
EFFECT OF TIER ONE CAPITAL COMPONENTS ON THE LOAN PORTFOLIO OF DEPOSIT MONEY BANKS IN NIGERIA

Udeh Patience Ndidiamaka

Federal Polytechnic Ohodo, Enugu State

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Abstract: *The inadequacy of tier one capital components has been a recurring issue of concern in the Nigerian banking sector, potentially affecting the ability of deposit money banks to perform their traditional role of financial intermediation through loans and advances. Additionally, the impact of specific tier one capital components, such as paid-up share capital, and statutory reserve on the loan portfolio of deposit money banks in Nigeria remains unclear hence, the study examines the effect of tier one capital components on loan portfolio of deposit money banks in Nigeria from 2015 to 2024. The independent variables of the study and proxies for tier one capital components are paid-up share capital and statutory reserve, while loans and advances are the dependent variable. A total of 23 deposit money banks were listed on the Nigerian Stock Exchange during the period, out of which 6 banks were sampled for the study. Secondary data were collected from the audited annual financial statements of the selected banks and analyzed using panel data regression analysis. Findings suggest that Paid Up-Share Capital has a positive and significant effect on Loans and Advances. However, Statutory Reserve has a positive but non-significant effect on Loans and Advances. The study recommends that Nigerian Deposit Money Banks should be adequately capitalized at all times in accordance with the Central Bank of Nigeria's prudential guidelines to enable the banks to efficiently provide their traditional service of financial intermediation, while implementing a retention policy that will enable them to retain a sizable proportion of their earnings for future growth and expansion. The implication of the study is that strong bank capital components can enhance lending capacity, thereby contributing to industry development, economic growth, and financial stability.*

Keywords: *Paid-up-share-capital, Retained-earnings, Statutory-Reserve, Share-premium and Loans-and-Advances.*

1.1 Introduction

Capital adequacy standards for banks that operate internationally have been a major concern for bank regulators worldwide. In view of this, internationally active banks are required to maintain a significant and adequate level of capital to avoid bank failures and to protect the interests of bank stakeholders. The globally recognized and acceptable capital regulations originated from the Basel Committee on Banking Supervision, which was established by the central bank governors of the Group of Ten (G10) industrialized nations of the world in 1975. The committee framed the details of

the agreed structure for measuring capital adequacy and the minimum capital standard (Aspal & Afroze, 2014). In 1988, the Basel Committee came up with Basel Capital Accord which propounded the definition of capital and distinguished bank capital between core elements (Tier 1) capital and supplementary elements (Tier 2) capital. In the same year, the Basel Committee introduced capital adequacy regulation, which required globally active banks to maintain a minimum capital equal to 8% of risk adjusted assets, with capital consisting of Tier I capital (equity capital and disclosed reserves) and Tier II capital (long term debt, undisclosed reserves and hybrid instruments) (Jacobson, Linde & Roszbach, 2002).

Thus, the adoption of the standards in the city of Basle came to be referred as the Basle Capital Accord on Capital Adequacy Standard. The capital adequacy standard under the Basle Accord has been widely accepted worldwide by bank regulators and was implemented by the Central Bank of Nigeria, effective December 2005 (Ezike & Oke, 2013). The 2007-2009 financial crisis reveals several weaknesses in the capital bases of internationally active banks. The definitions of capital varied widely between jurisdictions.

Nickolas (2020) defines tier I capital as a bank's core capital and is the funds that a bank uses to function on a regular basis and forms the basis of a financial institution's strength. It consists of shareholders' equity and retained earnings disclosed on the financial statements of banks and is a primary indicator to measure a bank's financial health. Tier I capital enable a bank to absorb losses without ceasing business operations. It is the primary funding source of the bank. Typically, it holds nearly all of the bank's accumulated funds. These funds are generated specifically to support banks when losses are absorbed so that regular business functions do not have to be shut down. Under Basel III, the minimum tier 1 capital ratio is 10.5%, which is calculated by dividing the bank's tier 1 capital by its total risk-weighted assets (RWA). Risk-weighted assets measure a bank's exposure to credit risk from the loans it underwrites. Raja (2019) identified three major components of tier 1 capital, namely, paid up share capital, preference share (which must be irredeemable and non-cumulative) and retained earnings or general reserve. In Nigeria, the CBN Guidance Notes on Regulatory Capital (2018) classifies tier I capital into seven components, namely: paid-up share capital, irredeemable preference shares, share premiums, general reserves (retained earnings), SMEEIS reserves, statutory reserve and other reserves as may be determined by the CBN from time to time. For the purpose of this study, however, we will adopt, paid up share capital and statutory reserve as the independent variables and proxies for components of tier I capital.

Paid-up capital is the amount of money a company has received from shareholders in exchange for shares of stock. Paid-up capital is created when a company sells its shares on the primary market directly to investors, usually through an initial public offering (IPO). When shares are bought and sold among investors on the secondary market, no additional paid-up capital is created as proceeds in those transactions go to the selling shareholders, not the issuing company (Chen, 2020). Retained

earnings are undistributed earnings that have not been paid to stockholders or transferred to a surplus account. Retained earnings are part of a bank's net worth, or capital and surplus. Retained earnings are also known as retained surplus. It represents that portion of a company's profits that it keeps to reinvest in the business or pay off debt, rather than paying them out as dividends to its investors. Retained earnings are one component of the corporation's net worth and increase the supply of cash that's available for acquisitions, repurchase of outstanding shares, or other expenditures the board of directors authorizes (Scott, 2003).

A statutory reserve is an amount of cash a financial institution, such as a bank, credit union, or insurance company, must keep on hand to meet the obligations incurred by virtue of accepting deposits and premium payments. The statutory reserves required of banks and credit unions are generally set by the nation's central bank, and those required of insurance companies are set by statute or regulation by the national, state or provincial government or regulatory authority. Calculated in various ways, statutory reserves are required to ensure that financial institutions are capable of paying claims even in a calamitous situation. A statutory reserve is usually kept as on deposit with the central bank of a country (Marshal, 2020). A company issues its shares at a premium when the price at which it sells the shares is higher than their par value. This is quite common, since the par value is typically set at a minimal value. The amount of the premium is the difference between the par value and the selling price. If shares do not have a par value, then there is no premium (Bragg, 2020). Loans/advances is the independent variable of the study. Loans and advances refer to a debt provided by a financial institution for a particular period while advances are the funds provided by the banks to the business to fulfill working capital requirements, which are to be payable within one year. Loan and advances is the most important asset as well as the primary sources of earning of banks, which help to improve the financial health of banks (Surbhi, 2015).

1.2 Statement of the Problem

Tier I capital is the primary funding source of the bank and is the assets a bank holds in order to continue providing for the business needs of its customers. The capital helps to ensure there is enough money to fulfill banking needs including providing loans and advances to customers of the bank. The components of tier 1 capital includes ordinary share capital, general reserve or retained earnings, and preferred share capital. The amount of capital that is held shows the strength of the bank as a measure of financial preparedness in case of emergencies.

The importance of tier I capital in banking operation cannot be over emphasized. Tier I capital is the funds that a bank uses to function on a regular basis and forms the basis of a financial institution's strength. It consists of shareholders' equity and retained earnings disclosed on the financial statements of banks and is a primary indicator to measure a bank's financial health. Tier I capitals are generated specifically to support banks when losses are absorbed so that regular business functions do not have to be shut down. Therefore, common equity capital is the most effective loss-absorption

financial instrument of banks. The reinforcement of common equity capital within the total regulatory capital of banks contributes to financial stability and sustained economic growth of a nation. Thus, internationally active financial institutions and banks must maintain a capital adequacy at specific minimum level prescribed by regulatory authorities in order to avoid risks and bankruptcy. History of Nigeria banks, however, shows that only few internationally active banks in Nigeria are able to comply with this requirement since the Basle I, II and III were introduced into the international banking arena. The consequence is that the evolving competition in the banking industry as a result of globalization has made it difficult for Nigerian banks to play their major role of financing economic activities arising from inadequate capital. Inadequate bank capital has led to a crisis of confidence in the Nigeria banks to the extent that the original functions which is to support the volume, type and character of banks business to provide for the possibilities of losses that may arise there from and to enable the banks meet reasonable credit need of the community have been eroded. The losses suffered by these banks led to series of banks failures in Nigeria (Ikpefan, 2013). It is in view of this development that the researcher embarked on this study to investigate the effect of tier one capital components on the loan portfolio of deposit money banks in Nigeria.

1.3 The main objective of this study was to examine the effect of tier one capital components on the loan portfolio of deposit money banks in Nigeria.

The specific objectives of the study were to:

- i. Ascertain the effect of paid-up share capital on total loans & advances
- ii. Investigate the effect of statutory reserve on total loans & advances

1.4 The following research questions are in line with the specific objectives of the study.

- i. What is the effect of paid-up share capital on loans and advances of deposit money banks in Nigeria?
- ii. To what extent does statutory reserve affect loans and advances of deposit money banks in Nigeria?

1.5 Null hypotheses were formulated for the study as follows:

- i. Paid-up share capital does not significantly affect loans and advances
- ii. Statutory reserve does not significantly affect loans and advances

Findings of the study will help to moderate and improve the volume and quality of the loan portfolios of their banks, respectively. It will also benefit investors in the Nigeria banking sector. Knowledge of the effect of tier one capital components on the loans portfolio of banks will assist current and potential investors of the banking sector to make an informed business decision. This knowledge will enable investors analyze the possibility of a bank generating adequate return on investment give that loan portfolio is the highest income generating assets of banks. The study will be of importance to the Central Bank of Nigeria (CBN) and the Nigeria Deposit Insurance Corporation (NDIC) who are the apex regulators of the Nigeria banking industry.

The study was scoped to focus on the effect of tier one capital components on loan portfolio of deposit money banks in Nigeria from 2015 to 2024. The independent variables of the study are: Paid-up share capital and statutory reserve while the dependent variable is loans and advances of selected deposit money banks in Nigeria. Data on these variables were collected from six (6) deposit money banks that were selected from the deposit money banks listed on Nigeria Exchange Group (NGX) during the period of 10 years (2015-2024).

Review of Related Literature

2.1 Conceptual Review

Components of Tier I Capital

Reichartz (2020) states that tier 1 capital is the core capital a bank holds in its reserves and exists as the primary source of funds. It's the assets a bank holds to continue providing for the business needs of its customers. Since banks typically provide capital for customers, this can include a substantial amount of risk. The capital helps to ensure there is enough money to fulfill needs. Tier 1 capital includes common stock, retained earnings, and preferred stock. The amount of capital that is held shows the strength of the bank as a measure of financial preparedness in case of emergencies. The strength of banks is determined by its tier 1 capital ratio. This ratio is used to describe the capital being held by a bank versus the total risk-weighted assets (RWAs) of the bank. Risk-weighted assets are the assets held by the bank that are weighted by its credit risk. Raja (2019) also asserts that tier 1 capital is the core measure of a bank's financial strength from a regulator's point of view. It consists of the types of financial capital considered the most reliable and liquid, primarily equity (paid-up share capital and reserves). Examples of tier 1 capital are common stock, preferred stock that is irredeemable and non-cumulative, and retained earnings. The theoretical reason for holding tier I capital is to provide protection against unexpected losses.

Under the Basel Accord, a bank has to maintain a certain level of cash or liquid assets as a ratio of its risk-weighted assets. The Basel Accords are a series of three sets of banking regulations that help to ensure financial institutions have enough capital on hand to handle obligations. Tier 1 capital includes

- (i) Permanent shareholders' equity in the form of common stock, perpetual non-cumulative preferred stock, and minority interests in equity accounts of consolidated subsidiaries;
- (ii) Disclosed reserves such as retained earnings, share premiums, or other surplus, and
- (iii) Qualifying innovative capital instruments up to a maximum of 15 percent of Tier 1 capital. Goodwill is deducted. This study will, however, adopt paid-up share capital, retained earnings, statutory reserve, and share premium as the independent variables and measures of components of tier I capital.

Paid-Up Share Capital

Paid-up capital is the amount of money a company has received from shareholders in exchange for shares of stock. Paid-up capital is created when a company sells its shares on the primary market directly to investors, usually through an initial public offering (IPO). This represents the funds raised by the banks through the issuance of shares to the public. This comes mainly in form of ordinary and preference shares. Most deposit money banks source fund through this form when they want to engage in capital projects or to meet certain legal requirements. It is the initial capital of banks before they take off (Ogbunobi, 2010; Chen, 2020). Paid-up share capital represents money that is not borrowed. A company that is fully paid-up has sold all available shares and thus cannot increase its capital unless it borrows money by taking on debt. A company could, however, receive authorization to sell more shares. A company's paid-up capital figure represents the extent to which it depends on equity financing to fund its operations. This figure can be compared with the company's level of debt to assess if it has a healthy balance of financing, given its operations, business model, and prevailing industry standards (Chen, 2020).

Statutory Reserve

A statutory reserve is an amount of cash a financial institution, such as a bank, credit union, or insurance company, must keep on hand to meet the obligations incurred by virtue of accepting deposits and premium payments. The statutory reserves required of banks and credit unions are generally set by the nation's central bank, and those required of insurance companies are set by statute or regulation by the national, state or provincial government or regulatory authority. Calculated in various ways, statutory reserves are required to ensure that financial institutions are capable of paying claims even in an emergency situation (Marshal, 2020).

The Statutory Reserve Requirement is a monetary policy instrument available to central banks of various economies for purposes of liquidity management. Effectively, banking institutions are required to maintain balances in their Statutory Reserve Accounts. The SRR is used to withdraw or inject liquidity when the excess or lack of liquidity in the banking system is perceived by the bank to be large and long-term in nature (Central Bank of Malaysia Statistical Bulletin, 2016). Section 16 of the Banks and Other Financial Institutions Act of 1991 (BOFIA 1991) makes it compulsory for banks to maintain a reserve fund out of the net profits for each year. Subsections 1 (a) and (b) specify the percentage of the net profit that should be transferred to this fund based on the outstanding amount and related to the share capital. In fact, Section 16(1) of (BOFIA 1991) states that an appropriation of 30% of profit after tax must be made to statutory reserve if the statutory reserve is less than the paid-up share capital of the bank and 15% of profit after tax if the statutory reserve is greater than the paid up share capital of the bank (Ogbunobi, 2010). Not only does the reserve requirement address liquidity issues and enhance the perception of stability for a nation's banking industry, it can also have a moderating effect on a nation's economy. If the reserve requirement is raised, the amount of

money available for lending is automatically reduced, effectively slowing down economic activity. Likewise, a reduction in the reserve requirement can potentially increase the amount of money available for lending.

Loan and Advances

Loans refer to a debt provided by a financial institution for a particular period while advances are the funds provided by the banks to the business to fulfill working capital requirement which are to be payable within one year. A loan is also seen as an amount borrowed for specific financial needs like investing in assets, purchasing consumer durable, constructing a building, making payments, or fulfilling financial obligations so that business processes can run smoothly. Advances are also provided by banks to organizations or business owners for meeting their capital requirements. Loans differs from advances in two major ways, firstly, loans are a source of long-term financing (typically more than a year), whereas advances are a source of short-term financing, that is, to be repaid within less than a year. Secondly, the monetary value of an advance is usually less than that of a loan (Surbhi, 2015).

Banking business is all about collecting deposit from members of the public and using the deposit collected to create loans and advances to borrowers. This process is known as financial intermediation. Therefore lending is one the fundamental functions of money deposit banks. Loans symbolize investment and typically constitute the lengthened assets of banks. Individuals and firms alike request for loans to meet their various funding needs (Gambo, 2017; Timsina, 2017; Akani & Oparaordu, 2018). Lending may be on short, medium or long-term basis and is one of the services that commercial banks do render to their customers. Banks give loans and advances to individuals, firms as well as government in order to enable them carry out investment and development activities as a way of growing and contributing to the economic development of a country.

2.2 Theoretical Framework

2.2.1 Buffer Theory of Capital Adequacy

The buffer theory of capital adequacy was propounded by Calem & Rob in 1996. The theory postulates that capital is more reliable, dependable and can be used for long term planning. More capital tends to absorb adverse shocks and thus reduces the likelihood of failure (Rime, 2001). Banks raise capital when the portfolio risk goes up in order to keep up their capital buffer (Laeven & Levine, 2009). The capital buffer is the excess capital a bank holds above the minimum capital required (Jokipii & Milne, 2011)

Buffer theory predicts that a bank approaching the regulatory minimum capital ratio may have an incentive to boost capital and reduce risk in order to avoid the regulatory costs triggered by a breach of the capital requirements. The capital buffer theory holds that banks with low capital buffers attempt to rebuild an appropriate capital buffer by raising capital while banks with high capital buffers attempt to maintain their capital buffer. However, poorly capitalized banks may also be

tempted to take more risk in the hope that higher expected returns will help them to increase their capital. This is one of the ways risks relating to lower capital adequacy affects banking operations. In the event of bankruptcy of a bank, the risks are absorbed by the bank, customers and Deposit Insurance Corporation.

The main objective of the study is to investigate the effect of tier one capital components on loan portfolio of deposit money banks in Nigeria. The buffer theory of capital adequacy on the other hand states that an adequate capital tends to absorb adverse shocks and thus reduces the likelihood of bank failures. Therefore, banks raise capital when the bank loan portfolio risk goes up in order to keep up their capital buffer. This theory predicts that as a bank approaches the regulatory minimum capital requirement, it will have the urge to boost capital so as to reduce risk in order to avoid the regulatory costs triggered by a breach of the capital requirements. Since buffer theory deals with bank regulatory capital, the need for capital adequacy and the need to reduce loan portfolio risk which are the pertinent issue in the study, we hereby anchor the study on Buffer Theory of Capital Adequacy developed.

2.3 Empirical Review

Ali and Marsida (2015) studied the influence of some macroeconomic and banking factors on credit growth in the Albanian banking system from 2002 to 2013. The study used credit growth as a dependent variable while GDP growth, inflation rate, unemployment rate, loan interest rate, capital adequacy ratio, bank size and NPL ratio were used as the independent variables. Ordinary least squares (OLS) regression model was used to analyze the data collected for the study. Quarterly panel data for the whole Albanian banking system with a total of 48 observations per each variable were collected. Result shows that the credit growth in the Albanian banking system is positively related to GDP growth, inflation rate and capital adequacy ratio while is negatively related to unemployment rate, interest rate, non-performing loans and bank size.

Gambo (2017) studied the relationship between bank specific and macroeconomic determinant of non-performing loans in Nigerian deposit money banks over the period of 5 years (2010 to 2014). A sample of 10 banks out of 15 quoted by the Nigerian Stock Exchange (NSE) was considered on a cross sectional basis. Non-survey research design and secondary data were used and these were obtained from the banks' annual reports and accounts, Central Bank of Nigeria (CBN) and Nigerian Stock Exchange fact book. The data were analyzed using descriptive statistics, correlation coefficient and multiple regressions. Results suggest that the relationship between capital adequacy ratio and Inflation reveals a positive insignificant relationship; whereas return on asset had negative insignificant relationship with the rate of non-performing loans. The study recommended that CBN for policy purposes should frequently assess the lending habit of deposit money banks in Nigeria. Finally, strengthening securities market will have a positive impact on the general improvement of the banking institutes thereby increasing the effectiveness of the financial sector.

Odundo and Orwaru (2018) explored bank size and financial stability of commercial banks in Kenya from 2011 to 2017. The main objective of this study was to establish whether or not bank size has a significant effect on financial stability of commercial banks in Kenya as measured by their return on assets (ROA), controlling for the banks' loan portfolio, capital strength and reliance on deposits. The study adopted a correlation research design. The target population was all the 10 commercial banks listed at the Nairobi Securities Exchange (NSE). Secondary balanced panel data sourced from the annual reports of all the 10 listed commercial banks at the NSE was used, yielding 70 data points. The regression results suggest that bank capital has a significant positive effect on stability. It was recommended that effective policies should be put in place to encourage banks to maintain higher capital bases to guarantee their soundness.

Afrifa et al, (2019) sampled 625 microfinance institutions (MFI) across 40 countries from 2010-2015 and examined the effect of buffer capital on the performance of MFIs. The study also examined how the effect varies with loan portfolio quality in the MFIs. Regression analysis was adopted for the study. Regression analysis was adopted for the study. Findings from the study suggest a negative relationship between buffer capital and MFIs' performance. The study also found that loan portfolio quality positively moderates the buffer capital-MFI performance relationship. It was also ascertained that the buffer capital-loan portfolio quality relationship does not vary for deposit-taking, profit-making, and regulated MFIs. The findings shed new light on the value relevance of capital in microfinance institutions.

Fungáčov et al, (2015), Using a large dataset of 170 Chinese banks for the period 2004 to 2013, conducted a study to ascertain how reserve requirements influence monetary policy through bank lending channel in China. Specifically, the study analyzed the reaction of loan supply to changes in reserve requirements. Finding from the study found no evidence of the bank lending channel through the use of reserve requirements. The study equally observed that changes in banks' reserve requirements influence loan growth of the sampled banks. The same findings hold true for other monetary policy instruments. It was also ascertained that bank ownership structure influences transmission of monetary policy in the studied banks.

Atlaw (2017) studied the effect of reserve requirement on Ethiopian commercial banks' performance from, 2004 to 2016. The specific objectives of the study were: effect of reserve requirement on commercial banks' profitability, effect of reserve requirement on commercial banks' profitability on lending capacity. Time series data of 13 sampled commercial banks in Ethiopia were obtained and used for the study. A quantitative research approach was adopted for the study. Secondary financial data were analyzed using linear regressions models. Result of data analysis indicates that reserve requirement has a negative effect on both commercial banks' profitability and lending capacity, thereby, affecting performance. The study recommended that commercial banks in Ethiopia should

be aware of the effect of reserve requirement on their performance and thus, National Bank of Ethiopia should be proactive in proper amendments of the reserve requirements of banks.

Timsinam (2017) used ordinary least square regression method to investigate the determinants of bank lending using commercial banks in Nepal from 1975 to 2014. Nepalese commercial banks' private sector credit (pvct) was used as the dependent variable while volume of deposits (dep), interest rate (Ir), stipulated cash reserve requirements ratio (crr), liquidity ratio (lr), inflation (inf), exchange rate (exr), and gross domestic product (gdp) were used as the independent variables of the study. Result of the regression analysis indicates that Gross Domestic Product and liquidity ratio have the greatest impacts on their lending behavior. Granger Causality Test was also conducted and shows evidence of unidirectional causal relationship from GDP to private sector credit. This implies that GDP is the barometer of the economy and commercial banks should pay attention to the overall macro-economic situation of their country, factors affecting the GDP in general and their liquidity ratio in particular while taking lending decision

Oganda (2018) examined the effect of cash reserves on performance of Commercial Banks in Kenya from 2007 to 2016. The study was a comparative analysis between National Bank and Equity Bank of Kenya. Specifically the study seeks to ascertain; the effects of cash reserves, customer deposits, non-performing loans and asset base on the performance of commercial banks in listed Kenya. Pearson Product Moment Correlational analysis was used to analyze the data gathered for the study. Document analysis guide was used to gather quantitative data from the banks financial statements through 2007 to 2016 and interview schedule was used to gather primary data. Pearson correlation was used to show the strength and association among the study variables. The study found that cash reserves had a strong negative correlation with return on equity (ROE) while, cash reserves significant relate with return on equity (ROE). It was recommended that the banks should therefore minimize cash reserves and invest this money in productive investments.

Azira et al, (2018) examined the bank specific and macroeconomic determinants of commercial bank lending in Malaysia using a sample of 27 banks covering the period from 2005 to 2014. Specifically the impact of macro prudential policy measure implemented in 2010 on the lending activities of Malaysian commercial banks was investigated. Using random effects estimation, the result demonstrate that bank size and volume of deposit positively influence commercial bank lending in Malaysia, while liquidity negatively influences the lending activities. With regard to macroeconomic determinants, this study does not find any conclusive evidence to support the influence of gross domestic product (GDP), lending rate and cash reserve requirement on commercial bank lending activities in Malaysia. Moreover, the findings of this study also reveal that the macro prudential policy measure which was implemented in 2010 to curb the high level of household indebtedness does not give any significant impact on lending activities in Malaysia during the study period.

While there have been several studies on bank capitalization and performance in many parts of the World, very few of them have focused on bank capitalization and performance of the Nigerian banking industry. A few of the works reviewed by the researcher were carried out in Nigeria while the rest of them were conducted abroad.

Udeh (2015) who evaluated the impact of monetary policy instruments on profitability of commercial banks in Nigeria using Zenith bank as evidence. Gambo (2017) who assessed the relationship between bank specific and macroeconomics determinant of non-performing loans in Nigerian deposit money banks. Akani & Oparaordu (2018) who analysed the determinants of commercial banks credit to the domestic economy in Nigeria. Akinyomi (2014) who examined the effect of deposit volume on bank lending behavior in the Nigerian post-consolidation banking period. Bawa, Akinniyi & Njarendy (2018) who examined the Effect of cash reserve ratio and money supply on the profitability of deposit money banks. Eze (2014) who examined the determinants of bank profitability in Nigeria. Eze & Unah (2015) who investigated if retained earnings is determined by capital structure in the oil and gas sector of Nigeria.

Also, none of the 63 studies covered 2019 and 2020 financial year in terms of time coverage. Therefore, this study intends to fill these research gaps by evaluating the effect of tier one capital components on loan portfolio of deposit money banks in Nigeria from 2010 to 2020.

3. Methodology

The study adopted *ex-post facto* research design. This study was conducted in Nigeria and precisely on deposit money banks. Secondary data were sourced from the published annual financial statement of the selected banks. Population of the study is the Twenty-three (23) deposit money banks listed in the NGX from 2015 to 2024. Sample was determined by simple random sampling technique and six (6) banks were randomly selected from the population. The dependent variable of the study are loans and advances while the independent variables are: share capital, retained earnings, statutory reserve and share premium. The following model was developed and adopted based on the variables of the study:

$$LOA = \beta_0 + \beta_1PSC + \beta_2STR + \varepsilon$$

Where:

f = Function of

LOAD= Loans and Advances

PDSC = Paid-Up Share Capital

STAR= Statutory Reserve

β =beta

ε = error term

Panel data regression analysis was used as the main statistical tool. Descriptive statistics were also be used to measure data distribution and dispersion. Hypotheses were tested using 0.05 level of

significance. Decision rule was set to Accept the Alternate hypothesis (H_0) if the P-value of the t-Statistic < 0.05 and the modulus of the t-Statistic > 2 . Otherwise, accept the null hypotheses (H_0).

4. Data Analysis

The data obtained from the sampled banks were analyzed using panel data regression analysis. The results of the analysis are presented in tables 1, 2 and 3 below.

Table 1: Descriptive Statistics

	LOAD	PDSC	STAR
Mean	13762365	85256067	1.43E+08
Median	14715590	22950000	1.23E+08
Maximum	18140000	7.69E+08	3.92E+08
Minimum	7851931.	714100.0	18689788
Std. Dev.	2914616.	1.72E+08	88910064
Skewness	-1.366547	3.148851	2.345198
Kurtosis	2.271406	12.26109	4.829945
Jarque-Bera	7.083021	308.3457	26.02621
Probability	0.028970	0.000000	0.000002
Sum	8.12E+08	5.03E+09	8.42E+09
Sum Sq. Dev.	4.93E+14	1.72E+18	4.58E+17
Observations	60	60	60

Source: Eview 10.0 Output

Table1 shows the variable description of the 60 observations of the panel data of the sampled deposit money banks in Nigeria. From the table, the industry's minimums include Loans and Advances; ₦7851931, Paid-Up Share Capital; ₦714100.0; and Statutory Reserve: ₦18689788. However, the industry's maximum includes Loans and Advances; ₦18140000, Paid-Up Share Capital; ₦769000000 and Statutory Reserve: ₦392000000. The means for the variables studied are Loans and Advances; ₦13762365, Paid-Up Share Capital; ₦85256067, and statutory Reserve: ₦143000000. The normality of the distribution of the data series is shown by the coefficients of Skewness, Kurtosis, and Jarque-Bera Probability. From the Table1, the probability of the Jarque-Bera Statistics for all the variables (focal and explanatory) have significant p-values as follows Loans and Advances (0.028970), Paid-Up Share Capital (0.000000) and Statutory Reserve (0.000002). The skewness coefficients which are greater than one for the explanatory variables under study. The kurtosis coefficient provides a second level of confirmation that all the variables are abnormally distributed with coefficients greater than three, Loans and Advances (0.028970), Paid-Up Share Capital (0.000000) and Statutory Reserve (0.000002).

Table2: Hausmann Test

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	6.569026	2	0.1605

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
PDSC	1.588068	1.550869	0.035097	0.8426
STAR	0.012534	-0.016318	0.000358	0.1272

Source: Eviews 10 Output

This Hausmann Test was conducted to choose the appropriate model between the Random Effect and Fixed Effect Models. H_0 : Random Effect Model is the appropriate model for the study

H_1 : Fixed Effect Model is the appropriate model for the study

Results from table2, shows that the coefficient of the Hausmann Test is not significant ($0.1605 > 0.05$). Based on this result, we reject the null hypothesis and accept the alternative. Hence, Fixed Effect Model is the appropriate model for the study.

Table3: Regression Analysis Result

Dependent Variable: LOAD

Method: Panel Least Squares

Date: 12/16/24 Time: 19:35

Sample: 2015 2024

Periods included: 10

Cross-sections included: 6

Total panel (balanced) observations: 60

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PDSC	1.588068	0.392291	4.048190	0.0002
STAR	0.012534	0.036465	0.343723	0.7325
C	-3.470606	3.652858	-0.950107	0.3466

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.716616	Mean dependent var	8.852184
Adjusted R-squared	0.665607	S.D. dependent var	0.322332
S.E. of regression	0.186394	Akaike info criterion	-0.370894
Sum squared resid	1.737140	Schwarz criterion	-0.021837
Log likelihood	21.12683	Hannan-Quinn criter.	-0.234359
F-statistic	14.04880	Durbin-Watson stat	0.736236
Prob(F-statistic)	0.000000		

Source: Eviews 10 Output

Table3 reveals that Paid-Up Share Capital has a positive (coefficients 1.588068) and significant (p-value 0.0002) effect on Loans and Advances of deposit money banks in Nigeria. Retained Earnings have a positive (coefficients 0.005284) and nonsignificant (p-value 0.5529) effect on Loans and Advances. Statutory Reserves was found to have a positive (Coefficient -0.012534) and nonsignificant effect (p-value 0.7325) on Loans and Advances. The effect of Share Premium on Loans and Advances as revealed by the regression is positive (coefficients 0.110478) and nonsignificant (p-value 0.6643). It was also revealed that a change in Paid-Up Share Capital will result to 1.59 increase in Loans and Advances of deposit money banks in Nigeria. In the same way, a change in Retained Earnings, Statutory Reserves, and Share Premium will result to 0.005, 0.012, and 0.110 increase in Loans and Advances of deposit money banks respectively.

The adjusted R-squared (R^2) indicated that 66% of the changes in Loans and Advances of deposit money banks in Nigeria is explained by the predictor variables (Paid-Up Share Capital, Retained Earnings, Statutory Reserves, and Share Premium). The remaining 34% could be explained by other factors capable of influencing the Loans and Advances of deposit money banks in Nigeria and other remote factors captured by the error term. The probability of the F-statistic is significant (Prob F-statistic 0.00000) which shows the statistical fitness of the multiple regression model and the results, by extension. There is a positive serial autocorrelation in the time series data extracted from annual reports and accounts of deposit money banks in Nigeria as suggested by Durbin-Watson stat of 0.736.

4.3 Test of Hypotheses

Hypothesis One

Decision: From the panel regression analysis in Table3, the P-value of 0.0002 is < 0.05 and the t-statistic of 4.048190 is > 2 . Therefore, the null hypothesis is rejected and the alternate hypotheses

accepted. This implies that Paid-up Share Capital have a significant effect on loan and advances of deposit money banks in Nigeria.

Hypothesis Two

Decision: From the panel regression analysis in Table3, the P-value of $0.7325 > 0.05$ and the t-statistic of $0.343723 < 2$. Therefore, the null hypothesis is accepted and the alternate hypotheses rejected. This implies that Statutory Reserve does not have a significant effect on loan and advances of deposit money banks in Nigeria.

Discussion of Findings

Paid-up Share Capital and Loan and Advances

The result of test of hypothesis one revealed that Paid-up Share Capital have a positive and significant effect on Loans and Advances of deposit money banks in Nigeria. The implication of this finding is that the more the banks are adequate capitalization, the more they are able to advance loans and advances to their clients, thereby increasing the profitability of the banks. The result is consistent with Buffer Theory of Capital Adequacy propounded by Calem & Rob in 1996. The theory postulates that capital is more reliable, dependable and can be used for long term planning. More capital tends to absorb adverse shocks and thus reduces the likelihood of bank failure.

This result is also in tandem with the finding of Gambacorta & Shin (2016) who conducted a study to find out if greater amount of capital (lower leverage ratio, defined as total assets over equity) induce banks to lend more. The researchers found out that banks with higher capital have higher lending growth. It also aligns with the findings of Ayaydin, and Karakaya (2014) who evaluated the effect of bank capital on profitability and risk in Turkish Banks and observed a positive relation between the capital and profitability. It further supports the findings of Ezike and Oke (2013) who analyzed capital adequacy standards, Basle Accord and the performance of Nigerian banks and found that capital adequacy standards, exert a major influence on bank performance. Bridges, Gregory, Nielsen, Pezzini, Radia, and Spaltro (2014) also made similar findings when the researchers explored the effect of changes in micro prudential regulatory capital requirements on bank capital ratios and bank lending in UK. The researchers found that capital requirements affect lending with heterogeneous responses in different sectors of the economy. The result contradicts the findings of Ikpefan (2013) who explored the impact of bank capital adequacy ratios, management and performance in the Nigerian commercial bank and found that capital adequacy ratios have negative impact on return on assets.

Statutory Reserve and Loan and Advances

The result of test of hypothesis three shows that Statutory Reserve does not significantly affect Loans and Advances of deposit money banks in Nigeria. The implication of this finding is an increase in statutory reserves, will reduce the banks' ability to grant more loans and advances to their clients. This result is consistent with the finding of Bawa, Akinniyi and Njarendy (2018) who analyzed the effect of cash reserve ratio and money supply on the profitability of deposit money banks in Nigeria

and found that cash reserve ratio has negative and nonsignificant impact on the earnings of deposit money banks. Other researcher found that reserve requirement has a negative effect on both commercial banks' profitability and lending capacity, thereby, affecting performance (Abid & Lodhi, 2015; Atlaw, 2017; Eden, 2014).

This result contradicts the finding of: Akani and Oparaordu (2018) who explored the determinants of commercial banks credit to the domestic economy in Nigeria and found that banks specific variables such as deposit liabilities and liquidity ratio have positive impact on total loans and advances while deposit rate. Awdia et al (2011) who analyzed the impact of capital requirements on bank risk-taking at Lebanese banks and found a positive correlation between bank profitability and increase in capital.

5. Summary of Findings

The findings are summarized as follows:

- i. Paid-up Share Capital has a positive and significant effect on Loans and Advances of deposit money banks in Nigeria.
- ii. Statutory Reserve has a positive and nonsignificant effect on Loans and Advances of deposit money banks in Nigeria.

In conclusion, tier I capital is the primary funding source of the bank and is the assets a bank holds in order to continue providing for the business needs of its customers. Tier I capitals are generated specifically to support banks when losses are absorbed so that regular business functions do not have to be shut down. The effect of the Tier I capital on loans and advances of banks led to the study. From the result of the data analysis, Paid-up Share Capital has a positive and significant effect on Loans and Advances of deposit money banks in Nigeria. Statutory Reserve has a positive and nonsignificant effect on Loans and Advances of deposit money banks in Nigeria. The adjusted R-squared shows that 66% of the changes in Loans and Advances of deposit money banks in Nigeria is explained by the predictor variables (Paid-Up Share Capital and Statutory Reserves). The remaining 34% could be explained by other factors capable of influencing the Loans and Advances of deposit money banks in Nigeria and other remote factors captured by the error term.

Based on the findings and the specific objectives of the study, the researcher hereby recommends that Nigeria Deposit Money Bank should be adequately capitalized at all times in accordance with the Central Bank of Nigeria regulatory guideline. Adequate capital as could be observed from the findings of the study enable the bank to efficiently provide its traditional role of financial intermediation in the economy. They can achieve this capital adequacy through the issue of shares which will increase their paid-up share capital. Nigeria Deposit Money Banks should also comply with the regulatory requirement concerning Statutory Reserve. However, the regulatory standard should not be exceeded because Statutory Reserve was found to limit the ability of the banks to extend loans and advances to their clients.

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