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Banking Sector Reforms and Financial Intermediation in Nigeria

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ABSTRACT
This study examined the effect of banking sector reforms on financial intermediation of commercial banks in Nigeria. Panel data were sourced from Central Bank of Nigeria Statistical Bulletin and financial statement of the commercial banks in the pre consolidation and post consolidation reforms. Multiple regression models were formulated to examined and compare the effect of the pre-consolidation reforms and post consolidation reforms on financial intermediation. Nine commercial banks that bear the same name in the pre and post consolidation reforms were used as sample size. Supply side and demand side financial intermediation were proxies for dependent variables while capital reforms, interest rate reforms, Central bank policy reforms, bank competition, management quality, assets quality, market risk and liquidity reforms were proxies for independent variables. The study employed panel data regression models of pooled effect, fixed effect and random effect models. After cross examination of the models using the Hausman test, the fixed effect models were used. The study found that 97.7 percent variation in demand side financial intermediation of the pre consolidation reforms was explained by variations in banking sector reforms and interest rate reforms and capital reforms have positive but no significant effect, bank competition have negative and significant effect while Central bank reforms have positive but no significant effect on demand side financial intermediation in the pre-consolidation reforms. 67 percent variation in demand side financial intermediation of the post consolidation reform was explained by variation in banking sector reforms and interest rate reforms, central bank reforms and bank competition have positive but no significant effect on the demand side financial intermediation while capital reforms have negative and no significant effect on demand side financial intermediation in the post consolidation reforms. 97.7 percent variation in demand side financial intermediation of the pre-consolidations was explained by variation in the banking sector reforms and that interest rate reforms and capital reforms have positive but no significant effect, bank competition have negative and significant effect while Central bank reforms have positive but no significant effect on demand side financial intermediation in the pre-consolidation reforms. 67 percent variation in demand side financial intermediation while interest rate reforms, central bank reforms and bank competition have positive but no significant effect while capital reforms have negative and no significant effect on demand side financial intermediation in the post

consolidation reforms. 46.3 percent of the systematic variation in the demand side financial intermediation and bank liquidity reforms in the pre-consolidation reforms, assets quality have positive and no significant effect while management quality and market risk have positive and significant effect on the demand side financial intermediation pre consolidation reforms. 73 percent variation in the supply side financial intermediation of the pre-consolidation reforms was traced to banking sector reforms and bank liquidity reforms in the post consolidation reforms and assets quality have positive and no significant effect while management quality and market risk have positive and no significant effect on the demand side financial intermediation post consolidation reforms. 60.2 percent of the systematic variation in the supply side financial intermediation in the pre consolidation reforms and interest rate and central bank policy has negative and significant effect while capital reforms and bank competition have positive and no significant effect on the supply side financial intermediation in the pre-consolidation reforms. 73.9 percent of the systematic variation in the supply side financial intermediation in the post consolidation while interest rate and central bank policy have positive and no significant effect while capital reforms and bank competition have negative and no significant effect on the supply side financial intermediation in the pre-consolidation reforms. 53.4 percent of the systematic variation in the supply side financial intermediation in the pre consolidation reforms and market risk has positive and significant effect while management quality, bank liquidity reforms and assets quality have negative effect on supply side financial intermediation in the pre consolidation reforms. 78.1 percent of the systematic variation in the supply side financial intermediation in the post consolidation reforms while bank liquidity have negative and no significant effect while management quality, market risk and assets quality have positive effect on supply side financial intermediation in the post consolidation reforms. it recommend that harmonize banking sector reforms with financial intermediation functions of commercial banks.

Keywords: *Banking Sector Reforms, Financial Intermediation*

INTRODUCTION

The reforms in the banking sector are based on a conviction that their gains will be accrued through expenses reduction, increased market power and reduced earnings volatility, economies of scale which will create a vibrant banking system and increase operational efficiency through resource mobilization and credit allocation. However, according to Ali (2015) the character of the sort of reforms that has characterized the Nigerian banking industry creates doubt about its prospects of realizing efficiency gains. The foregoing concern then becomes a source of worry as to whether or not the Nigerian banking sector is really repositioned through the various reforms to contribute or mobilize and allocate the huge scarce financial resources effectively and efficiently to manufacturing sector of the Nigerian economy. Also, in spite of the financial sector liberalizations, the growing concern is that the Nigerian banking industry remains shallow and performs well below average when compared with developed economies such as the USA, Germany and Japan; and the newly industrialized countries of China, Malaysia and India Ali (2015) and Hamid, (2012).

Thus, can the submissions of (Ali, 2015 & Hamid, 2012) who opined that the banking systems in Nigeria lack depth, and they only serve a small proportion of the geometrically-growing population at a relatively high cost be substantiated.

Furthermore, there are two schools of thought on the effect of banking sector reforms on financial intermediation. There is fair agreement within the literature on the transmission mechanisms between reformed policies and financial intermediation. The traditional view in general is that banking sector reforms is encapsulated in institutional, monetary and exchange rates restructuring, and can therefore be analyzed via the study of their transmission mechanisms. The main thrust of this argument is that policy actions of the monetary authorities which are implemented by the banking sector have as its ultimate target growth stimulation. The response of the banking sector to these policies represents in principle the transmission mechanisms which hold the key to the realization of these ultimate targets. This was a common pitfall that characterizes the four models of reforms implemented in Nigeria so far, viz.: institutional and capital base reforms, model of monetary control and interest rates reforms. With regard to institutional reforms, the assumption is that banking sector liberalization accompanied by increased capital base requirements is a necessary condition for improved performance of the banking sector. This was echoed by the proponents of the initial banking sector reforms in structural adjustment programme era and re-echoed by the pre/post Soludo era. The underlying argument draws its strength from the neo-classical supply-side economics, rooted in Say's Law that supply creates its own demand (Jhinghan, 2003). That is, increased capital base implies increased availability of loanable funds. This should lead to a fall in interest rate and should be capable of stimulating or eliciting a demand following response as envisaged by Say's Law of Markets.

However, the major pitfalls of this assumption is reflected in the trade-offs costs which manifested in the various eras of reforms in Nigeria. In particular, the post-Soludo reform era, which is believed to have drawn into the banking sector a significant proportion of currency outside banks and new monies from both the domestic and international money markets did not result in increased credit purvey to the productive sector. Contrary to the expectation that this should enhance the ability of banks to create credit, systemic leakages resulted in banks investing their funds on alternative and secure portfolios, in addition to exhibiting detrimental credit apathy (Ifionu & Keremah, 2016).

The effect of the Nigeria banking sector reforms has well been studies, however, significant proportion of the studies focused on the effect of banking sector reforms on economic growth and the effect on the performance of the banking sector. Owolabi, Olanrewaju and Okwu (2013) examined the causal linkages between banking sector reforms and output growth of manufacturing sector as well as the direction of such causality. Okoi, Ocheni and Akaninyene (2019) examined the impact of banking sector reforms on economic growth in Nigeria using the annual time series data for forty six years. Lucky and Bruno (2018) examines the effect of financial reforms on banking sector efficiency in Nigeria. Ikeora, Igbodika and Andabai, (2016) evaluate the

relationship between banking sector reforms and performance of Nigerian. Ifionu and Keremah (2016) investigated the effect of the reforms on the performance and profitability of Deposit Money Banks. From the above, this study examined the effect of banking sector reforms on financial intermediation in Nigeria.

LITERATURE REVIEW

Loanable Funds Theory

Under the loanable Funds theory of interest, the rate of interest is calculated on the basis of demand and supply of loanable funds present in the capital market. The loanable funds theory of interest advocates that both savings and investments are responsible for the determination of the rates of interest in the long run while short-term interest rates are calculated on the basis of the financial conditions prevailing in an economy. The determination of the interest rates in case of the loanable funds theory of the rate of interest depends on the availability of loan amounts. The availability of such loan amounts is based on factors like the net increase in currency deposits, the amount of savings made, willingness to enhance cash balances and opportunities for the formation of fresh capitals (Bibow, 2000). The nominal rate of interest is determined by the interaction between the demand and supply of loanable funds.

The Perfect Theory of Financial Intermediary

Three pillars are at the basis of the modern theory of finance: optimality, arbitrage, and equilibrium. Optimality refers to the notion that rational investors aim at optimal returns. Arbitrage implies that the same asset has the same price in each single period in the absence of restrictions. Equilibrium means that markets are cleared by price adjustment through arbitrage at each moment in time (Levine et al, 2000). In the neoclassical model of a perfect market, e.g. the perfect market for capital, or the Arrow-Debreu world, the following criteria usually must be met:

i. No individual party on the market can influence prices
ii. Conditions for borrowing/lending are equal for all parties under equal circumstances
iii. There are no discriminatory taxes
iv. Absence of scale and scope economies
v. All financial titles are homogeneous, divisible and tradable
vi. There are no information costs, no transaction costs and no insolvency costs
vii. All market parties have ex ante and ex post immediate and full information on all factors and events relevant for the (future) value of the traded financial instruments.

Banking Sector Reform

Banking sector reforms refer to the changes or shifts in banking processes and practices imposed on banks by banking systems regulators (Ongore and Kusa, 2013). Reforms are predicated upon the need for reorientation and reposition of existing status quo in order to attain an effective and efficient state. Reforms are deliberate actions by the government to fast track, jump start and

consolidate specified sector of the economy to achieve desired objectives. Thus, banking reforms are deliberate policy response to correct perceived or impending financial crises and subsequent failure. Reforms in the financial industry are aimed at addressing issues such as corporate governance, risk management and operational inefficiencies. The vortex of most banking reforms is around firming up capitalization. Banking reforms are primarily driven by the need to achieve the objective of consolidation, competition and convergence in the financial architecture. Banking reforms are normally carried out through banking sector deregulation.

Deregulation of the banking sector requires a set of indicators that can be used for effective policy formulation, implementation and evaluation (Sanusi, 2012). As such, there is no precise definition in the literature of banking sector development. Fry (2008) observed that the key to banking sector development is the reduction and ultimate unification of fragmented financial markets. This involves a complete set of indicators mainly covering credit intermediation, liquidity management and the risk management characteristics of the financial system. Owolabi and Okwu (2013) posited that it is hard to find an indicator that can directly measure the development of the banking sector.

Empirical Review

Ali, Clems, Ikeotuonye and Yua (2020) examined the effect of banking sector reforms on the growth of manufacturing sector in developing economies: a study of Nigeria. The specific objectives of this study is to investigate the relationship between aggregate credit to the manufacturing sectors (ACM)**,** commercial banks' reserve requirement (CBR), commercial banks' investment (CBI), loan-to-deposits ratio **(**LDR**),** lending rate (LR), real effective exchange rate index (EXR) and manufacturing sector output growth (MGDP), anchored on financial liberalization theory and Keynesian theory of finance and economic growth. The study used secondary data obtained from the publications of NBS and CBN and subjected them to Co-integrating and Serial Correlation CM Test to ascertain the long run and short run relationship between ACM, CBR, CBI, LDR, LR and MGDP at 5% level of significance. The findings show that banking sector reforms did not have significant effect on growth of the manufacturing sectors for the period 1986 to 2018 in Nigeria.
Avinash and Mitchell-Ryan (2019) investigated the impact of the sectoral distribution of commercial bank credit on economic growth and development in Trinidad and Tobago. The study employs Vector Error Correction Model to ascertain the relationship that exists between credit and investment. The study found that credit and growth tends to demonstrate a demand following relationship, while further analysis revealed a 'supply leading relationship between credit and growth within key sectors of the non-oil economy. Ayadi et al (2013) explored the relationship between financial sector development and economic growth across the Mediterranean, using data covering the period of 1985 –2009. The study found that credit to the private sector and bank deposits are negatively associated with growth, which in the authors' opinion, portend deficiencies in credit allocation in the region and suggest weak financial regulation and supervision. Beck, Cull and Jerome (2012) examined the longrun causal relationship between banking sector reform and economic growth for three South Asian countries namely India, Pakistan and Bangladesh. The

study employed a cointegrated vector autoregressive model to assess the long-run relationship between banking sector reform and economic growth. The results indicate causality between banking sector reform and economic growth and running from banking sector reform to economic growth.

Ebele and Iorember (2016) x-rayed the effect of commercial bank credit on the manufacturing sector output in Nigeria from 1980 to 2015 using Cochrane-Orcutt method. Five variables of manufacturing sector output, inflation rate, interest rate, loans and advances and broad money supply were used for the study. They found that, inflation rate and interest rate have negative effect on manufacturing sector output while loans/advances and broad money supply have positive effect with manufacturing sector output in Nigeria. The study therefore recommended economy growth, though not significant in specified parsimonious error correction model. Bank credits were both positive and significant signifying that the availability of finance can have favorable and immediate impact on real sector growth. Also natural resource rent was positive and highly significant. Both human capital and prime lending rate were positive and significant, while domestic investment was not significant. They finally opined that given the low level of industrial sector growth in Nigeria, there is need to speed up financial sector reform to enhance intermediating efficiency, promote robust institutional quality and prudent use of scarce resources. Frank and Rotimi (2016) study the impact of domestic financial reform on manufacturing sector performance in Nigeria using time series from 1981 to 2014. Result showed that, the coefficient
Gidigbi (2017) assessed the impact of banking reforms on banks' performance and economic growth for the period 1981 to 2015 by fitting an ANOVA model into Stepwise Regression. Using dummy variables to isolate reform periods, results show that banking reforms contribute positively to economic growth, especially in the period 1999 to 2004. Also, banking reforms are found to contribute negatively to banks' performance, following the 1993 reforms. The study confirms that banking system reforms in Nigeria have dual impact on the economy and banks' performance. The banking reforms are capable of promoting growth in the economy. Thus, the study recommends pre-crisis reforms testing by the apex bank.

Ikeora, Igbodika and Andabai, (2016) evaluated the relationship between banking sector reforms and performance of Nigerian economy using Secondary data spanning from 1998- 2013 with the aid of Vector Error Correction Model (VECM), the result showed that there is a long-run equilibrium relationship between banking sector reforms and performance of Nigerian economy. Also, the coefficient of determination indicates that about 55% of variation in the performance of Nigerian economy can be explained by changes in banking sector reforms variables. The study also found that there is causality between banking sector reforms and performance of Nigerian economy. The study then sued monetary authorities to be more proactive in bank supervision and pursue the supervisory framework based on prudence and professionalism. Also that, monetary and fiscal policy should be properly aligned towards stimulating and deepening the economy while ensuring that banks effectively managed their resources by focusing on risk management and corporate governance tenets.

Lawal (2016) examined the effect of exchange rate fluctuations on manufacturing sector output in Nigeria from 1986 to 2014. Data for the study was sourced from (CBN) statistical Bulletin and World Development Indicators (WDI) on manufacturing output, Consumer Price Index (CPI), Government Capital Expenditure (GCE), Real Effective Exchange Rate (EXC) and analyzed through the multiple regression analysis using Autoregressive Distribution Lag (ARDL). The ARDL result showed that exchange rate fluctuations have long run and short run relationship insignificant effect on the manufacturing sector output. Also that government expenditure has a positive relationship on manufacturing sector output but not significant. The study recommended that government should implement the policies on export strategies to encourage exports and discourage imports in order to achieve a favourable balance of payment; government should encourage the use of domestic materials in production in order to encourage international competitiveness and also increase expenditures on economic services such as manufacturing so as to increase their output.
Lucky and Bruno (2018) examines the effect of financial reforms on banking sector efficiency in Nigeria from 1986- 2016. The study employed exchange rate, interest rate and liquidity variables. Using OLS regression the findings indicate that financial reform targets have significantly affected banking sector efficiency in Nigeria in the long run. The study recommends that the regulatory and supervisory framework should be strengthened while interest rate policy should be made to stimulate savings through high real deposit rate and lending rate so as to promote financial deepening and thus banking efficiency.

Mitku (2018) intended to determine the effect of cash required reserve on commercial bank lending in Ethiopia using panel data of eight purposively chosen commercial banks over the period of eleven years (2005 to 2015). The investigation tested the relationship between commercial bank lending and cash required reserve. Eleven years' financial data of eight purposively chosen commercial banks were used for analysis purpose. Ordinary least square model was applied to test the impact of predictor variable on commercial bank lending. The result suggests that, there is no significant relationship between commercial bank lending and cash required reserve in Ethiopian commercial banks. Nathanael (2014) investigated the effect of the reforms on Nigeria's economic growth process from 1980 to 2012. He found that the reform enhanced Nigeria's economic progress. He therefore recommended among others, further increase the minimum capital base by the monetary authorities as well as perpetuation of the expansionary monetary policy.

Okoi, Ocheni and Akaninyene (2019) examined the impact of bank in g sector reforms on economic growth in Nigeria using the annual time series data for forty six years (1970-2015). The major objective of the study was to examine how banking sector reforms impact on economic growth in Nigeria. The design of the study was ex-post facto and desk research design. Data for the study were sourced from Central Bank of Nigeria (CBN) statistical bulletin and International Monetary Fund (IMF) journals. The study was based on Financial Repression Hypothesis (FRH) by Mckinnon a nd Shaw (1973. The data were analyzed using Johnansen cointegration test and

Granger-causality test for the period 1970 – 2015. Autoregressive Distributive Lag (ARDL) test was adopted in the study. From the ARDL test results, it was found that interest rate spread (INRS) was correctly signed in the model and adequately predictive of economic growth indicator studied while other exogenous variables {exchange rate (EXR), bank capital base (BCAB) and corporate governance disclosure index (CGDI)} studied did not impact positively on gross domestic product growth in Nigeria. The ARDL bound test revealed the existence of a long-run relationship among these variables. The speed of adjustment parameter as indicated by the coefficient of the Error Correction Mechanism (ECM) was significant with appropriate negative sign. The study concluded by recommending that, the policy of deposit and lending rate should be made reasonable as smaller spread between savings and deposits rates influences efficient financial intermediation. Finally, since corporate governance disclosure is seen as an indicator of the company's openness index, companies should always make full disclosure; thereby not withhold in g any relevant information to external stakeholders.

Toby and Zaagha (2020) empirically examined the effect of Central Bank policy rates on private sector funding in Nigeria. The purpose of the study was to examine the extent to which monetary policy affect private sector funding in Nigeria. Time series data were sourced from Central Bank of Nigeria Statistical Bulletin from 1985-2018. The study employed multiple regression models to estimate the relationship that exists between monetary transmission channels and private sector funding in Nigeria. Ordinary Least Square (OLS), Augmented Dickey Fuller Test, Johansen Co-integration test, normalized co-integrating equations, parsimonious vector error correction model and pair-wise causality tests were used to conduct the investigations and analysis. Empirical findings that Central Bank Policy rates has significant relationship with credit to private sector, credit to core private sector and no significant relationship with credit to small and medium scale enterprise sector.
William, Zehou, and Hazimi (2019) investigated the factors that influence domestic credit to the private sector in Ghana. The study uses the Johansen cointegration and vector auto-regression model to analyze panel data spanning the period from 1961 to 2016. Findings from the study revealed that though there is no long-run association among the variables, there exist significant short-run relationship between domestic credit to the private sector, broad money and gross capital formation. Further diagnostic tests showed that gross capital formation Granger causes both domestic credit to the private sector and broad money, and domestic credit to the private sector Granger-causes broad money. They concluded that money supply and gross capital formation are necessary factors to address in the quest for developing the financial strength of domestic banks in providing credit facilities to the private sector for economic growth.

Yua, Upaa, Adiga & Haruna, (2020) examined commercial banks' credit and manufacturing sector performance in emerging economies: evidence from Nigeria. The specific objectives of the study were to investigate the effect of commercial bank loans and advances (CBLA), commercial banks' lending rates (CBLR), inflation (INFL) and aggregate savings (ASAV)on manufacturing

performance in the emerging economies. The study was anchored on loan pricing theory and the neo-classical theory of interest rate. The study used secondary data obtained from the Central Bank of Nigeria statistical bulletin and used for the analysis. The variables for the study were tested for unit root using the Augmented Dickey Fuller test and the test of Johansen cointegration within the framework of vector error correction was applied to test for the short-run and long-run effect. The findings of the study revealed that commercial banks' credit had significant effect on the manufacturing sector performance. The study concluded that commercial banks' credit enhanced manufacturing performance in emerging economies. This paper also suggests some measures in order to boost employment and manufacturing performance in Nigeria.
Zaagha (2020) examined the effect of money supply on private sector funding in Nigeria. The purpose of the study was to examine the extent to which monetary policy affect private sector funding in Nigeria. Time series data was sourced from Central Bank of Nigeria Statistical Bulletin from 1985-2018. Credit to private sector, credit to core private sector and credit to small and medium scale enterprises sector was used as dependent variables while narrow money supply, broad money supply, large money supply, private sector demand deposit was used as independent variables. Ordinary Least Square (OLS), Augmented Dickey Fuller Test, Johansen Co-integration test, normalized co-integrating equations, parsimonious vector error correction model and pair-wise causality tests were used to conduct the investigations and analysis. The empirical findings revealed that money supply explains 82.1 percent variation on credit to core private sector, 85.2 percent and 23.4 percent of the variation in credit to private sector and credit to small and medium scale enterprises sector. The study conclude that money supply has significant relationship with credit to private sector, credit to core private sector and credit to small and medium scale enterprises sector. From the findings, the study recommends that Central Bank of Nigeria should induce the variations of the amount of money changes through the nominal interest rates. That the monetary authorities should ensure adequate quantity of money supply that positively affect private sector funding in Nigeria.

Zaagha and Murray (2020) examined the effect of deposit money banks policy on private sector funding in Nigeria. Time series data was sourced from Central Bank of Nigeria Statistical Bulletin from 1985-2018. Credit to private sector, credit to core private sector and credit to small and medium scale enterprises was used as dependent variables while liquidity ratio and loan to deposit ratio was used as independent variables. Ordinary Least Square (OLS), Augmented Dickey Fuller Test, Johansen Co-integration test, normalized co-integrating equations, parsimonious vector error correction model and pair-wise causality tests were used to conduct the investigations and analysis. The empirical findings revealed that deposit money banks policy explains 40.8 percent variation on credit to core private sector, 28.1 percent and 58.9 percent of the variation in credit to core private sector and credit to small and medium scale enterprises sector. The study conclude that deposit money banks policy has no significant relationship with credit to private sector and credit to core private sector but has significant relation with credit to small and medium scale enterprises sector. From the findings, the study recommends compliance to deposit money banks policies; this will enhance effective financial intermediation and increase funding of the private sector. There is

also need for the regulatory authorities to harmonize the various deposit money banks policies with the objective of enhancing private sector funding. There is need to decentralize the operation of the deposit money banks in the urban cities. Policies should be formulated to extend the operation of the deposit money banks to the rural communities, this will enable the institutions to mobilize much deposit and increase credit to the private sector.

Zuzana, Riikka and Laurent (2015) examined how reserve requirements influence the transmission of monetary policy through the bank lending channel in China while also taking into account the role of bank ownership. The implementation of Chinese monetary policy is characterized by the reliance on the reserve requirements as a regular policy tool with frequent adjustments. Using a large dataset of 170 Chinese banks for the period 2004–2013, they analyze the reaction of loan supply to changes in reserve requirements. The authors found no evidence of the bank lending channel through the use of reserve requirements. They observed, nonetheless, that changes in reserve requirements influence loan growth of banks. The same findings hold true for other monetary policy instruments. Further, they showed that the bank ownership format influences transmission of monetary policy.

Jegede (2014) empirically examined the effect of monetary policy on commercial bank lending in Nigeria between 1988 and 2008, using macroeconomic time series variables of exchange rate, interest rate, liquidity ratio, money supply, and commercial bank loan and Advances. The study employs Vector Error Correction Mechanism of Ordinary Least Square econometric technique as the estimation method. Findings indicate that there exists a long run relationship among the variables in the model. The study specifically revealed that exchange rate and interest rate significantly influenced commercial banks' lending, while liquidity ratio and money supply exert negative effect on commercial banks' loan and advances. The study concludes that monetary policy instruments are not effective to stimulate commercial bank loans and advances in the long-run, while banks' total credit is more responsive to cash reserve ratio and recommends that monetary authority should make efforts to develop indirect monetary instruments and exercise appropriate control over the monetary sector.

Adelegan, (2018) examined the dynamic linkages between domestic investment, domestic credit to the private sector and gross domestic product (GDP) in Nigeria over the period of 1970 to 2015. The Vector Autoregressive (VAR) model, its accessories of impulse response functions (IRFs) and variance decomposition composition (VDC) were use. Findings indicate that the relationship between growth and domestic credit to the private sector is positive and insignificant. Also, the results show that increase in PLR reduces output for the period under study, but this was not statistically significant. In addition, the relationship between PDI and PDI is positive but statistically insignificant. Finally, the negative relationship between exchange rate and private domestic investment suggests that the appreciation of the real exchange rate discourages domestic private investment. The study recommends among others that monetary and fiscal policies should

be better coordinated to ensure that macroeconomic fundamentals are moving in the right direction.

Adeniyi et al. (2018) investigated the relationship that exists between monetary policy instruments and Deposit Money Banks Loans and Advances in Nigeria. Annual time series data covering a period from 1981-2016 were used and the Toda and Yamamoto granger non-causality model was employ to examine the relationship existing between Deposit Money Banks loan and advances and monetary policy variables in Nigeria. Findings revealed that structural changes in monetary policy system exerted positive significant impact on loan and advances of Deposit Money Banks in Nigeria. Findings also revealed bidirectional relationship existing between MPR and loan and advances of Deposit Money Banks in Nigeria. Precisely, MPR proved to be a significant variable which causes Deposit Money Bank loans and advances in Nigeria. Other explanatory variables (broad money supply, liquidity ratio, inflation rate and cash reserve ratio does not granger cause loan and advances of Deposit Money Banks in Nigeria within the study period. It concluded that the structural change in monetary policy system and monetary policy rate have significant impact on loan and advances of deposit money banks in Nigeria. Hence, the study recommended that monetary authority should formulate policies that will stabilize interest rate so as to boost the investors' confidence.

Ogolo (2018) empirically examined the effects of monetary policy on commercial banks' lending to the real sector from 1981 – 2014 using multiple regression models aided by Software Package for Social Sciences. The study modeled commercial banks credit to agricultural and manufacturing sector as the function of interest rate, monetary policy rate, treasury bill rate, exchange rate, broad money supply and liquidity ratio. The regression results from model one found that interest rate, monetary policy rate have positive relationship with commercial banks' lending to the agricultural sector while Treasury bill rate, exchange rate, broad money supply and liquidity ratio have negative effect on the dependent variable. Model two found that interest rate, Treasury bill rate, exchange rate, broad money supply and liquidity ratio have negative effect on commercial banks' lending the manufacturing sector while monetary policy rate have positive relationship with the dependent variable. They recommend that monetary policy should be harmonized with bank lending objectives to enhance commercial banks' lending to the real sector of the economy. Commercial banks should develop policies of managing the negative effect of monetary policy variables on its lending.

William, Zehou, and Hazimi (2019) investigated the factors that influence domestic credit to the private sector in Ghana. The study uses the Johansen cointegration and vector auto-regression model to analyze panel data spanning the period from 1961 to 2016. Findings from the study revealed that though there is no long-run association among the variables, there exist significant short-run relationship between domestic credit to the private sector, broad money and gross capital formation. Further diagnostic tests showed that gross capital formation Granger causes both domestic credit to the private sector and broad money, and domestic credit to the private sector Granger-causes broad money. They concluded that money supply and gross capital formation are

necessary factors to address in the quest for developing the financial strength of domestic banks in providing credit facilities to the private sector for economic growth.

Olorunmade, Samuel, and Adewole, (2019) examined the determinant of private sector credit and its implication on economic growth in Nigeria. The fluctuation in the supply of money and credit is the basic causal factor at work in cyclical process; when money supply falls, prices decrease, profit decrease, production activities become sluggish and production falls and when money supply expands, price rise, profit increase and the total output increases and finally growth takes place.Sample regression analysis were used to analyse data obtained from Central Bank of Nigeria statistical bulletin from 2000 to 2017. It was revealed in the determinant of credit supply that there was significant relationship between Total credits to private sector and money supply in Nigeria. The study also findsthat there was significant relationship between private sector credit and economic growth in Nigeria. They recommend that there should be persistence increase of money supply to Nigerian economy in order to increase the flow of credit to the real sector of the Nigerian economy, financial institutions should distribute more credit to the real sector for productive purposes in order to increase Gross domestic product.

Literature Gap

This chapter presented the theoretical, conceptual and empirical review on banking sector reforms and financial intermediation. There are different strands of studies on the effect of banking sector reforms. There are many variables that are exogenous that affect the financial intermediation of the banking sector reforms which have not been captured by the authors. The empirical studies reviewed has shown that banking sector reforms affect other macroeconomic indicators such as bank credit, however there is no study on banking sector reforms and financial intermediation that include the demand and the supply sides of financial intermediation. In this study, the researcher will focus on banking sector reforms and financial intermediation in Nigeria. Furthermore, some of the authors examined banking sector reforms and economic growth using time series data of post banking sector reforms such as the banking sector recapitalization, the post financial sector deregulation. The findings of these studies can be very appealing but failed to give insight on the effect of banking sector reforms and financial intermediation.

METHODOLOGY

Research Design

The choice of a design is influenced by the purpose of the study, the study setting, unit of analysis and time horizon. This study was quasi experimental research design approach for the data analysis. It therefore implies an empirical study used to estimate the relationship and impact of explanatory variables.

Population of the Study

Nogales (2002) defined population as the total number of elements that conform to the characteristics needed for the purpose of the study. Thus, the population for this study includes the 22 licensed commercial banks in Nigeria as at December, 2019 (CBN, 2019).

Sampling Procedure and Sampling Size

Considering the nature and the availability of data required for this study, the researcher used random sampling procedure to quoted commercial banks. The sample size is based on the availability of the required data from the banking sector. The 9 quoted commercial banks that were in existence in the pre and post consolidation reforms that bears the same names

Methods of Data Collection

This study will employs secondary data to be sourced from Nigerian Deposit Insurance Corporate (NDIC), Central Bank of Nigeria (CBN) and the Nigerian Stock Exchange (NSE) publications from 1995-2005 for preconsolidation 2006 to 2020 for post consolidation reforms.

Methods of Data Analysis

The main tool of analysis is the Ordinary Least Squares (OLS) using the multiple regression method for a period of 10 years, annual data covering 2011-2020. Statistical evaluation of the global utility of the analytical model, so as to determine the reliability of the results obtained were carried out using the coefficient of correlation (r) of the regression, the coefficient of determination (r^2), the student T-test and F-test.

(i) **Coefficient of Determination (r^2) Test:** This measure the explanatory power of the independent variables on the dependent variables. R^2 gives the proportion or percentage of the total variation in the dependent variable Y that is accounted for by the single explanatory variable X. The higher the R^2 value the better. For example, to determine the proportion of monetary policy to private sector funding in our model, we used the coefficient of determination. The coefficient of determination varies between 0.0 and 1.0. A coefficient of determination says 0.20 means that 20% of changes in the dependent variable is explained by the independent variable(s). Therefore, we shall use the R^2 to determine the extent to which variation in monetary policy variables are explained by variations in private sector funding variables over the periods covered in this study.

(ii) **Correlation Co-Efficient (R):** This measures the degree of the relationship between two variables x and y in a regression equation. That is, it tries to establish the nature and magnitude of the relationship when two variables are been analyzed. Thus correlation co-efficient show whether two variables are positively or negatively correlated. That is, it takes the value ranging from – 1, to + 1.

(iii) **F-Test:** This measures the overall significance. The extent to which the statistic of the coefficient of determination is statistically significant is measured by the F-test. The F-test can be done using the F-statistic or by the probability estimate. We use the F-statistic estimate for this analysis.

(iv) **Student T-test:** measures the individual statistical significance of the estimated independent variables. This is a test of significance used to test the significance of regression coefficients (Gujurati, 2003). Generally speaking, the test of significance approach is one of the methods used to test statistical hypothesis. A test of significance is a procedure by sample results are used to verify the truth or falsity of a null hypothesis (Ho) at 5% level of significance.

(v) **Durbin Watson Statistics:** This measures the collinearity and autocorrelation between the variables in the time series. It is expected that a ratio of close to 2.00 is not auto correlated while ratio above 2.00 assumed the presence of autocorrelation.

(vi) **Regression coefficient:** This measures the extent in which the independent variables affect the dependent variables in the study.

(vii) **Probability ratio:** It measures also the extent in which the independent variables can explain change to the dependent variables given a percentage level of significant.

Model Specification

From theories, principles and empirical findings, the model below is specified in this study.

SSFI = f (CR, INR, CBPR, BC) (1)
DSFI = f (CR, INR, CBPR, BC) (2)
SSFI = f (AQ, MQ, MR, BLR) (3)
DSFI = f (AQ, MQ, MR, BLR) (4)
It is empirically stated as

$$SSFI = \beta_0 + \beta 1CR + \beta_2 INR + \beta_3 CBPR + \beta_4 BC + \mu \quad (5)$$

$$DSFI = \beta_0 + \beta 1CR + \beta_2 INR + \beta_3 CBPR + \beta_4 BC + \mu \quad (6)$$

$$SSFI = \beta_0 + \beta 1AQ + \beta_2 MQ + \beta_3 MR + \beta_4 BLR + \mu \quad (7)$$

$$DSFI = \beta_0 + \beta 1AQ + \beta_2 MQ + \beta_3 MR + \beta_4 BLR + \mu \quad (8)$$

Where

SSFI = Supply side financial intermediation

DSFI = Demand side financial intermediation

CR = Capital reforms

INR = Interest rate reforms

CBPR = Central bank Policy reform

BC = Bank competition

AQ = Assets quality

MQ = Management quality

MR = Market risk

BLR = Bank liquidity reforms proxy by loan to deposit ratio

β_0 = Regression Intercept

β_1 - $\beta 4$ = Coefficient of the independent variables to the Dependent variable

µ = Error term

RESULTS AND DISCUSSION

Table 1: Prensentations of Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.	Description	Summary	Conclusion
			Model 1			
Pre-Reform	24.59259	4	0.0001	0.0001 < 0.05	Reject null	Fixed effect model
Post-Reform	21.37396	4	0.0000	0.0000 < 0.05	Reject null	Fixed effect model
			Model 2			
Pre-Reform	16.70169	4	0.0304	0.0304< 0.05	Reject null	Fixed effect model
Post-Reform	26.01628	4	0.0000	0.0000 <0.05	Reject null	Fixed effect model

			Model 3			
Pre-Reform	23.59419	4	0.0000	0.0000 <0.05	Reject null	Fixed effect model
Post-Reform	17.75297	4	0.0000	0.0000< 0.05	Reject null	Fixed effect model
			Model 4			
Pre-Reform	31.18357	4	0.0000	0.0000 < 0.05	Reject null	Fixed effect model
Post-Reform	15.50931	4	0.0035	0.0035 < 0.05	Reject null	Random effect model

Source: E-view 9.0

Table 1 summaries the results of the Hausman test for the models formulated in chapter three of this study. The results show that the fixed effect model is most appropriate except for post reform in mode l to 4

Table 2 Presentation of Regression Results

Variable	Pooled Effect			Fixed effect			Random effect		
	β coefficient	T. stat	p. value	β coefficient	T. stat	p. value	β coefficient	T. stat	p. value
				The Pre-Reform					
INR	-0.001605	-0.071716	0.9430	-0.003200	-0.807179	0.4218	-0.002456	-0.620883	0.5362
CR	-0.116055	-5.808171	0.0000	-0.006143	-1.358719	0.1778	-0.006731	-1.491364	0.1392
CBPR	0.030623	0.662206	0.5095	0.005602	0.688426	0.4930	0.007287	0.897007	0.3720
BC	-6.407305	-0.099688	0.9208	0.005587	11.21533	0.0000	0.005109	10.68794	0.0000
C	7.078250	8.205261	0.0000	4.808251	27.20367	0.0000	4.906232	15.43807	0.0000
R-squared	0.268190			0.980144			0.523106		
AdjR^2	0.237049			0.977374			0.502812		
F-statistic	8.612168			353.7712			25.77715		
F- Prob	0.000006			0.000000			0.000000		
D W	0.310513			0.686655			0.567846		
				The Post-Reform					
CBPR	0.033788	0.831655	0.4071	0.031519	1.332256	0.1853	0.031663	1.338424	0.1831
CR	-0.012555	-1.360910	0.1759	-0.004228	-0.719333	0.4733	-0.004530	-0.772669	0.4411

		-							
BC	-0.621950	2.158778	0.0327	0.034884	0.157405	0.8752	0.008256	0.037575	0.9701
INR	0.020825	0.746321	0.4568	0.014575	0.892620	0.3738	0.014845	0.909354	0.3648
C	7.919631	7.673390	0.0000	6.293743	9.162092	0.0000	6.357985	8.087901	0.0000
R-squared	0.052979			0.699841			0.027139		
$AdjR^2$	0.023840			0.670317			0.002795		
F-statistic	1.818138			23.70429			0.906630		
F- Prob	0.129156			0.000000			0.462212		
D W	0.348937			0.873873			0.817442		

Source: E-view 9.0

From the pre- consolidation reforms, the result shows that the adjusted R^2 is 0.977374 indicating that the independent variables explained 97.7 percent of the systematic variation in demand side financial intermediation over the observed years, while the remaining 2.3 percent is explained outside the unspecified variables, thus, exogenously explained. The F-statistic and probability informs that the model is significant while the Durbin Watson statistic informed that the result is free from autocorrelation. The regression results informed us that if the variables are hold constant, demand side financial intermediation of the quoted commercial banks can increase by 4.8. The beta coefficient informed that interest rate reforms and capital reforms have positive but no significant effect on demand side financial intermediation in the pre- consolidation reforms, bank competition have negative and significant effect while Central bank reforms have positive but no significant effect on demand side financial intermediation in the pre-consolidation reforms.

From the post- consolidation reforms, the result shows that the adjusted R^2 is 0.670317 indicating that the independent variables explained 67 percent of the systematic variation in demand side financial intermediation over the observed years, while the remaining 33 percent is explained outside the unspecified variables, thus, exogenously explained. The F-statistic and probability informs that the model is significant while the Durbin Watson statistic informed that the result is free from autocorrelation. The regression results informed us that if the variables are hold constant, demand side financial intermediation of the quoted commercial banks can increase by 6.3. The beta coefficient informed that interest rate reforms, central bank reforms and bank competition have positive but no significant effect on the demand side financial intermediation while capital reforms have negative and no significant effect on demand side financial intermediation in the post consolidation reforms.

Banking Sector Reforms and Demand Side Financial Intermediation in Pre- Post Consolidation

Table 3 Presentation of Regression Results

Variable	Pooled Effect			Fixed effect			Random effect		
	β coefficient	T. stat	p. value	β coefficient	T. stat	p. value	β coefficient	T. stat	p. value
				The Pre- Consolidation Reform					
BLR	-0.002996	-0.271430	0.7867	-0.002996	-0.271430	0.8934	-0.000239	-0.142699	0.8868
AQ	-0.277099	-0.826781	0.4105	-0.277099	-0.826781	0.7208	-0.019347	-0.365079	0.7159
MQ	0.682688	8.730081	0.0000	0.682688	8.730081	0.0000	0.712978	18.01646	0.0000
MR	0.100599	1.897469	0.0609	0.100599	1.897469	0.3323	-0.008520	-0.953947	0.3426
C	2.048167	2.046826	0.0435	2.048167	2.046826	0.0000	2.204948	4.768267	0.0000
R-squared	0.485538			0.485538			0.803465		
$AdjR^2$	0.463410			0.463410			0.795012		
F-statistic	21.94283			21.94283			95.04965		
F- Prob	0.000000			0.000000			0.000000		
				The Post- Consolidation Reform					
D W	0.227402			0.227402			0.175445		
MQ	0.461552	8.266040	0.0000	0.188132	2.273128	0.0248	0.031663	1.338424	0.1831
MR	0.275028	2.272509	0.0247	0.623025	5.371435	0.0000	-0.004530	-0.772669	0.4411
BLR	-0.002072	-0.544094	0.5873	-0.002717	-1.107949	0.2701	0.008256	0.037575	0.9701
AQ	-0.145955	-0.414285	0.6793	0.154671	0.598290	0.5508	0.014845	0.909354	0.3648
C	2.190953	2.197088	0.0298	1.135490	1.014541	0.3123	6.357985	8.087901	0.0000
R-squared	0.354071			0.754930			0.027139		
$AdjR^2$	0.334196			0.730824			0.002795		
F-statistic	17.81513			31.31801			0.906630		
F- Prob	0.000000			0.000000			0.462212		
D W	0.469796			1.195886			0.817442		

Source: E-view 9.0

Table 3 presents the regression results of the effect of banking sector reforms and demand side financial intermediation in the pre and post commercial banks reforms. The result shows that the

adjusted R^2 is 0.463410 indicating that the independent variables explained 46.3 percent of the systematic variation in the demand side financial intermediation over the observed years, while the remaining 53.7 percent is explained outside the unspecified variables, thus, exogenously explained. The F-statistic and probability informs that the model is significant while the Durbin Watson statistic informed that the results are free from autocorrelation. The regression results informed us that if the variables are hold constant, demand side financial intermediation of the quoted commercial banks can increase by 2.0. The beta coefficient informed bank liquidity reforms in the pre-consolidation reforms and assets quality have positive and no significant effect on the demand side financial intermediation in the pre-consolidation reforms while management quality and market risk have positive and significant effect on the demand side financial intermediation pre consolidation reforms over the periods covered in the study.

The result also indicate that the adjusted R^2 is 0.730824 indicating that the independent variables explained 73 percent of the systematic variation in the demand side financial intermediation over the observed years, while the remaining 27 percent is explained outside the unspecified variables, thus, exogenously explained. The F-statistic and probability informs that the model is significant while the Durbin Watson statistic informed that the results are free from autocorrelation. The regression results informed us that in the post consolidation reforms, if the variables are hold constant, demand side financial intermediation of the quoted commercial banks in the post consolidation reforms can increase by 1.13. The beta coefficient informed bank liquidity reforms in in the post consolidation reforms and assets quality have positive and no significant effect on the demand side financial intermediation in the pre-consolidation reforms while management quality and market risk have positive and no significant effect on the demand side financial intermediation post consolidation reforms over the periods covered in the study.

Banking Sector Reforms and Supply Side Financial Intermediation in Pre- Post Consolidation

Table 4: Presentation of Regression Results

Variable	Pooled Effect			Fixed effect			Random effect		
	β coefficient	T. stat	p. value	β coefficient	T. stat	p. value	β coefficient	T. stat	p. value
				The Pre- Consolidation Reform					
INR	-0.005746	-1.329534	0.1872	-0.115766	-1.973584	0.0472	-0.006109	-1.418756	0.1592
CBPR	-0.005746	-1.329534	0.1872	-0.005746	-2.929534	0.0002	0.002886	0.833390	0.4067
CR	0.002453	0.706851	0.4816	0.002453	0.706851	0.4816	-4.098905	-0.036714	0.9708
BC	0.000104	0.092858	0.9262	0.000104	0.092858	0.9262	0.002395	0.878550	0.3819
C	0.002294	0.838262	0.4042	0.002294	0.838262	0.4042	0.639177	16.81534	0.0000

R-squared	0.005746			0.705746			0.105939		
AdjR^2	0.002453			0.602453			0.121662		
F-statistic	0.002453			7.002453			0.121662		
F- Prob	0.000104			0.000104			0.105939		
D W	0.002453			0.002453			0.121662		
The Post- Consolidation Reform									
INR	0.033310	1.153292	0.2509	0.025990	1.737152	0.0849	0.026168	1.749321	0.0826
CR	-0.008202	-0.858882	0.3920	-0.004834	-0.897543	0.3712	-0.004934	-0.917705	0.3605
CBPR	0.026047	0.619371	0.5368	0.020980	0.967780	0.3351	0.021105	0.973628	0.3320
BC	-0.611790	-2.051484	0.0422	-0.021276	-0.104772	0.9167	-0.036120	-0.178841	0.8583
C	7.563126	7.079411	0.0000	6.257467	9.941514	0.0000	6.290766	8.139796	0.0000
R-squared	0.354071			0.762603			0.039683		
AdjR^2	0.334196			0.739252			0.010135		
F-statistic	17.81513			32.65889			1.342987		
F- Prob	0.000000			0.000000			0.257491		
D W	0.469796			0.914418			0.874488		

Source: E-view 9.0

Table 4 presents the regression results on the effect of banking sector reforms and the supply side financial intermediation in the pre and post consolidation reforms. The result shows that the adjusted R^2 is 0.602453 indicating that the independent variables explained 60.2 percent of the systematic variation in the supply side financial intermediation in the pre consolidation reforms of the quoted commercial banks over the observed years, while the remaining 39.8 percent is explained outside the unspecified variables, thus, exogenously explained. The F-statistic and probability informs that the model is significant while the Durbin Watson statistic informed that the results are free from autocorrelation. The regression results informed us that if the variables are hold constant, supply side financial intermediation in the pre consolidation reforms of the commercial banks can increase by 0.002. The beta coefficient informed that interest rate and central bank policy have negative and significant effect on the supply side financial intermediation while capital reforms and bank competition have positive and no significant effect on the supply side financial intermediation in the pre-consolidation reforms.

Furthermore, the result shows that the adjusted R^2 is 0.739252 indicating that the independent variables explained 73.9 percent of the systematic variation in the supply side financial intermediation in the post consolidation reforms of the quoted commercial banks over the observed years, while the remaining 26.1 percent is explained outside the unspecified variables, thus,

exogenously explained. The F-statistic and probability informs that the model is significant while the Durbin Watson statistic informed that the results are free from autocorrelation. The regression results informed us that if the variables are hold constant, supply side financial intermediation in the pre consolidation reforms of the commercial banks can increase by 6.3. The beta coefficient informed that interest rate and central bank policy have positive and no significant effect on the supply side financial intermediation while capital reforms and bank competition have negative and no significant effect on the supply side financial intermediation in the pre-consolidation reforms.

Banking Sector Reforms and Supply Side Financial Intermediation in Pre- Post Consolidation

Table 5: Presentation of Regression Results

Variable	Pooled Effect			Fixed effect			Random effect		
	β coefficient	T. stat	P. value	β coefficient	T. stat	P. value	β coefficient	T. stat	P. value
				The Pre- Consolidation Reform					
MR	-0.146768	-0.711064	0.4779	2.060736	2.487004	0.0138	-0.146768	-3.699464	0.0000
MQ	-0.092983	-0.983608	0.3265	-0.058379	-3.114041	0.0093	-0.092983	-0.967562	0.3345
BLR	0.000913	0.059249	0.9528	-0.366310	-1.052442	0.2940	0.000913	4.058282	0.0000
AQ	0.198531	1.616131	0.1077	-0.051830	-2.966354	0.0436	0.198531	1.589766	0.1135
C	1.658518	5.255861	0.0000	0.077718	0.257578	0.7970	1.658518	5.170119	0.0000
R-squared	0.019053			0.685023			0.819053		
AdjR^2	0.001069			0.534548			0.701069		
F-statistic	0.946863			5.711064			7.946863		
F- Prob	0.437985			0.000535			0.000000		
D W	1.872011			1.972286			1.872011		
				The Post- Consolidation Reform					
MR	0.252207	2.104048	0.0373	0.141667	1.298067	0.1967	0.156192	1.461509	0.1463
MQ	0.522838	9.453995	0.0000	0.160783	2.064647	0.0411	0.210239	2.864553	0.0049
BLR	-0.004515	-1.197318	0.2334	-0.004947	-2.144280	0.0340	-0.004756	-2.064319	0.0410
AQ	-0.004899	-0.014040	0.9888	0.199377	0.819634	0.4140	0.185154	0.765935	0.4451
C	1.751565	1.773421	0.0785	4.779039	4.538066	0.0000	4.354753	4.118392	0.0001
R-squared	0.419705			0.801294			0.110067		

AdjR^2	0.401849	0.781749	0.082685
F-statistic	23.50596	40.99778	4.019606
F- Prob	0.000000	0.000000	0.004165
D W	0.495222	1.007320	0.960117

Source: E-view 9.0

Table 5 presents the regression results on the effect of banking sector reforms and the supply side financial intermediation in the pre and post consolidation reforms. The result shows that the adjusted R^2 is 0.534548 indicating that the independent variables explained 53.4 percent of the systematic variation in the supply side financial intermediation in the pre consolidation reforms of the quoted commercial banks over the observed years, while the remaining 46.4 percent is explained outside the unspecified variables, thus, exogenously explained. The F-statistic and probability informs that the model is significant while the Durbin Watson statistic informed that the results are free from autocorrelation. The regression results informed us that if the variables are hold constant, supply side financial intermediation in the pre consolidation reforms of the commercial banks can increase by 0.07. The beta coefficient informed that market risk have positive and significant effect on supply side financial intermediation while management quality, bank liquidity reforms and assets quality have negative effect on supply side financial intermediation in the pre consolidation reforms.

The result also shows that the adjusted R^2 is 0.781749 indicating that the independent variables explained 78.1 percent of the systematic variation in the supply side financial intermediation in the post consolidation reforms of the quoted commercial banks over the observed years, while the remaining 21.9 percent is explained outside the unspecified variables, thus, exogenously explained. The F-statistic and probability informs that the model is significant while the Durbin Watson statistic informed that the results are free from autocorrelation. The regression results informed us that if the variables are hold constant, supply side financial intermediation in the pre consolidation reforms of the commercial banks can increase by 4.7. The beta coefficient informed that bank liquidity have negative and no significant effect on supply side financial intermediation while management quality, market risk and assets quality have positive effect on supply side financial intermediation in the post consolidation reforms.

Bank Capital Reform and Financial Intermediation in Nigeria

The study found that capital reforms have negative but no significant effect on the demand side financial intermediation in the pre and post consolidation reforms. It is evidence from the regression results that capital reform reduces demand side financial intermediation of the nine commercial banks by 0.06 and 0.04 percent over the years covered in this study. The negative effect of capital reforms on demand side financial intermediation contradict the objective of the capital reforms of the commercial banks and also contradict the financial intermediation theories. The negative effect of capital reforms on demand side financial intermediation could be traced to management quality as one major determinant to deposit mobilization. It could also be traced to

monetary policy variables and objectives such as tight monetary policy and the decreasing savings rate compared to the rate of inflation within the periods covered in this study. Empirically the findings contradict the expectations of the study and the empirical findings of Abubakar and Gani (2013) found a positive relationship between credit to the private sector and economic growth, due to unfavorable feat of credit going into real sector, the findings of Adesanya and Obademi (2016) that banking sector developments that were experienced in Nigeria`s economy at one point or the other had significant effect on the activities of the economy, the findings of Adjei-Frimpong (2014) that Ghanain banks are inefficient. The study further revealed that well capitalized banks in Ghana were less cost efficient and the findings of Aiyetan and Aremo (2015) that relaxing financial development constraints and deepening the financial sector are crucial to boosting the manufacturing output growth in Nigeria.

Furthermore, the study found that capital reform have positive and no significant effect in pre consolidation reforms but negative and no significant effect on the post consolidation of supply side financial intermediation of the nine quoted commercial banks over the periods covered in this study. It could be deduced from the regression coefficient that capital reforms of the commercial banks increases supply side financial intermediation in the pre-consolidation reforms by 0.02 percent but reduces supply side financial intermediation of the post consolidation reforms by 0.04 percent. The negative effect of capital reforms in the post consolidation reforms contradict the a-priori expectations of the study while the positive effect of capital reforms on the supply side financial intermediation confirms the a-priori and in line with the objectives of the banking sector reforms. The negative effect of capital reforms on supply side financial intermediation could be traced to credit rationing theories as empirical evidence shows that some of the private sector such as the small and medium scale enterprises has been neglected for funding. The findings confirm the findings Akinlo and Olufisayo (2011) that banking sector development cause economic growth in the long run and the short run and the findings of Akpansung and Babalola (2011) that private sector credit impacts positively on economic growth over the period of coverage in the study.

Bank Interest Rate Reform and Financial Intermediation in Nigeria

The study found that interest rate reforms have negative and no significant effect on demand side financial intermediation in the pre consolidation reforms but positive and no significant effect on the demand side financial intermediation in the post consolidation reforms. the model regression coefficient proved that interest rate reforms reduces demand side financial intermediation by 0.03 in the pre-consolidation reforms but increases demand side financial intermediation by 0.01 in the post consolidation reform. Furthermore, the study found that interest rate reforms have negative and significant effect on supply side financial intermediation in the pre-consolidation reforms but positive and no significant effect on post consolidation reforms. the estimated model produced a regression coefficient that proved that interest reforms reduces supply side financial intermediation by 1.9 percent in the pre-consolidation reforms but increases supply side financial intermediation by 1.7 percent.

The positive effect of interest rate reforms on the financial intermediation of the commercial banks confirms our a-priori expectations of the study and justifies the deregulations of interest rate in the last quarter of 1986 to allow for the market forces of demand and supply to determine the interest rate the financial market. However, the negative effect of interest rate reforms on the financial intermediation could be traced to wide margin between lending rate and deposit rate. The deregulation of interest rate translated into an immediate rise in the gap between several monetary policy targets and their actual outcomes. Between 1986 and 1994, the narrow money supply M1 and the net credit to government fell short of their target. The outcomes of these variables for 1986 were -2.9% and -3.8% growth rates, as against their targeted values of 7.8% and 5.9% respectively. Beyond 1986, the actual outcome of narrow money supply as well as the Net credit to government outwits their target. It was 49.07% and 209.4% as against their targeted values of 13% and 10.9% respectively in 1990 and by 1993 the gulf stretched further, reaching actual value of 56.32% and 103.23% far beyond their targets of 20% and 14% respectively CBN (2012).
Empirically this finding confirms the findings of Odhiambo (2010) investigated the dynamic relationship between interest rate reform, bank-based development and economic growth in South Africa using two models in a step-wise fashion. He found that financial development which results from interest rate reforms does not Granger-cause investment and economic growth and submitted that even though interest rate reforms impacted positively on financial development in South Africa, the causal relationship tends to take a demand following path. Nwakama and Mbatogu (2004) that lending rate does not influence demand for domestic credit in Nigeria, unlike the deposit rate and the findings of Owolabi (2014) that though financial sector liberalization had effect on banks performance.

Central Bank Policy and Financial Intermediation in Nigeria

The study results found that central bank policy reforms have positive no significant effect on the demand side financial intermediation in the pre-consolidation reforms and positive and no significant effect on the demand side financial intermediation in the post consolidation reforms. The results indicate that the variable could add 0.05 and 0.03 percent per unit increase in the variables within the periods of the study. Furthermore the study found that central bank policy reforms have negative and significant effect on the supply side financial intermediation but positive and no significant effect on the supply side financial intermediation in the post consolidation reforms.

The estimated regression coefficient proved that central banks policy reform increases supply side financial intermediation by 0.02 percent in the post consolidation reforms but reduces supply side financial intermediation by 0.005 in the preconsolidation reforms. The positive effect of the variables confirms our a-priori expectations and justifies monetary policy objectives. However, the negative effect of the variables contradicts our a-priori expectations and the objectives of financial sector reforms. The negative effect of the variables could be traced to monetary policy variations over the periods covered in this study. Empirically the findings confirm the findings of

Toby and Peterside (2014) that increment in availability of credit to those sectors, which are inclusive in the real sector of the economy, has potential of increasing gross domestic products, Toby and Zaagha (2020) that Central Bank Policy rates has significant relationship with credit to private sector, credit to core private sector and no significant relationship with credit to small and medium scale enterprise sector.

Banking Sector Competition and Financial Intermediation in Nigeria

The model results found that bank competitions have negative and significant effect on the demand side financial intermediation in the preconsolidation reforms but negative and no significant effect on the demand side financial intermediation in the post consolidation reforms. Coefficient of bank competition proved that increase in the variables by 1 percent can lead to 0.05 and 0.03 percent decrease in demand side financial intermediation of the quoted commercial banks within the periods covered in this study. the model further established that bank competition have positive and no significant effect on the supply side of financial intermediation in the preconsolidation reform and negative and no significant effect in the posit consolidation reforms.

The positive effect of the variables confirms the objective of the banking sector reforms which was to increase the number of commercial banks branches. It could be recall that prior to the banking sector reforms, the total number of commercial banks branches were less than one bank in the developed financial market. The negative effect of the variable contradicts our a-priori expectation and could be traced to banking habit and increasing banking density. The findings of the study is supported by the findings of Tomola et al (2010) that manufacturing capacity utilization and bank lending rates significantly affect manufacturing output in Nigeria, Ugwuanyi and Amanze (2014) that there was a significant difference in the contribution of saving deposits to the total liability of the Nigerian banking industry after 2005 banking sector reforms.

Bank Assets Quality and Financial Intermediation in Nigeria

The model results found that bank assets quality have negative and significant effect on the demand side financial intermediation in the preconsolidation reforms but negative and no significant effect on the demand side financial intermediation in the post consolidation reforms. Coefficient of bank assets quality indicates that increase in the variables by 1 percent can lead to 0.27 and 0.15 percent decrease in demand side financial intermediation of the quoted commercial banks within the periods covered in this study.

The model further established that bank assets quality have negative and significant effect on the supply side of financial intermediation in the preconsolidation reform and positive and no significant effect in the posit consolidation reforms. The positive effect of bank assets quality confirms the a-priori of the study and justifies the objectives of the banking sector reforms while the negative effect of bank assets quality contradict the a-priori expectations and could be blamed on the increasing rate of nonperforming loans and macroeconomic volatility. The finding is supported by the findings of William, Zehou, and Hazimi (2019) that though there is no long-run

association among the variables, there exist significant short-run relationship between domestic credit to the private sector, broad money and gross capital formation. Xuezhi and Benson (2013) that there was a strong positive association between the financial services and the economic growth, and also there was two-way Granger causality between them and Yua, Upaa, Adiga & Haruna, (2020) that commercial banks' credit had significant effect on the manufacturing sector performance.

Bank Management Qualities and Financial Intermediation in Nigeria

The model results found that bank management quality have positive and significant effect on the demand side financial intermediation in the preconsolidation reforms and positive and significant effect on the demand side financial intermediation in the post consolidation reforms. Coefficient of bank management quality indicates that increase in the variables by 1 percent can lead to 0.68 and 0.18 percent decrease in demand side financial intermediation of the quoted commercial banks within the periods covered in this study.

The model results also found that bank management quality have negative and significant effect on the supply side financial intermediation in the preconsolidation reforms but positive and significant effect on the supply side financial intermediation in the post consolidation reforms. Coefficient of bank management quality indicates that decrease in the variables by 1 percent can lead to 0.58 percent increase in supply side financial intermediation in the preconsolidation reforms and 0.16 percent increase in supply side financial intermediation of the quoted commercial banks within the periods covered in this study. The positive effect of the variable confirms the a-priori expectations and justifies the objectives of banking sector reforms. The findings of the study confirm the findings of

Simon-Oke, and Jolaosho (2016) that the various financial sector reforms put in place since the introduction of the Structural Adjustment Programme (SAP) in Nigeria have not significantly brought about the needed improvement on the level of industrial productivity growth in the country, the findings of Sunday (2018) that banks credits contributed positively to manufacturing sector output in both short-run and long-run.

Bank Market Risks and Financial Intermediation in Nigeria

The estimated regression model found that market risk have positive and no significant effect on the demand side financial intermediation in the preconsolidation reforms and positive and significant effect on the demand side financial intermediation in the post consolidation reforms. Coefficient of market risk indicates that increase in the variables by 1 percent can lead to 0.1 and 0.62 percent increase in demand side financial intermediation of the quoted commercial banks within the periods covered in this study.

The estimated regression model found that market risk have negative and significant effect on the supply side financial intermediation in the preconsolidation reforms and positive and significant effect on the supply side financial intermediation in the post consolidation reforms.

Coefficient of market risk indicates that increase in the variables by 1 percent can lead to 2.0 and 0.14 percent increase in supply side financial intermediation of the quoted commercial banks within the periods covered in this study. The positive effect of the variable confirms the a-priori expectations and justifies the objectives of banking sector reforms. The findings of the study confirm the findings of Simon-Oke, and Jolaosho (2016) that the various financial sector reforms put in place since the introduction of the Structural Adjustment Programme (SAP) in Nigeria have not significantly brought about the needed improvement on the level of industrial productivity growth in the country, the findings of Sunday (2018) that banks credits contributed positively to manufacturing sector output in both short-run and long-run.

Bank Liquidity Reform and Financial Intermediation in Nigeria

The estimated regression model found that bank liquidity have negative and significant effect on the demand side financial intermediation in the preconsolidation reforms and negative and significant effect on the demand side financial intermediation in the post consolidation reforms. Coefficient of bank liquidity policy indicates that increase in the variable by 1 percent can lead to 0.029 and 0.027 percent decrease in demand side financial intermediation of the quoted commercial banks within the periods covered in this study.

The estimated regression model found that bank liquidity have negative and significant effect on the supply side financial intermediation in the preconsolidation reforms and negative and significant effect on the supply side financial intermediation in the post consolidation reforms. Coefficient of bank liquidity policy indicates that increase in the variable by 1 percent can lead to 0.3 and 0.049 percent decrease in supply side financial intermediation of the quoted commercial banks within the periods covered in this study. The negative effect of liquidity reforms onb the financial intermediation of the quoted commercial banks financial intermediation confirms the a-priori expectations of the study. Increase liquidity is expected to have a negative effect on financial intermediation such as supply side financial intermediation. This finding is in line with the trade-off theory between bank liquidity and earning assets as illustrated by Nwankwo in 1990.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The study conclude that interest rate reforms and capital reforms have positive but no significant effect on demand side financial intermediation in the pre- consolidation reforms, bank competition have negative and significant effect while Central bank reforms have positive but no significant effect on demand side financial intermediation in the pre-consolidation reforms.

From the findings, the study conclude that t interest rate reforms, central bank reforms and bank competition have positive but no significant effect on the demand side financial intermediation while capital reforms have negative and no significant effect on demand side financial intermediation in the post consolidation reforms. The study conclude that interest rate reforms and

capital reforms have positive but no significant effect on demand side financial intermediation in the pre- consolidation reforms, bank competition have negative and significant effect while Central bank reforms have positive but no significant effect on demand side financial intermediation in the pre-consolidation reforms.

From the findings, the study conclude that interest rate reforms, central bank reforms and bank competition have positive but no significant effect on the demand side financial intermediation while capital reforms have negative and no significant effect on demand side financial intermediation in the post consolidation reforms. From the findings, the study conclude that bank liquidity reforms in the pre-consolidation reforms and assets quality have positive and no significant effect on the demand side financial intermediation in the pre-consolidation reforms while management quality and market risk have positive and significant effect on the demand side financial intermediation pre consolidation reforms over the periods covered in the study.

The study found that bank liquidity reforms in in the post consolidation reforms and assets quality have positive and no significant effect on the demand side financial intermediation in the pre-consolidation reforms while management quality and market risk have positive and no significant effect on the demand side financial intermediation post consolidation reforms over the periods covered in the study. From the findings of the study, we conclude that interest rate and central bank policy have negative and significant effect on the supply side financial intermediation while capital reforms and bank competition have positive and no significant effect on the supply side financial intermediation in the pre-consolidation reforms.

The study conclude from the findings that interest rate and central bank policy have positive and no significant effect on the supply side financial intermediation while capital reforms and bank competition have negative and no significant effect on the supply side financial intermediation in the pre-consolidation reforms. Market risk have positive and significant effect on supply side financial intermediation while management quality, bank liquidity reforms and assets quality have negative effect on supply side financial intermediation in the pre consolidation reforms. The study conclude that bank liquidity have negative and no significant effect on supply side financial intermediation while management quality, market risk and assets quality have positive effect on supply side financial intermediation in the post consolidation reforms.

Recommendations

1. The study recommended that the Central Bank of Nigeria should continue with its banking sector reforms such as increase capital base as this can encourage substantial credit allocation to the prioritized activity sectors, build and enhance financial intermediation functions of the banking sector.

2. The study recommends market determined interest as a stimulant in enhancing financial intermediation. Monetary authority should ensure that the financial sector implements policies that will make credit available competitive interest rate that enhance effective financial intermediation

in Nigeria. The study suggested the need for proper deregulation of interest rate which will ensure conventional rates that will enhance effective financial intermediation.
3. The study recommends the need for monetary authorities to stabilize Central bank policy rates and commercial banks should reduce lending rate to encourage investment borrowings. Monetary authorities should be more proactive in bank supervision, pursue a vibrant supervisory framework based on prudence and ensure best practices.
4. The regulating body such as Central Bank of Nigeria should adopt a direct credit control and ensure increase in assets quality of the commercial banks to enhance effective financial intermediation in Nigeria.
5. There is need for the decentralization of banks operation from urban cities and encourage rural banking schneme. Policies should be advanced such that will encourage banking habit and reduce banking density as this will enhance deposit mobilization and credit allocation.
6. The regulatory authorities and commercial banks should study the operating environment to manage the market risk and better manage their liquidity ratio because these variables prevent affect financial intermediation and the need for more financial banking sector reforms that enhances effective financial sector intermediation.
7. The regulatory authorities should harmonize liquidity policy with the financial intermediation function of commercial banks and management of the commercial banks should give more emphasis to liquidity reforms as it affect bank financial intermediation.
8. The study recommended an improvement in financial intermediation, monetary policy intervention and consistent regulations as necessary ingredients for effective financial intermediation and that a more structured reform programme with identifiable and specific objectives that prioritizes commercial banks financial intermediation.

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