical Value	-3.1931

*MacKinnon critical values for rejection of hypothesis of a unit root.

Augmented Dickey-Fuller Test Equation
Dependent Variable: (TBD)
Method: Least Squares
Date: 16/11/14 Time: 08:10
Sample(adjusted): 1981 2013
Included observations: 40 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TBD(-1)	-0.277690	0.143451	-4.935787	0.0608
TBD(-1))	-0.175057	0.168392	-1.039578	0.3055
C	1.819577	0.798898	2.277608	0.0288
@TREND(1981)	0.061569	0.033347	1.846309	0.0731

R-squared	0.189458	Mean dependent var	0.198479
Adjusted R-squared	0.121913	S.D. dependent var	0.475334
S.E. of regression	0.445418	Akaike info criterion	1.315033
Sum squared resid	7.142302	Schwarz criterion	1.483921
Log likelihood	-22.30065	F-statistic	2.804905
Durbin-Watson stat	1.922647	Prob(F-statistic)	0.053494

YEAR (₦'M)	GDP (₦'M)	TBCR (₦'M)	TBD (₦'M)	DCR (₦'M)
1980	**31546.8**	**6,349.10**	**4845.9**	**0.76324**
1981	205222	8,582.90	4880.9	0.56868
1982	199685	10,275.30	5180.7	0.50419
1983	185598	11,093.90	5855.6	0.52782
1984	183563	11,503.60	6343.5	0.55144
1985	201036	12,170.20	7046.2	0.57897
1986	205971	15,701.60	6649.8	0.42351
1987	204807	17,531.90	7998	0.4562
1988	219876	19,561.20	10667.9	0.54536
1989	236730	22,008.00	10188	0.46292
1990	267550	26,000.10	15588.8	0.59957
1991	265379	31,306.20	22849	0.72986
1992	271366	42,736.80	33263.5	0.77833
1993	274833	65,665.30	49923.6	0.76027
1994	275451	94,183.90	65348.7	0.69384
1995	281407	144,569.60	79469.4	0.5497
1996	293745	169,437.10	95904	0.56602
1997	302023	385,550.50	133336	0.34583
1998	310890	272,895.50	142252	0.52127
1999	312184	322,764.90	202152	0.62631
2000	329179	508,302.20	345001	0.67873
2001	356994	796,164.80	470067	0.59042
2002	433204	954,628.80	544700	0.57059
2003	477533	1,210,033.10	638733	0.52786
2004	527576	1,519,242.70	808658	0.53228
2005	561931	1,976,711.20	948640	0.47991
2006	595822	2,524,297.90	1497904	0.59339
2007	634251	4,813,488.80	2307916	0.47947
2008	674889	7,799,400.10	3650644	0.46807
2009	589945	9,667,876.70	3386527	0.35029
2010	637023	11, 601452.04	3996102	0.34854
2011	683908	13, 921,742.5	4715400	0.3468
2012	728362	16,706,090.99	5564172	0.3451
2013	736136	17,313916.75	56359286	0.3460