Regulatory Intervention Effectiveness and Performance of Financial Institutions in Nigeria.

Ogundipe, S. Adeyemi., Ph.D.; Fasola I. Kayode Ph.D.; & Falana B. Ranti., Ph.D

Babcock University, Nigeria

ABSTRACT

Deposit Money Banks have over the years made good contributions to Nigeria's economic development. However much remains to be done as various regulatory interventions implemented to ensure safe and sound financial services delivery have not achieved the expected results as Nigerian banks still carry poor credit portfolios, illiquidity, weak asset quality, and high interest rates and this may be attributed to sub-optimal increase in asset base, increasing loan loss provision, huge non-performing loan, poor earnings of non-interest income and return on assets. This study adopted *ex-post facto* design using multiple regressions estimation techniques to analyse the data which was extracted from annual financial statements of three (3) foremost DMBs in Nigeria (UBA, FBN and GTB). The study revealed that combined variations in the institutions intervention effectiveness (shareholders fund, reserve requirements, statutory reserve, asset quality and prime lending rate) have resulted into 60% changes in all the explanatory variables of bank performance. It is therefore recommended that the CBN should be more proactive in the exercise of their regulatory intervention functions when an indication emerges that any of the banks' are experiencing liquidity crisis to avoid systemic distress in the banking industry as intermediation of funds can get disrupted and liquidity challenges turn into reputational damage.

Key Words: Asset quality, loans and deposits, non-performing loans, regulations, and reserves.

INTRODUCTION

The global economy was hit by an unprecedented financial and economic crisis in 2007–2009 that resulted in a global recession. This crisis led to the collapse of many world-renowned financial institutions and thus affected several national economies (Sanusi, 2012). Similarly the Nigerian economy was affected by the second round effect of the crisis as the stock market collapsed by 70 percent in 2008–2009 and many Nigerian banks sustained huge losses, particularly as a result of their credit exposure through margin lending to trade in the capital market and invested heavily in the downstream oil and gas, the telecommunication sector, and the situation led the Central Bank of Nigeria to intervene and rescue eight (8) of the deposit money banks (DMBs) using liquidity injections, removed their top executives, and also prosecuted those suspected to have committed infractions in the industry (Sanusi,2012). Further, Olokoyo, 2012; Bebeji, 2013 and Kareem, Akinola and Oke, 2014) stated that financial services industry experienced a high level of competition coupled with political instability and inconsistencies in policy implementation; thus, leading to a rapid decline on the level of profitability and financial performance of banks. In the same vein, Taiwo & Musa; and Olusanmi, Uwuigbe and Uwuigbe, (2015), observed that this is because the deregulation of the commanding heights of the economy especially the financial services industry has led to the proliferation of banks with the attendant problem of distress impasse as the banks were virtually marketing the same customers, de-marketing each others to gain competitive advantage and this led the management of some of

these banks to believe that the only option left for them to survive is to take excessive risks which, Gunu, 2009; Gunu and Olabisi, (2011) opined that this development in the sector culminated into series of bank failures, related financial shocks and crises in the banking sector and the entire economy.

Subsequently, the CBN responded and introduced financial sector reforms with several policy changes which include emergent of e-banking, introduction of cashless policy, bank verification number (BVN), reduction of the tenure of bank MDs/ CEOS, a separation of the dual roles of bank Chairman/MDs/CEOs; the inauguration of Asset Management Companies (AMCON) which was assigned the primary responsibility of mopping up the prevailing huge volume of toxic assets of banks in order to relieve them of Non-Performing Loans (NPL) by purchasing these at a discount as a way to improve banks liquidity profile. These measures were expected to enhance credit allocation to borrowers, improved profitability, increased banks' capital base to absorb both internal and external shocks as well as engender increase in shareholders' wealth, and also to ensure the reduction of social costs of bank failure to the economy (Igbinosa, Ogbeide, & Babatunde 2017). Meanwhile, Yusuf and Ekundayo (2019) posited that banking industry has had its own fair share of corporate failures largely due to weak or inefficient regulatory oversight as several regulatory laws such as the promulgation of the 1952 Banking Ordinance, CBN Act of 1958, Banking Decree (Act) of 1969, Bank and Other Financial Institutions Act (BOFIA) 1991, BOFIA 2004, Nigerian Deposit Insurance Corporation (NDIC) Act 2006, CBN Act 2007 among others were operating independently or sometimes with overlapping functions and there is no synergy between them to create a robust and efficient financial system. Thus CBN (2018), reported that in spite of five (5%) approved NPLs' threshold the DMBs not only failed to comply but also grow their NPLs to over 20 percent and exceeding their lending limits which showed that the banking industry still harbours weaknesses in governance by contravening the prudential guidelines in defiance of NDIC Act. 2006 and other similar Acts of the CBN. Similarly, poor credit appraisal and deterioration of shareholders' funds, among others have led to CBN interventions. Thus Occhino (2016), opined that the CBN interventions was to prevent liquidity crises in banks from developing into a much more costly, full-blown financial distress impasse by early intervention through direct lending using its' credit windows to provide liquidity to banks over time with expectations to improve their performance that would galvanise them towards gaining full recovery of their assets values and for the financial system as a whole to regain its' stability and public's confidence. In spite of this, Nigerian banks still indulge in contravention of prudential guidelines on lending limits coupled with poorly appraisedcredits culminating in poor risk assets and in some cases leading to distress impasse in the banking industry (CBN, 2018). However, Chude and Chude, (2015) stated that inconsistencies of interventions by the regulators to prevent banking crisis still remain a challenge as the Financial Regulatory Coordinating Committee (FRSCC) has been dormant and not able to guarantee effective and efficient banking practices in Nigeria which have created gaps and lapses that were perceived to have contributed to the financial crisis in Nigeria. Similarly, Fadare (2011) asserted that between August and December 2009, the CBN injected the equivalent of US$4.1 billion into ten (10) Nigerian banks that were facing liquidity crisis and distress impasse and also introduced series of regulations deemed necessary to protect the banking sector from systemic collapse by ensuring safety and soundness of the banking system.

Furthermore, Fitch (2018) reported that in the banking sector, the key risk factor was weak asset quality, which has the tendency to drive NPLs and provisioning charges higher across the industry's tiers, resulting in weaker margins and consequent pressure on Capital Adequacy Ratios (CAR) positions. This factor was also responsible for the reluctance of banks to extend new credit facilities. Similarly, Fitch (2018) also appraised the adverse economic impact of bank credit on the borrowers and their businesses which resulted in rising defaults, additional provisioning by banks and consequent reduction in banks' capital adequacy ratio (CAR) to be responsible for DMBs travails. Also, Abata (2014) posited that NPL and the performance of banking institutions in Nigeria have well been documented from both theoretical and empirical perspectives with the aid of regression estimation techniques. However, there exists few fragmented studies of citable significance that have dealt with the issue of asset quality and DMBs performance in Nigeria and

it is important we use new estimation tools to bridge the knowledge gap and to unearth other perspectives. Besides, the enduring distress syndrome in the banking industry has seemingly defied solution till date hence, this study investigates the causes of regulatory interventions, evaluate policy responses, and its effects on bank performance. Therefore the objective of this study is to examine the effect of regulatory intervention effectiveness on bank performance using appropriate explanatory variables. Thus this study broadly hypothesized that institutions' intervention effectiveness (IIE) dimensions sub-variables (mergers & acquisitions(M&A), reserve requirements (RR), statutory requirements (SR), assets quality (AQ), and prime lending rate (PLR)) do not affect bank performance and its variables (total assets (TA), loan loss provision (LLP), non-performing loans (NPL), non-interest income (NII), and return on assets (ROA).

Conceptual Review of Literature

The efficient flow of capital in the financial sector serves as a stimulant for bank performance and economic growth; as banks inter-mediate by mobilizing capital from the savings or surplus sector and allocate such funds to the deficit sector of the economy (Solomon, 2016). However, bank regulation generally points to some kind of intervention in the banking business which ranges from explicit statutory controls, rules, and circulars to regulate the activities and certain critical elements of banking business (Uche & Uche, 2014). The necessities for CBN intervention include the pursuit of financial soundness in banks, efficient credit allocation and efficient use of resources (Adam, 2009). Further, regular supervisory interventions begin with informal action which aims at convincing the management and board of directors of DMBs that are having problems to correct identified deficiencies and these measures are often enough to address issues in a timely and efficient way and in a discreet manner, as informal interventions are typically not disclosed (Svoronos, 2018). Other intervention measures by the CBN were the strengthening of the inter-agency coordinating framework through the Financial Services Regulation Coordinating Committee (FSRCC); issuance of the Code of Corporate Governance to engender sound governance practices in the financial sector, conducting own-risk assessment and relying less on classification by rating agencies; regulating the tenor of banks chief executives to a maximum of two terms of five (5) years each; rigorous demand for transparency in structured credit instrument to be improved upon for easy assessment of associated risk (CBN, 2014). In addition, formal regulatory intervention regimes serve as precursor to regular supervisory action in practice to ensure supervisory forbearance that contributes to intervention effectiveness to control any credible threat to the soundness of the financial system. The existence of supervision may resort to the introduction of more stringent measures to induce extant compliance with banking regulations (Svoronos,2018).

Merger and Acquisition (M&A).

Jimmy, (2008); defined a merger as the combination of two or more organizations into one larger organization. Such actions are commonly voluntary and often result in a new organizational name. Sudarsanam (2008) stated that Merger is essentially a fusion of two or more companies in which one of the combining companies legally exists and the surviving company continues to operate in its original name. It can also be described in such terms as Acquisition, Buyout and Takeover which can be used interchangeably are all part of the merger and acquisition system. Soludo (2004) further explained that the major objective of M&A is to strengthen the banking system and to ensure the achievement of a diversified, strong, and reliable banking sector that will guarantee the safety of depositors' savings and shareholders' funds as well as play active developmental roles in the Nigerian economy and the global financial market. Similarly Okafor (2011), observed that the short compliance period created huge implementation difficulties and caused a major shock in the banking sector. At the conclusion of the exercise, 75 out of the 89 banks that existed prior to the announcement date fused (through mergers and acquisitions) into 25 banks while 14 others could not be consolidated having failed to meet the recapitalization deadline and had their operating licenses withdrawn. However, Oloye and Osuma (2015) posited that, from the review of various literature on M&As, there is no generally accepted conclusion as to whether M&As have either a positive or a

negative impact on the performance of commercial banks.

Reserve Requirement (RR): Chude and Chude, (2014) defined cash reserve ratio (CRR) **as** the ratio of cash reserve requirement to total current liabilities as stipulated by CBN and has control elements that influence commercial banks' credit to the banking public by simply increasing or decreasing the ratio of cash in enhancing their lending position. Also the CBN has the statutory power to set the minimum reserves each bank must hold to demand deposits, and bank notes, the purpose of minimum reserve ratios is liquidity rather than safety. Reserve requirements have also been used in the past to control the stock of banknotes and/or bank deposits. Such reserves are usually denominated in gold coins, central bank notes or deposits, and foreign currency (CBN, 2013).

Statutory Reserves (RR): According to CBN (2010)**,** Every bank shall maintain a reserve fund appropriated out of its net profits for each year (after due provision made for taxation) and before any dividend is declared as follows: where the amount of the reserve funds is; (i) less than the paid-up share capital, transfer to the reserve fund a sum equal to not less than 30% of the net profits; and (ii) equal to or over the paid-up share capital, transfer to the reserve fund a sum equal to not less than 15% of the net profit; Provided that no transfer under this subsection shall be made until all identifiable losses have been made good. According to Bouwman, (2013), the introduction of the reserve requirement based on the mere assumption that a bank could overuse customers' savings or/and lend excessively could discourage engagement in corporate social responsibility (CSR). This is because reserve capitals do not originally exist with interest against banks, but most financial tools used to buttress banks' liquidity such as interbank lending and borrowing, as well as discount window come with higher risks and financial demerits.

Asset Quality (AQ). Ombaba (2013) defined asset quality as the general risk attached to various assets held by financial institutions and is commonly used by these institutions to determine how many of their assets are at financial risk and how much provision for potential losses they must make. Also, Khalid (2012) opined that the most common assets of banks requiring a strict determination of asset quality are loans and advances. Increasing loan quality will increase the return on financial institution loans and reduce the costs of failure, but at the same time it will be attained at a cost that requires banks' attention to manage. Similarly, Iwedi and Onuegbu (2014) asserted that the banking industry had been hit by low-quality loan assets as a result of poor economic and financial conditions in the country following the financial meltdown of 2008 and the negative oil price shock.

Prime Lending Rate (PLR): Ngure (2014) defined interest rates as the price a borrower pays for the use of the money they borrow from a lender or the fee paid on borrowed assets and Sayedi (2013) described interest rate as the percentage rate over amount borrowed or saved over a period of one year. Karl et al., (2009) posited that interest rates are derived from macroeconomic factors which agree with Irungu (2013) that interest rates are major economic factors that can influence economic growth. Also inflation and inflationary expectations can exert pressure on interest rates upward which do affects lending rates resulting to reduced credit demand and lending ability of commercial banks (Keynes, 2006). Irungu (2013) further stated that interest rate is the price of money and can either be nominal or real, and nominal interest rate can be measured in naira terms, not in terms of goods. The nominal interest rates measure the yield in naira per year invested while the real interest rate is corrected for inflation and is calculated as the nominal interest rate minus the rate of inflation.

Bank performance

Okafor (2012) opined that bank performance depends on the level of efficiency exhibited in the application of human, financial and material resources available to a bank while it is a known fact that the management of banks faces several risks in the process of managing the resources available to their respective banks

hence, banks operate on the premise of minimizing risks since any identified risks cannot adequately serve the credit needs of her customers and in the long run banks may restrict customers access to credit as appropriate to the demands of economic development owing to perceived liquidity and capital adequacy problems. Also different stakeholders of a bank see performance from different perspectives wherein depositors are more likely to be concerned with the bank's long-term capability to ensure their savings; equity investors are concerned about the bank's profitability; while creditors pay more attention to how banks can repay their financial obligations (Otieno & Onditi, 2016). Oladejo and Oladipupo, (2011) posited that in the global world, banks are the largest owners of financial assets, which in turn are an important success factor for institutions operations in both the real and service sectors of the economy. Therefore, the performance of banks tends to have a direct impact on the stability of the economy (Greenberg &Simbanegavi, 2009).

Loan loss provisioning (LLP): Loan Loss Provision is a portion of a bank's profit that is, deducted or sacrificed to pay off part of sticky past due of its borrowers according to prudential guidelines on non-performing credits (CBN, 2014). Also, Ajekwe, Ibianke and Silas, (2017) refer to deductions made from the net interest income of banks to provide for anticipated bad or non-performing loans. Golin and Delhaise (2013), stated that loan loss provision is "a noncash charge against operating income made to account for expected or unexpected loan losses." and can be a general provision or a specific provision. The general provision covers all loan losses that are not yet determined but banks consider loans generally to have a high probability of default while specific provision term, on the other hand, is used for loans that are already identified as having trouble to pay back. Karim, Chan and Hassan (2010) asserted that the main effect of provision for bad loans on banks is the fact that increasing provision for bad debt limits the financial growth of banks as it deprives banks of the needed liquidity and also limits their capability to fund other potentially viable businesses and make credit facilities available to individuals and corporate bodies.

Non-performing loans (NPL) is defined as credits that the banks perceive as possible loss of funds due to loan defaults, they are further classified into substandard, doubtful or lost and bank credit in the lost category hinders bank from achieving their set targets (Kolapo *et al.*, 2012). The Nigerian Deposit Insurance Corporation (NDIC) (2018), in its report stated that a lot of loans granted by banks to finance oil and gas investments went bad and thus created huge NPLs as banks largely lack expertise that can manage credit exposure to the oil and gas industry, telecom and power sectors. Fitch (2017) reported that the Financial Stability Report (FSR) of the CBN showed that banking industry NPLs moved from 11.7 per cent to 12.8 per cent at the end of 2016 to N2.1 trillion at the end of December 2016 from N1.67 trillion in June 2016. Consequently baseline CAR for the industry, large, medium, and small banks stood at 14.78 percent, 15.47 percent, 12.75 percent and 3.14 percent, respectively, showing a decline, although above limit, but worse for small banks. The apex bank's simulation also showed that a 100 per cent further increase in NPLs, will lead to a damning effect on all sizes of banks.

Non-interest income (NII): This is defined as the revenue derived mostly from fees and other activities outside the core activity of lending. Unlike interest income, non-interest income is usually stable and largely unaffected by economic, financial and liquidity market cycles; it is usually not controlled by law or regulation (Chen, Huang, & Zhang, 2015). NII is largely grouped into fee income and non-fee income. Examples of non-interest income include credit-related fees and commissions, account maintenance charges, corporate finance/advisory fees, commissions on foreign exchange deals, trading income, e-business digital banking income, and transaction banking income. Augie (2017) observed that advances in information and communications technology for processes like loan securitization and credit scoring and growth and expansion of financial instruments and markets impact the levels and types of non-interest income in commercial banks thus Kenton (2018) opined that the degree to which banks rely on non-interest fees to generate revenue is a function of the economic environment and local regulations.

Return on Asset (ROA): Return on assets is computed as net income divided by total assets. This is generally considered as a good indicator to evaluate the profitability of the assets of a firm in comparison to other firms in the same industry (Were &Wambua, 2013). According Hariyani (2010), ROA is the ratio that reflects the bank's ability to earn an income after tax obtained from the asset. The higher the ROA, the more accrued to bank also increased the possibility that the small banks can avert troubled state. Also Messai and Jouin (2013) asserted that the ROA hurts NPLs and banks with a strong level of profitability through making huge earnings can reduce the risk of bad debts. Also Patra and Padhi (2016) found that profitability played a significant role in improving loan performance and ROA also a measure of the performance of banks.

Loans and advances: Ngalawa, (2014) defined lending as the core business of banks, and the interest generated from loans is often the largest source of income for commercial banks' and such interest income is expected to have a positive impact on banks performance. Loans granted by banks also explained the pro-cyclical nature of bank performance and if, however, these loans, are not paid back by the borrowers when due or the debts are not adequately serviced, bank performance may be hindered. Similarly Obioma and Charles (2018) described loans and advances (L&A) as an amount given for a specified period and is recoverable with a particular interest rate while advances mean such money that is given for a temporary business use to meet purchases, travel expenses and interest is not charged on this advance amount.

Empirical Review of Literature

Ozili and Outa, (2017) found that government guarantees on bank loans, provide some insight into other unique interventions that may temporarily induce LLP procyclicality in emerging countries where it might be difficult to implement a dynamic provisioning system. Meela and Prasad (2016) posited that rapid credit growth is usually associated with poor lending decisions which indicate the probability of occurrence of bad loans and the likelihood of a banking crisis as a result of increase in the Loans and Advances ratio (LAR) (Peña 2017). However Shingjergji (2013) found a negative effect of LAR on NPLs in the Albanian banking industry, which suggests an increase in the loan portfolio, may not increase the NPL level. However, there is need to unearth theoretical reasons to believe that with the increase in credit over total assets, the likelihood of adverse selection and the possibility of bad loans increases or exists. Several studies on the impact of bank loan provisions documents have shown conflicting results, for instance Leventis *et al* (2011) reported a negative relationship between bank performance and loan loss provisions in their cross-country study. Ingves, 2011) found that an assessment of the loss-absorption capacity of banks is also needed once the size of NPL stock has been estimated, together with some projections over new NPL flows, this measure is compared with banks' provisions and capital buffers. In the absence of sufficiently large buffers NPL losses can quickly erode banks' solvency.

Uremadu (2012) reported a positive relationship between CRR and banks profitability and this position was confirmed by Akanbi and Ajagbe (2012) and Onoh (2017) among banks in Nigeria. On the other hand Punita and Somaiya (2006) carried out a study on the impact of monetary policy on the profitability of banks in India between 1995 and 2000 and found that bank rates, cash reserve systems have negative and significant effects on the performance of banks. Abid and Lodhi (2015) reported that CRR taken as measure for reserve requirement has significant inverse relationship with banks' financial performance in Pakistan, which is measured by ROA and ROE but reserve requirement ratio (RRR) of banks in Vietnam show negative relationship with profit (Nguyen, Vu & Le, 2017). Udeh (2015) however documented that cash reserve ratio has no significant impact on the profit before tax of Zenith Bank Plc Nigeria while the cash reserve ratio has a negative impact on bank lending and hence profitability of banks in Nepal. Arif (2012) in his study of the effect of risk factors on the performance of twenty two (22) banks in Pakistani between (2004 – 2009) and found that there is a significant impact of liquidity risk factors on the banks profitability as an increase in customer deposits may lead to increase in the bank's profitability in terms of reducing

dependence on the CBN in meeting the customers' obligations and profitability is negatively affected by the allocation of non-performing loans and liquidity gap however, this finding was contradicted by Kurotamunobaraomi, Giami and Obari (2017), who investigated the interrelationship between liquidity and performance of DMBs in Nigeria for the period of (1984 – 2014) using cash reserve ratio, liquidity ratio, and loan-to-deposit ratio as proxies for liquidity; and return on shareholders' funds as the proxy for performance and subject them to ordinary least square regression, Johanson Cointegration, Granger Causality test and Error Correction Model and found that banks reserve ratio and loan-to-deposit ratio negatively impacted the banks performance within the period under review and the DMBs performance may be as a result of the industry structure hence, the need for more studies becomes imperative.

METHODOLOGY

The study adopted an *ex post facto* design and used purposive sampling method to select the three (3) DMBs out of the 10 foremost banks that control over 60% of assets and liabilities of the banking industry size. Data for the study were sourced from published financial statements of United Bank of Africa, Guarantee Trust Bank and First Bank from 2009 to 2022 and various tests were conducted to analyze the explanatory variables of the study. The study variables were operationalized as follows:

Operationalization of Variables

Y = Dependent Variables; X = Independent Variables and Z = Control Variables

$Y = f(X, Z)$; $Y = y_1, y_2, y_3, y_4, y_5$; $X = x_1, x_2, x_3, x_4, x_5$;

Where: Y = Bank Performance (BP); y_1 = Total Assets (TA); y_2 = Loan Loss Provision (LLP); y_3 = Non-Performing Loan (NPL); y_4 = Non-Interest Income (NII); y_5 = Return on Assets (ROA).

X = Regulatory Intervention Effectiveness (RIE); x_1= Merger &Acquisition (MA); x_2= Reserve Requirement (RR); x_3 = Statutory Reserves (SR); x_4= Asset Quality (AQ)' x_5= Prime Lending Rate (PLR)

Functional Relationship

BP=f(TA,LLP,NPL,NII,ROA); RIE=f(MA,RR,SR,AQ, PLR);

Hypothesis One: Merger and Acquisitions has no significant relationship with Total Assets in DMBs in Nigeria.

$$TA_{it}= \beta_0 + \beta_1 M A_{it} + \beta_2 RR_{it}+ \beta_3 SR_{it}+ \beta_4 AQ_{it}+ \beta_5 PLR_{it}+e_{it}\ldots\ldots\ldots\ldots\text{equ. 1}$$

Hypothesis Two: Reserve Requirements (RR) has no significant relationship with Loan Loss Provision in DMBs in Nigeria.

$$LLP= \beta_0 + \beta_1 M A_{it} + \beta_2 RR_{it}+ \beta_3 SR_{it}+ \beta_4 AQ_{it}+ \beta_5 PLR_{it}+e_{it} \ldots\ldots\ldots\ \text{equ. 2}$$

Hypothesis Three: Statutory Reserves (SR) has no significant relationship with Non-Performing Loans in DMBs in Nigeria.

$$NPL_{it}= \beta_0 + \beta_1 M A_{it} + \beta_2 RR_{it}+ \beta_3 SR_{it}+ \beta_4 AQ_{it}+ \beta_5 PLR_{it}+e_{it} \ldots\ldots\ldots\ \text{equ. 3}$$

Hypothesis Four: Assets Quality (NII) has no significant relationship with Non Interest Income in DMBs in Nigeria.

$$NII_{it}= \beta_0 + \beta_1 \, M \, A_{it} + \beta_2 RR_{it}+ \beta_3 SR_{it}+ \beta_4 AQ_{it}+ \beta_5 PLR_{it}+e_{it} \ldots\ldots\ldots\ldots \text{ equ. } 4$$

Hypothesis Five: Prime Lending Rate (PLR) has no significant relationship Return on Assets in DMBs in **Nigeria.**

$$ROA_{it}= \beta_0 + M \, A_{it} + \beta_2 RR_{it}+ \beta_3 SR_{it}+ \beta_4 AQ_{it}+ \beta_5 PLR_{it}+e_{it} \ldots\ldots\ldots\ldots \text{ equ. } 5$$

METHOD OF DATA ANALYSIS

The study data adopted pre and post estimation technique to determine the outcome of the model specification used for desk study carried out on the three banks (United Bank of Africa (UBA), Guarantee Trust Bank (GTB), and First Bank of Nigeria (FBN) that were selected out of the sampled subjects. Thus Hausman test, Heteroskedasticity test, and autocorrelation test were conducted using panel data to determine the most appropriate estimating technique between fixed effect and random effect but favored random effect with the $\rho > 0.05$. Three post-estimation tests were carried out to determine the presence of any econometric errors which could impair on the outcome of the analysis. The Heteroskedasticity test was conducted using the Breusch-Pagan / Cook-Weisberg test to know whether the variations in the residuals of the model over the period "t" are trending. Serial auto-correlation test was carried out using Wooldridge test to determine the existence of associations among the coefficients of the model and its residuals as an unhealthy association result into the error terms being smaller than expected and the co-efficient of determination being higher than normal. Lastly, the cross-sectional dependence test (only applicable when using fixed effect or random effect) was conducted using the Pesaran CD test to determine if the residuals of the model across the firms "i" are correlated over time "t".

Analysis of Results

Analysis of the study results revealed that there is no multicollinearity problem among the distribution series of the explanatory variables as the variables are not unhealthily associated. This is confirmed using the Pearson Product Moment Correlation Coefficient (PPMCC) test and Variance Inflation Factor (VIF) test with the threshold of 0.8 and Mean VIF of 5. The results of the post-estimation tests showed that there is presence of serial auto-correlation between the residuals and the coefficients of the model; thus, the regression equation was estimated using Pooled OLS with cluster standard errors. The regression result showed that regulatory intervention effectiveness measured as measured as merger and acquisitions (M&A), reserves requirements (RR), statutory reserve (RR), asset quality (AQ). and prime lending rate (PLR) significantly affect the performance of the three (3) listed deposit money banks under study at 5% chosen significant level (ρ-value of F-test<0.05). the coefficient of multiple determination depicted the joint effect of all the explanatory variables on the explained variable revealed that combined variations in the regulatory intervention effectiveness would result to 60% changes in the bank performance and its sub-variables. Judging from the ρ-values of the heteroskedasticity test and serial auto-correlation test with both $\rho < 0.05$, the results of the post-estimation tests showed that there is heteroskedasticity problem and also, the presence of serial auto-correlation between the residuals and the coefficients of the model; thus the regression equation was estimated using Pooled OLS with cluster standard errors. The regression result showed that regulatory intervention effectiveness (RIE) significantly affect the performance of the three (3) DMBs in Nigeria at 5% significant level (ρ-value of F-test<0.05). Also the coefficient of multiple determinations (Adjusted R^2) depicted the joint effect of all the explanatory variables revealed that combined variations in the regulatory intervention effectiveness would result to 94% changes in the bank performance.

CONCLUSION AND RECOMMENDATIONS

The comparison of results of the model before and after the introduction of control variables with coefficient of multiple determinations was found to have increased from 60% prior and 94%after is an indication that the 34% difference in the result is the effect of controlling powers of cash deposit and total loan on bank performance. The study showed strong implication that cash is the strength of any bank and whatever ways it is been deployed, such investment or activity must be regenerative enough not only recover the total sum committed into banking operations or any investment activities, it must also earn income or profit to ensure service flow for sustainability and growth. The study concluded that there is relationship between regulatory intervention effectiveness and the performance of listed deposit money banks in Nigeria. It is therefore recommended that the CBN should be more proactive to intervene rapidly as soon as an indication emerges that any bank is experiencing liquidity crisis to avoid a situation whereby intermediation of funds gets more and more disrupted as liquidity challenges turn into solvency problems. This confirms the position of Chude and Chude, (2014) who found that regulatory inconsistencies between the Central Bank of Nigeria (CBN), Nigeria Deposit Insurance NDIC, and the Financial Regulatory Coordinating Committee (FRSCC) have not guaranteed effective and efficient banking practices in Nigeria because each administrative regime propounds new banking regulation only to create new policy gaps as these institutions are working at cross purposes thereby contributing to bank distress and failure. It is suggested that more studies should be conducted on all the DMBs operating in Nigeria including development, merchant and micro-finance institutions for more robust outcomes.

REFERENCES

1. Abata, M.A. (2014). Asset quality and bank performance. A Study of commercial banks in Nigeria .*Research Journal of Finance and Accounting www.iise.org ISSN 2222-1697 (Paper) ISSN*
2. Abid, S. F &Lodhi, S. (2015). Impact of changes in reserve requirement on banks profitability. The case of banks in Pakistan, *European journal of business & management, 7(31)*
3. Adam, A. J.(2009). Banks regulation, Risk Assets and income of Nigeria Bank. *The Abuja Management Review, 3(9), 6-9.*
4. Ajekwe, C.C., Ibiamke, I. A. & Silas, M.F. (2017)**.** Loan loss provisions, Earnings smoothing and capital management under IFRS. The case of deposit money banks in Nigeria. *American Journal of Management Science and Engineering; 2(4): 58-64*
5. Akanbi, T. A. &Ajagbe, F. A. (2012).Analysis of monetary policy on commercial banks in Nigeria. *African Journal of Business Management* 6(51), 12038-12042.
6. Arif, A., (2012). Liquidity risk and performance of banking system: *Journal of Financial Regulation and Compliance, 20(2), 182–195*
7. Augie, B. (2017). *Banks' interest income spikes on improved loan book, higher yields.* Retrieved January 7, 2019, https://www.businessdayonline.com/banks-interest-income-spikes-improved-loan-book-higher-yields/
8. Bassey, F. A., Toby, E. G., Bassey, I. F. & Ekwere, R. E. (2016). Liquidity management and the performance of banks in Nigeria, *International Journal of Academic Research in Accounting, Finance and Management Sciences 6 (1), (41–48).*
9. Bebeji, A., (2013). Consolidation and Asset Quality of Banks in Nigeria. *International Journal of Business and Management Invention.*2(2).12-20.
10. Bouwman, C.H.S. (2013). *Liquidity: How Banks CreateIt and How It should be Reglated?* Oxford handbook of Banking, 2nd Edition; A.N. Berger, P. Molyneux, and J.O.S. Wilson
11. CBN, (2018). Statistical bulletin. *CBN Publications,www.cbn.org/*Abuja.
12. Central Bank of Nigeria. (2016). Understanding monetary policy and financial concepts.*www.cbn.org.*
13. Central Bank of Nigeria. (2014). Consolidated banking supervision annual report (2009–2014). *Central Bank of Nigeria. Abuja.www.cbn.org.*
14. Central Bank of Nigeria, (2013). Annual report and statement of account, various issues *www.Central bank. go.ke/*

15. Central Bank of Nigeria (2010). Press release through communiqué No. 98 & 101. *www.Central bank.*

16. Chen, C., Huang, Y. & Zhang, T. (2015). *Non-Interest Income, Trading, and Bank Risk.* (Unpublished master's thesis) University of Dayton, Ohio, United States of America.

17. Chimkono,E. Muturi W. &Njeru, A. (2016).Effect of non-performing loans and other factors on performance of Commercial banks in Malawi.

18. Chude, N. P., & Chude D. I.,(2014).The Relationship between Regulatory Inconsistencies and Nigerian Banking Industry. *Global Journal of Management and Business Research. Finance 14 Issue 4 Version 1.0*

19. Fitch (2017).Fitch affirms Nigerian banks' profitability. Guardian Business News, Lagos.

20. Golin, J. & Delhaize, P. (2013). *The Bank Credit Analysis Handbook: A guide for Analysts, Bankers and Investors.*2nd Edition. John Wiley & Sons Singapore Pt. Ltd. Singapore. International Financial Report System (2018).IFRS 9.

21. Greenberg, J., & Simbanegavi, W. (2009). Testing for competition in the South African banking sector. Retrieved on 12 July 2012 from h*ttp:// www.commerce. cut.ac.za/economics/seminars pdf*

22. Gunu, U. & Olabisi, J.O., (2011). Impact of Bank Mergers and Acquisition on their Staff Employment. *The Journal of Commerce*. 3(2): 35 – 44.

23. Gunu, U. (2009). The impact of banking industry recapitalization on employment in Nigerian banks. *European Journal of Social Sciences*. 11(3): 486 – 495.

24. Haryana, I. (2010). *Restrukturisasidan Penghapusan Kredit Macet.* Jakarta. Elex Media Komputindo.

25. Ingves, S., (2011). *Basel III – much-needed regulations for a safer banking sector, speech at* The Swedish Society of Financial Analysts, Sveriges Riks bank.

26. Irungu, P.N., (2013). *The Effect of Interest Rate Spread on Financial Performance of Commercial Banks in Kenya*. An MSc Research Project Submitted to the University of Nairobi.

27. Jimmy. A. (2008). Merger and Acquisitions. Another Tool for Traders .*Investopedia*

28. Karim, M. Z. K, Chan, S. & Hassan, S. (2010). Bank efficiency and non-performing loans. evidence from Malaysia and Singapore. *Prague Economic Papers, 2, 118-132.*

29. Iwedi, M. & Onuegbu, O. (2014). Credit risk and performance of selected deposit money banks in Nigeria: An empirical investigation. *European Journal of Humanities and Social Sciences, 31,*

30. Kargi, H.S. (2011). Credit risk and the performance of Nigerian banks. *Ahmadu Bello University, Zaria.*

31. Kareem, A.O., Akinola, G.O. & Oke, E.A. (2014). Effect of Mergers and Acquisitions on Employee Development: The Nigerian Banking Industry Experience. *Fountain Journal of Management and Social Sciences*. 3(2):47-56.

32. Kenton, W. (2018, June 29). *Non-Interest Income.* Retrieved from Investopedia: https://www.investopedia.com/terms/n/noninterest-income.asp

33. Khan N.A. (2018). *An Empirical Assessment of Non-Performing Assets* in Indian Scheduled

34. Kurotamunobaraomi, T, Giami, I. B. & Obari, O. B. (2017).Liquidity and Performance of Nigerian banks. *Journal of Accounting and Financial Management, 3 (1).*

35. Leventis, S., Dimitropoulos, P. E. &Anandarajan, A. (2011). Loan loss provisions, earnings and capital management under IFRS. The case of EU commercial banks, *Journal of Financial Services Research, 40No. (1-2)*, 103-122.

36. Meela, D.& R. Prasad. R, S. R. (2016). Influence of bank management on non-performing assets. Thecase of the State Bank of India. *InternationalJournalofAdvanceResearchinComputerScienceandManagementStudies 4. 30–37.*

37. Messai, A.;Selma D.; &Jouini, F.(2013). Micro and macro determinants of non-performing loans. *International Journal of Economics and Financial Issues. 3(4) 853-860*

38. Moghalu, K.C. (2011). Central banking in emerging economies. Challenges, successes, and prospects. *The Guardian, 29, 11922,. 69.*

39. Ngalawa, H. (2014). Performance of South African banking sector since 1994.*Journal of Applied Business. on at: https ://www research gate. net/ publication/286065675.*

40. Ngure I.M. (2014).*The Effect of Interest Rates on Financial Performance of Commercial Banks in Kenya.* Unpublished thesis for the award of the degree of Master of Business Administration of theUniversity of Nairobi, Kenya.

41. Obioma J, & Charles O. (2018).Bank asset quality performance among Nigerian Banks – The Role of Monetary Policy IIARD *International Journal of Banking and Finance Research ISSN 2406-8634.4 No. 1www.iiardpub.org*

42. Occhino ,F. (2016).*Central Bank Lending in a Liquidity Crisis.* Economic Commentary. www.cbn.ng.org *of the 21st century.* Address by the CBN Governor to the bankers committee. CBN, Abuja.

43. Okafor, R.G. (2012). Performance evaluation of Nigerian commercial banks. Before and after consolidation.*IJEMR.*2 (2) 1 – 14

44. Oladejo, M., & Oladipupo, A. (2011). Capital regulation and the performance of the Nigerian Banks. Need for review. *Journal of Emerging Trends in Economics and Management Sciences (JETEMS), 2(3), 215- 224.*

45. Oloye M. I., & Osuma G. (2015). Mergers & Acquisitions and Performance of DMBs. *Pyrex Journals of Management Research. Journal www.pyrexjournals.org*

46. Olusanmi, O, Uwuigbe, U. & Uwuigbe, O.R. (2015). The Effect of Risk Management on Bank's Financial Performance in Nigeria. *Journal of Accounting and Auditing: Research & Practice,* 1-7.

47. Ombaba K.B.M., (2013). Assessing the factors contributing to non-performance Loans in Kenyan Banks, *European Journal of Business and Management, 5(32), 13-20.*

48. Onoh, U. A. (2017).Monetary policy and their effect on turnover ratio of commercial banks in Nigeria. *Journal of Business & African Economy, 3(1).*

49. Ozili, P. K. (2017). Discretionary provisioning practices among Western European banks, *Journal of Financial Economic Policy, 9, No. 1, 109-118.*

50. Patra, Biswajit, & Puja Padhi.,(2016). Determinants of nonperforming assets-bank-specific and macroeconomic factors. A panel data analysis of different group of commercial banks operating in India. *Theoretical and Applied Economics 22: 215–36.*

51. Punita, R. &Somaiya, K.J. (2006).*Monetary policy. It's impact on the profitability of review*. Seminar organised by the Chartered Institute of Bankers of Nigeria (CIBN) and Royal Bank of Canada (RBC). Research Department CBN, Abuja.

52. Saleh, T. A. (2014). Bank liquidity risk and performance. An empirical study of the banking system in Jordan. *Research Journal of Finance and Accounting,* ISSN 2222-1697. 5 (12).

53. Sanusi, S. L (2011). *Banks in Nigeria and National Economic Development. A critical review.* Chartered Institute of Bankers of Nigeria (CIBN) and Royal Bank of Canada (RBC) on March 7. Research Department CBN, Abuja.

54. Sanusi, L.S. (2012). *The Banking Reform and its Impact on the Nigerian Economy.* A public lecture delivered at the University of Warwick's Economic Summit, Warwick.

55. Sayedi, S.(2013). Bank specific, industrial specific and macroeconomic Determinants of banks' profitability in Nigeria. *Journal of Finance.*

56. Shingjergji, A. (2013). The impact of bank specific variables on the non-performing loans ratio in theAlbanian banking system. *Research Journal of Finance and Accounting 4: 148–52.*

57. Soludo, C. (2004). *Consolidating the Nigerian Banking Industry to Meet the Development Challenges of the 21st Century.* Being an address delivered to the Special Meeting of the Bankers' Committee, held on July 6, at the CBN Headquarter, Abuja.

58. Soludo, C (2006). *Financial Sector Reformed and the Real Economy*. A speech delivered to the council of Fellows of the Pharmaceutical Society of Nigeria. Lagos.

59. Svoronos J-P. (2018). Early intervention regimes for weak banks Financial Stability Institute. *FSI Insights on policy implementation. 6. Bank for International Settlements.*

60. Sudarsanam, U (2008) Effects of Financial Products Marketing Management of Profitability of some Banks in Nigeria

61. Taiwo, T.O & Musa, A.F., (2014). The Impact of Consolidation on the Performance of DMBs in

Nigeria. *Global Advanced Research Journal of Management and Business Studies. 3(10) 479-485.*

62. Udeh, S.N. (2015). Impact of monetary policy instruments on profitability of commercial banks in Nigeria. Zenith Banks Plc, *Research Journal of Finance & Accounting 6(10).*

63. Uremadu, S. O. (2012). Bank capital structure, liquidity and profitability evidence from the Nigerian banking system. *International Journal of Academic Research in Accounting, Finance and Management Sciences, 98-113.*

64. Were, M. & Wambua J.(2014). What factors drive interest rate spread of commercial banks? Empiricalevidence from Kenya. *African Growth. www.independent .academia.edu*

65. Yusuf, I. &Ekundayo, O. (2019).Regulatory non-compliance and performance of deposit money banks in Nigeria. *Journal of Financial Regulation and compliance.10.1108/JFRC-04-2017-0041*