

Non-Performing Loans and Deposit Money Bank's Profitability

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Abstract

This study is to analyse the problem of non-performing loans on deposit money banks profitability in Nigeria between the periods of 1990-2020. The data used for this study was derived from the Central Bank of Nigeria Statistical Bulletin Annual Reports and the Nigerian Deposit Insurance Corporation for a period of 31 years (1990-2020). The variable from which data were sourced which includes two dependent variables namely, return on assets (ROA) and return on equity (ROE). It was revealed that persistent increase in non-performing loans result in poor performance of deposit money banks in Nigeria, non-performing loan reduces deposit money banks return on asset. And five independent variables namely; Total Loans and Advances (TLA), Non-Performing Loans (NPL), provision error model for loan losses (PLL), lending rate (LDR) and Inflation Rate (INF). The Auto regressive distributed lag (ADRL) Approach to co-integration analysis was obtained employed in the analysis of the data in order to check for the existence of long run relationship between the variables. The statistical method used for this approach to test the integration analysis was vector error correction model (VECM). The estimated results from all the models indicate that non-performing loan ratios, show a statistical significant but negative influence on deposit money banks profitability. The study therefore recommends that deposit money banks should employ competent risk managers that always use their skill to reduce the incident of non-performing loans in deposit money bank in Nigeria, amongst others, that effective credit policy that is reflected in flexible tenure, restructuring of credit terms, and monitoring the end use of funds given to their customer should be adopted. This will help reduce the tempo of non-performing loans thereby increasing deposit money banks profitability in Nigeria.

Keywords: Banking, Bank Profitability, Non-Performing Loans, Return on Asset, Return on Equity, Risk.

Introduction

Most individuals and governments businesses have a credit arrangement with a financial institution, particularly banks. This is to say that several economic agents rely on recurrent short-term loans to cover their short-term working capital and consumption requirements. Others generally employ medium to long-term loans to fund capital expenditures, brand-new purchases, or long-term capital expansions. Conceptually, therefore, all credit requests are required to include a thorough evaluation of the borrower's capacity and willingness to repay as and when due. They contend that identifying the current and future hazards involved in lending operations forms the cornerstone of good credit risk management (Khan, Siddique, & Sarwar, 2020).

According to Jolevski, (2017), in a competitive market, risky investments that aren't producing income are known as nonperforming loans. When principal or interest on a debt is past due and unpaid for 90 days or longer, it is usually viewed as nonperforming. There is considerably more to loan categorization and provisioning than just considering sums that are past due. The borrowers' cash-flow and overall ability to repay amounts owing are significantly more important than whether the loan is overdue or not.

For financial reporting purposes, the principal balance outstanding rather than delinquent payments is used to identify a nonperforming loan portfolio (Laryea, Ntow-Gyam, & Alu, 2016). The nonperforming loan portfolio is an indication of the quality of the total portfolio and ultimately that of a bank's lending decisions. There can be a number of reasons to explain deterioration in loan portfolio quality. It is unavoidable that banks make mistakes in judgment. However, for most failed banks, the real problems are systemic in nature and rooted in a bank's credit culture and management style. Hence, Greuning and Bratanovic (2003) posit that credit risk is the most common cause of nonperforming loans and bank failures, causing virtually all regulatory authorities to prescribe minimum standards for credit risk management (Lata, 2014).

Thus, clearly defined policies that outline the bank's concept of credit risk management and the boundaries within which credit risk is to be handled often include the measures used to mitigate these risks. Three different types of policies are frequently included in specific credit risk management procedures. The rules on concentration and big exposures, proper diversification, lending to related parties, and overexposures are examples of policies that are intended to restrict or minimize credit risk. The third set includes policies of loss provisioning or the making of allowances at a level adequate enough to absorb anticipated loss not only on the loan portfolio, but also on all other assets that are subject to losses (Abiola, & Olausi, 2014).

Commercial banks carry on ordinary banking business with the general public, changing cash for bank deposits and bank deposits for cash, transferring bank deposit from one corporation to another, giving bank deposit in exchange of bills of exchange, providing trustees and executor's services, providing safe custody of funds and valuables as well as foreign exchange remittance (Lata, 2014).

Profitability in the form of retained earnings is typically one of the key sources of capital generation. A sound banking system is built on profitable and adequately capitalized banks. Profitability is a revealing indicator of a bank's competitive position in banking markets and of the quality of its management. It allows a bank to maintain a certain risk profile and provides a cushion against short-term problems. It is worth mentioning that Interest income is a major source of bank profitability and is dependent on performing loans. Interest income originates from loans and all advances extended by a bank such as working capital overdrafts, among others. It also includes interest received on bank's deposits kept with other financial institutions (Adebola, Yusoff, & Dahalan, 2011).

Interest income is often eroded when a bank accumulates a large stock of nonperforming loans that do not yield income. There is a growing body of empirical evidence to suggest

that nonperforming loans (NPLs) have adverse effects on bank profitability that often lead to bank failures. Profitability is an indicator of a bank's capacity to carry risks and / or to increase its capital. The capital adequacy of a bank is generally gauged by the extent to which owners' funds provide cover for depositors in the event of loans and advances becoming nonperforming.

The lending policy of a bank must be specific on how much loan will be made available to whom, what period and for what reason (Adebisi, & Matthew 2015). For this reason, lending policies should be well documented so that lending officers will be able to know the areas of prohibition and the area of where they can operate. Also, such policies should be subjected to periodic review to make the banks keep abreast with the dynamic and innovation nature of the economy as well as competing with other changing economic sector. The distressed banks ratio of nonperforming loans and leases to total loans and leases increased from 68.87 percent to about 79.77 percent while the industry ratio stood at about 33.90 percent in 1996. These represent empirical indicators of declining profitability and potential bank failures (NDIC, 1996). Because the loans portfolio usually represents the largest risk asset of a bank, bank regulation always undertakes an appraisal of the lending culture of banks. One of the principal objectives of such appraisal is to verify the quality of the credit portfolio and make a quantitative assessment on potential nonperforming loans or possible losses, and recommending remedial actions so as to ensure that the banks remain profitable (Ahmad, & Bashir, 2013). This is against the backdrop that profit is the bottom line performance result showing the net effects of bank policies and activities in a financial year, and nonperforming loans portfolio is not usually an indicator of bank profitability.

Statement of the Problem

Banks have recently failed as a consequence of loan collection issues. The primary source of bank profits is loan. Banks, on the other hand, have their own goals in terms of lending, which include profitability, expansion, safety, appropriateness, and liquidity (Adebisi & Matthew, 2015).

Banks are vulnerable to a variety of hazards, including credit risk, which often results in nonperforming loans. When loans and other advances become nonperforming and nearly irrecoverable, credit crystallizes.

During the financial crises of the late 1980s, 1990s and beyond, many banks collapsed mainly due to huge nonperforming, loans indicating that nonperforming loans portfolio is rather a sign of pending bank failure than a pointer to bank profitability (Ekanayake, Azeez, 2015; Iwedi, & Onuegbu, 2014). For example, in 1993 insolvent banks accounted for about 20 percent of banking system assets and about 22 percent of deposits. In 1995 almost half of the banks reported being in financial distress, during which about 25 banks were liquidated as a result of nonperforming loans portfolio. Moving into 2000s technically distressed banks in Nigeria had accumulated nonperforming loans in excess of the shareholders' funds that led to the injection of about N700bn by the Central Bank of Nigeria

and the formation of the Asset Management Company of Nigeria (AMCON) to participate in a bazaar of nonperforming loans (NPLs) as strategies to reviving the sick banks (Kamarudin, Sufian, Nassir, Anwar & Hussain, 2019).

Banks are susceptible to many risks including credit risk that usually brings about nonperforming loans. Credit crystallizes when loans and other advances become nonperforming and almost irrecoverable. During the financial crises of the late 1980s, 1990s and beyond, many banks collapsed mainly due to huge nonperforming, loans indicating that nonperforming loans portfolio is rather a sign of pending bank failure than a pointer to bank profitability. For example, in 1993 insolvent banks accounted for about 20 percent of banking system assets and about 22 percent of deposits. In 1995 almost half of the banks reported being in financial distress, during which about 25 banks were liquidated as a result of nonperforming loans portfolio (Kamarudin, Sufian, Nassir, Anwar & Hussain, 2019; Kolapo, Ayeni, & Oke, 2012; Laryea, Ntow-Gyam, & Alu, 2016)). Moving into 2000s technically distressed banks in Nigeria had accumulated nonperforming loans in excess of the shareholders' funds that led to the injection of about N700bn by the Central Bank of Nigeria and the formation of the Asset Management Company of Nigeria (AMCON) to participate in a bazaar of nonperforming loans (NPLs) as strategies to reviving the sick banks.

The issues of nonperforming loans portfolio and negative bank profit can be traced to insider abuse, compromise of sound credit risk procedures, overtrading, incompetence, complacency, inadequate supervision, among other shortcomings of corporate governance.

Loan, when not recovered could adversely affect banks. It is easily granted than recovered. It usually needs proficiency i.e. competency and expertise in the recovery process. It sometimes become an uphill task to recover. When they are not recovered, the impact is often disastrous to the bank. It can lead to illiquidity, insolvency and distress or even outright liquidation. There is therefore a need for arriving at strategies for efficient loans management and recovery. That is the peak of the problem that this study seeks to resolve.

Objectives of the Study

The broad objective of this study is to investigate the non-performing loan and deposit money bank's profitable.

Other specific objectives of the study are to:

- i. Verify the extent to which total loans and advances affect DMBs profitability in Nigeria.
- ii. Examine the influence of nonperforming loans on DMBs profitability in Nigeria
- iii. Investigate the Impact of provisions for loan losses on DMBs' profitability in Nigeria
- iv. Estimate empirically the extent to which lending rate has impacted on DMB's profitability in Nigeria.
- v. Examine the impact of inflation rate on DMBs' profitability in Nigeria.

Literature Review

Conceptual Review

The conceptual framework is the highlight of concepts and empirical findings from the consulted literatures. It brings to light the relationship between these concepts and findings on how variables are related in the research study (Nworgu, 2015). The dependent variable in the study is the Deposit Money Bank performance while the independent variables are the non-performing loans of deposit money banks, Inflation rate, Lending rate, Provision for Loan Losses and Total Loans and Advances. The conceptual frameworks that will be examined include the following.

Bank Performance

The economic literature pays a great deal of attention to the performance of banks, expressed in terms of competition, concentration, efficiency, productivity and profitability, (Bikker & Bos 2008). The key reason is that banks are seen as special, given their pivotal role in providing credit to enterprises. Banks and other financial institutions are also regarded, particularly in the aforementioned phenomena, particularly, competition and efficiency, as difficult if not impossible to observe directly, since information on output prices (or credit rates) is rare and figures on the costs of banking products are unavailable. The literature has tried to measure these unobservable variables by many different methods, none of which, however, has been entirely conclusive or unchallenged.

The banking industry plays a major role in the economic development of a nation. It is based on this premise that a lot of researchers pay greater attention to the performance of Deposit Money Bank's (DMBs). Studies, such as Macit (2012) suggested that the performance of DMBs can be measured in terms of competition, productivity, profitability, efficiency as well as concentration. Financial performance is based on how well a bank is performing over some time and expressed in terms of profitability or losses incurred over the period under consideration (Bodie, Kane, & Marcus, 2005). DMBs that perform very well are considered to be better equipped to withstand or resist negative shocks from the environment and thus can contribute significantly to the stability of a country's financial system (Athanasoglou, Brissimis, & Delis, 2008).

Basic Model of Bank Performance

In the book of Jacob A. Bikker and Jaap W.B. Bos (2008), titled " Bank Performance: A Theoretical and Empirical Framework for the analysis of Profitability, Competition and Efficiency ", noted that the profitability of banks is of interest to bank management, financial markets, bank supervisors and academics. This interest is driven by increasing consolidation in the banking sector, changes in production technology and regulation, and dissolving borders, both geographically and vis-à-vis related financial products and industries. As a result, explaining (changes in) the profitability of banks is the implicit or explicit subject of much of the banking literature. When we estimate a market power model, we look for – the abuse of – market power as a means of explaining increases and

differences in profitability. And when we employ an efficient frontier model, we expect suboptimal management decisions regarding production factors to lead to differences in profitability. Interestingly, and often implicitly, these expectations reflect important assumptions not just with respect to a bank's decision making process or its competitive behavior, but also with respect to other factors that may help explain changes and differences in profitability. For example, a market power model that assumes output price competition, thereby also assumes that products are fairly homogeneous, perhaps as a result of harmonization and liberalization of bank regulation. And by focusing on efficiency, we implicitly assume that inefficiency dominates other types of suboptimal production decisions related to for example scale or scope, (Bikker & Bos 2008).

Profit Maximization

A key assumption in much of the literature is that banks are profit maximizers. It is in fact one of the (few) assumptions shared by all models reviewed in the chapters of Part II. At this point in our discussion of trends in bank profitability, it is therefore instructive to remind ourselves of exactly why banks maximize profits. To be sure, standard theory tells us that a bank's shareholders are claimants for its profits and it is thereby in their interest to maximize these profits. They maximize their return on investment by maximizing revenue and by minimizing costs. Depending on the market power of the bank in input and output markets respectively, it may be able to increase output prices or decrease input prices. (Basu, S.; 2019).

Bank management can select the mix of inputs and outputs by which profits are maximized. In order to avoid stating the obvious, and to clarify our motivation further we therefore begin by asking why a bank should not be able to attain maximum profits. Here, we consider four issues related to profit maximization: (a) the role of diversification and risk preferences; (b) principal agent problems between shareholders and bank management; (c) imperfect competition; (d) inefficient use of inputs and outputs. (Kamarudin F; 2019).

Efficiency of Bank

When the bank performs all its business activities at a relatively low cost, then we can say that the bank is efficiently doing its job. The concept of efficiency as a general performance indicator for all types of businesses was first formulated in the early works of Edgeworth (1881) and Pareto (1927) and recorded its empirical implementation in the book of Shepherd (1953). Efficiency in economics is interpreted as the maximum potential ratio between the output and the input of the product development process, which shows the optimal distribution of available resources that would allow achieving the maximum potential (Cvilikas & Jurkonyte-Dumbliauskiene 2016). According to Drucker (1963), efficiency can be defined as the ability of an organization to achieve its output from the minimum input level. In other words, Efficiency is defined as the measure of effectiveness that produces the minimum waste of time, effort, and skill.

Its output from the minimum input level. In other words, Efficiency is defined as the measure of effectiveness that produces the minimum waste of time, effort, and skill.

The term efficiency is different from the term effectiveness, both are used to describe the performance of an entity but according to Jouadi and Zorgui (2014), efficiency summarizes the idea to produce with the best manner, which means that efficiency is focused on the use of minimum inputs to produce the best output, in other words, the optimized use of resources to generate the best products with the minimum costs. In management, we can consider efficiency as the study of the optimized use of internal factors of the firm. On the other hand, the effectiveness concept summarizes the yield of factors and the reach of goal, without considering the manner and the resources optimized use.

Measures of Banking Efficiency

There are different approaches to measure efficiency, and different ways to classify the measures of efficiency. This could be illustrated as follows:

Structural and Non-Structural Measures

Mester and Huges (2008) believes that the most common approaches to measuring banking efficiency are the structural approach and the nonstructural approach, according to this study, the nonstructural approach compares performance among banks using different financial ratios. The nonstructural approach also considers the relationship between performance and investment strategies and other factors such as characteristics of governance. It looks for evidence of agency problems in correlations of performance ratios and variables characterizing the quality of banks' governance.

Loan and Advances

Loan and advances section of a bank is very important because the success of this department helps to increase its business, (Md. Ashabur Rahman 2019). If this section does not properly work, the bank itself may become bankrupt. Bank makes loans and advances mostly to traders, businessmen, and industrialists. Although the nature of credit may differ in terms of security requirement, disbursement provision terms and conditions etc.

The Nature of Loan and Advances Granted by Banks

Bank loan can be classified in various ways according to the class of people the loan is granted to. Thus, loan can be classified according to purpose namely: Personal loans, Agricultural loans, Bridging loans, Industrial loans, Probate loan.

On the basis of the maturity length, loans can also be categorized. As a result, we have loans for short, medium, and long terms. The short-term loan has a maximum period of one year. Only two to three years are considered to be the medium term. Long-term loans, however, often last for five years.

Personal Loan

This loan is typically used for durable consumer goods, repairs and decorations, rent, tuition, home renovations, car purchases, and other products for personal use or investments. These loans are frequently referred to as "petty lending" and are typically for tiny sums. The banker must speak with the loan applicants to determine the loan's purpose, how much the customers require, and whether repayment may be achieved without placing an undue burden on either the consumers or the bank. (Tach, L., Halpern-Meekin, S., Edin, K., & Amorim, M.; 2019).

To determine the available disposal income from which the loan can be repaid, the net monthly income is calculated while the monthly expenses are subtracted. The term "personal loans" was chosen because people typically receive them to buy consumer durable goods like automobiles, televisions, and other items. Typically, no security is needed for this kind of borrowing. (Kumar & Tesfay, M.; 2016).

This is usually included in the loan agreement as non-payment insurance should the borrower pass away before repayment. When a loan is approved, interest is added "up front." As a result, interest is charged to the total amount that must be repaid. This indicates that interest is applied to the entire amount over the entire period. As a result, the customer is paying back the capital in consistent installments, reducing the amount owed to the bank each month. However, the interest charged is applied to the entire amount for the entire period, making the interest charged penal.

If interest rates are logically cut after the interest has been fixed, the client may suffer. In contrast, he might gain if interest rates rise throughout the course of the loan.

Agricultural Loan

Any nation's economic development is greatly influenced by its agriculture sector. Both short-term and long-term funds are distributed for the purchase of livestock, machinery, fertilizer, and other items.

Banks typically turn down loans for agricultural projects due to their lengthy gestation periods and low harvests caused by weather. Additionally, the fact that farmers use the money for other things like expanding their family size encourages banks to invest in agricultural finance, which is known as the agricultural credit guarantee program as of 2000. Government vowed to provide states with subsidies in the 2002 budget and to make sure that the federal government focused on agricultural planning. The Nigerian Agricultural and Cooperative Bank (NACB) is crucial to the distribution of agricultural loans. Some types of security are gotten if required.

Bridging Loan

When house-owners require temporary finance in order to purchase a property at the same times as selling the house in which they live, it is often the bank that provides finance to purchase the new property and receives repayment when the old property has been sold. When this type of loan is required, the bank likes to see that the completion date of the

sales and purchase contracts are known as they have a solicitors undertaking that the proceeds of the sale will be delivered to the bank. It is on rare occasions that the bank will give an „open ended bridging loan, which is a loan to cover the purchase of a property before the first property is sold. Bridging loans are, from the banks point of view, simple profitable and self-liquidating (Smets, P.; 2006).

Industrial Loan

Moratorium is given under this loan which the customer is given time to set up and yielding before repayment is commenced. Industrial loan repayment normally depends on the production or survival of the company. If it cannot achieve its optimum production, the tendency to repay loan is doubtful. (Altman, E. I., & Hotchkiss, E.; 2010).

Probate Loan

A probate loan is granted to an executor of a will when, in order to obtain probate (i.e. the transfer of the deceased's assets to the executor), capital transfer tax must be paid. The executor needing funds will go to the bank, show the manager evidences of his right to the executorship, a loan will be granted and the tax paid when probate is then granted. The loan is either repaid from the deceased's current/deposit account, or if this is insufficient, an asset say stock and shares is sold to repay the loan. (Basson, C. P.; 2015)

Causes of Loan Default

Loan defaults are caused by variety of factors, some controllable and others uncontrollable. Controllable factors are those that reflect overall bank credit policy as well as inadequate credit analysis, loan strutting and loan documentation. Uncontrollable factors typically reflect adverse economic conditions, adverse changes in regulations, environmental changes surrounding the borrower's operations and catastrophic events. While there is little that can be done to prevent uncontrollable variables. Effective credit granting procedure can significantly reduce other sources of losses. The following affects loan defaults; Bank-related factors, Customer-related factors, Uncontrollable factors. (Shi, L., Allan, N., Evans, J., & Yun, Y.; 2018).

Inadequate initial capitalization: Some business often run into problems shortly after beginning operations because of inadequate capitalization. Owners underestimate the costs of opening the doors for business and overestimate the speed with which they can turn out profit. By the time they recognize the problem, their capital had depleted and lenders refuse to extend additional credit.

High financial and operating leverage: If a company has a large amount of outstanding debt and the high percentage of its total costs are fixed it operates with a high degree of financial and operating leverage. High financial leverage exposes the firm to high interest payments that must be met when sales decline. High operating leverage exposes the firm to substantial depreciation and maintenance expenses when sales decline. In both

cases, the volatility of earnings is high relative to changes in sales. (Yinusa, O. G., Ariyibi, M. E., Yunusa, L. A., & Olaiya, K. I.; 2021)

Misconception of bank loans: Some borrowers do not clearly understand the purpose of bank loans. They sometimes regard bank loans as windfall receipts and very much unwilling to refund them.

Strong Competition: To grow and remain profitable, companies must adapt to economic events. They should regularly improve existing operations and introduce new products to remain competitive. Frequently, new competitors move into a firm's market and disrupt normal operations. A company can react either offensively or defensively. Offensive responses normally focus on marketing efforts intended to differentiate the firm's products and segment the market. In many cases, the firm cuts prices to retain market share and may not break even. (Scott, M., & Bruce, R.; 1987)

Loan Diversion: Diversion of loans purposes other than those for which they are granted most often leads to bad debt. This is because the expected cash flow cannot be granted to meet up repayment schedule.

Effects of Loan Default

The lending of funds deposits with banks to those who require them implied risk taking by the lending credit may not materialized as planned. The lending institution demands may be made by depositors. If this happens, the lending institution would not be able to attain the objectives expected of them. The overall effect would be a loss of confidence in the banking system. According to Nwaubani, R. U.; 2021 Other negative effects of default on loan repayments are:

Loss to banks: The un-recovered loans constitute a very heavy loss on the part of the banks. When the debts are not paid, the banks have to write them off which sometimes have significant adverse effects on the banks operations.

Decline in revenue: The interest loss adversely affects the bank's major revenue. The main activity of the banks is the granting of loans and credit to customers. They charge interest on loans and this forms a major source of revue for them. Failure to pay interest on loans means that the banks will lose substantial revenue.

Distress: In a situation where bad accumulate largely to the extent that the bank cannot write them off, it may lead to the bank becoming illiquid. After this stage, if the situation does not improve, the affected banks may become distressed and ultimately go into liquidation.

Increased overhead: When the debt foes bad, the bank may resort to legal action to receive part or the whole of the debt. The legal fee involved in most cases is usually very enormous. Regrettably, they may lose the case after spending the huge amount on litigation.

Limited Credit Creation Capacity: As bad debt increase, the capital of the bank decreases and the money available to the banks for lending becomes depleted, thereby hampering the capacity of the banks to create credit. (Nwaubani, R. U.; 2021)

Non-Performing Loan

There is no global standard to define non-performing loans at the practical level. Variations exist in terms of the classification system, the scope, the contents. Such problem potentially adds to disorder and uncertainty in the NPL issues. A loan is non-performing when payments of interest and/or principal are past due by 90 days or more, or interest payments equal to 90 days or more have been capitalized, refinanced, or delayed by agreement, or payments are less than 90 days overdue, but there are other good reasons such as a debtor filing for bankruptcy to doubt that payments will be made in full (Bondarenko, *et al.*, 2020). In addition, the Nigerian banking regulation also defines NPL as follows: Nonperforming loan and advances are a loan whose credit quality has deteriorated and the full collection of principals and/or interest as per the contractual repayment terms of the loan and advances are in question (CBN, 2015). A loan is categorized as non-performing when the principal or interest is due and unpaid for six months or more from the first day of default (Prudential Financial Policy Department, 2014). However, 2010 CBN prudential guidelines for money deposit banks in section 15.1, classified non-performing loans facilities into three distinct categories as sub-standard, doubtful and lost loan.

Interest rates provide the price signals for borrowers, lenders, and banks. Through the process of taking deposits, making loans, and responding to interest rate signals, the banking system helps channel funds from savers to borrowers in an efficient manner. According to the Central bank of Nepal, a loan is categorized as a pass loan, substandard loan, doubtful loan, and poor loan. Pass loan, substandard loan, doubtful loan, and loan loss are also included under non-performing loans. (John, T. A.; 2018).

Non-performing loans can be calculated by using this formula.

$$\text{Non-performing loan} = \frac{\text{Non-performing Loans}}{\text{Total Loan}}$$

Determinants of Non-Performing Loan

Generally, non-performing loans are considered bad debts because the chances of recovering the defaulted loan repayments are minimal. However, having more non-performing loans in the company's balance hurts the bank's cash flows, as well as its stock price. Therefore, banks that have non-performing loans in their books may take action to enforce the recovery of the loans they are owed. Holding a high number of NPLs relative to the total assets of a company poses a huge risk to the bank. Potential investors are interested in investing in companies with healthy books of accounts. When the percentage of non-performing loans increases, the lender's stock price will also go down. The NPLs a bank holds in its books, the less attractive it is for potential investors because its future profitability will suffer if the lender will not earn an income from its credit business. Also, the lender will be required to set aside a portion of its profits as bad debts provisions in case it is required to write off the debts.

Macroeconomics Determinants

GDP Growth

GDP is an accurate indicator of the size of an economy and the GDP growth rate is probably the single best indicator of economic growth. Louzis et al. (2012) examined the determinants of non-performing loans (NPLs) in the Greek banking sector separately for each category of loan. NPLs can be explained by macroeconomic variables and management quality. Differences in the quantitative impact of macroeconomic factors among loan categories are evident. Messai and Jouini (2013) tried to detect the determinants of non-performing loans for a sample of 85 banks in three countries (Italy, Greece, and Spain) for the period of 2004–2008. These countries have faced financial problems after the subprime crisis in 2008. The variables used are macroeconomic variables and specific variables to the bank.

The macroeconomic variables are included the rate of growth of GDP, unemployment rate and real interest rate with respect to specific variables opted for the return on assets, the change in loans, and the loan loss reserves to total loans ratio (LLR/TL). After the application of the method of panel data, they found the problem loans vary negatively with the growth rate of GDP, the profitability of banks' assets and positively with the unemployment rate, the loan loss reserves to total loans and the real interest rate.

Inflation

In economic development, low inflation indicates a positive sign for economic growth. Low inflation contributes towards economic stability – which encourages saving, investment, economic growth, and helps maintain international competitiveness. A high rate of inflation reduces the borrower's ability to service debt by reducing their real income, thereby increasing NPL (Rinaldi & Arellano, 2006).

Moreover, Ghosh (2015) demonstrated the effect of NPLs on commercial banks and savings institutions in the USA and found that inflation has a significant and positive effect on NPLs. This study expects inflation to have a positive and significant effect on NPLs.

$$\text{Inflation} = \frac{\text{CCP Index} - \text{HCP Index}}{\text{CCP Index}} * 100$$

Bank-Specific Determinants

In a study of 500 commercial banks from more than 50 countries between 2005 and 2007. Shehzad et al. (2010) found that concentrated ownership (proxied by different levels of shareholding) significantly reduces a bank's non-performing loans ratio, conditional on supervisory control and shareholder's protection rights. Furthermore, ownership concentration affects the capital adequacy ratio positively conditional on shareholder protection. At low levels of shareholder protection rights and supervisory control, ownership concentration reduces bank riskiness.

Cornett et al. (2010) examined how government ownership and government involvement in a country's banking system affect bank performance from 1989 through 2004. Their

study uncovered an interesting pattern of changing performance differences between state-owned and privately-owned banks around the Asian financial crisis.

Bank Size

Banks-specific determinants have a major impact on the NPL of commercial banks. If the size of the bank is bigger it reflects the strength of banks. Salas and Saurina (2002) noticed a negative relation between bank size and NPL; they describe the relationship by noting that greater bank size allows for higher diversification, leading ultimately to lower risk proxy through the non-performing loan. This study expects bank size to have a negative relation with NPL. (SINGH, S. K., BASUKI, B., & SETIAWAN, R.; 2021)

$$\text{Bank Size (BS)} = \frac{\text{Log (Assets of Bank } i)}{(\text{Total Assets of Bank } j)}$$

Capital Adequacy Ratio (CAR)

Capital Adequacy Ratio (CAR) is the ratio of a bank's capital in relation to its risk-weighted assets and current liabilities. It is decided by central banks and bank regulators to prevent commercial banks from taking excess leverage and becoming insolvent in the process. It is mandatory that each bank preserve the standard CAR ratio (Basel Accord). (HERSUGONDO, H., ANJANI, N., & Pamungkas, I. D. 2021)

A bank with a high capital adequacy ratio is considered safe and likely to meet its financial obligations. When the ratio is low, a bank is at a higher risk of failure, and so may be required by the regulatory authorities to add more capital (Berger & Yong, 1997). Louzis et al. (2012) and Cheng et al. (2016) found that CAR has an insignificant impact on NPL. This research expects CAR to have insignificant relation with NPL. Thus, in this study Capital Adequacy Ratio (CAR) has a negative effect on NPL. The capital adequacy ratio is calculated as:

$$\text{CAR} = \frac{\text{Total Risk weighted Assets}}{\text{Total Capital Fund}}$$

Return On Assets (ROA)

To determine the profitability of banks, simply looking at the earnings per share isn't quite enough. It's also important to know how efficiently a bank is using its assets and equity to generate profits. For this reason, the key profitability ratio to look at is the return on assets (ROA). Sound financial performance and a stable financial system are indicated by higher ROA for each bank. Profitable banks are less constrained because of less pressure to generate more revenue to invest in risky loans. Therefore, this study expects ROA and NPL to have a negative relationship. Makri et al. (2014) revealed strong correlations between NPL and various macroeconomic (public debt, unemployment, annual percentage growth rate of gross domestic product) and bank's specific (capital adequacy ratio, rate of nonperforming loans of the previous year and return on equity) factors. (SINGH, S. K., BASUKI, B., & SETIAWAN, R.; 2021). Return on assets is calculated as:

$$\text{Return on Assets (ROA)} = \frac{\text{Net Income}}{\text{Total Assets}}$$

Theoretical Review

To understand why mobilizing and allocating funds by deposit money banks to small-medium enterprises under certain conditions may be positively related to economic growth, it is necessary to understand the critical function the deposit money banks provide to the economy by looking at the Supply Leading Theory and Keynesian Theory of Consumption, Savings, Investment and Interest Rate. However, to understand broadly on non-performing loan and deposit money basic profitability other theories are cited for identification and motivations of the study.

Keynesian Theory of Consumption, Savings, Investment, and Interest Rate

The essential element of this theory is the idea that macro economy can be in disequilibrium for a considerable time if government does not intervene to help overcome the aggregate demand to reduce unemployment which results from many factors such as lapses in financial institutions like banks to increase economic growth. According to Keynes, an increase in investment results in an increase in income, while peoples' propensity to consume will lead to lack of savings. Nevertheless, in economic market when a fraction of the individuals is spending, they put back part of the income into the economy. In this way, a small increase in investment has a larger cumulative effect on income and the increased income leads to more purchase and consumption which will definitely raise the GDP.

The theory finally concludes that the financial institutions especially banks help in the reduction of risks faced by firm and businesses in their process, improve the portfolio of diversification and isolation of the economy from the vicissitudes of international economic changes. It also provides linkages for the different sectors of the economy and encourages a high level of specialization expertise and economies of scale, Nzotta and Okereke, (2009).

Credit Default Theory

The Credit Default is a theory relevant for situations where there exists indirect relation to the effect of default that affects the financial performance of a bank. As postulated by Wilson Sy in 2007, this theory is seen to be in corroboration with studies on the relationship between non-performing loans and financial performance; as it recognizes the drivers of Non-performing loans to be „Delinquency” and „Insolvency”.

Delinquency is defined as a failure to meet a loan payment by a due date, whereas insolvency is defined as a situation where assets are less than liabilities. The term credit default really revolves around the concept of delinquency. This occurs when a borrower is unable to make a loan repayment by the due date, caused by liquidity failure. Delinquency triggers a solvency assessment which may lead to a conclusion of negative equity position thereby causing loan termination and an expectation of loss by the lender. The theory combines two cardinal variables into a ratio with regard to non-performing loans: „Loan”

„Serviceability“ Ratio (LSR)“ which is defined as the maximum loan interest rate an owner occupier borrower can service a loan amount from net disposable income after living expenses.

Supply Leading Theory

The supply leading theory postulates that the existence of financial institutions like deposit money banks and the supply of their financial assets, liabilities and related financial services in advance of demand for them would provide efficient allocation of resources from surplus units to deficit units, thereby leading the other economic sectors in their growth process (Patrick, 1996). This theory performs two functions: first it transfers resources from traditional sectors to modern sectors; and second, it promotes and stimulates an entrepreneurial response (SMEs) in the modern sectors.

The proponents of this theory believe that the activities of the financial institutions serve as a useful tool for increasing the productive capacity of the SMEs in the economy. They opined that countries with better developed financial system tend to grow faster in this aspect. Early economist like Schumpeter (1911) has strongly supported the view of finance led causal relationship between financing of small-medium enterprises and a country's economic growth.

Empirical Review

There are a number of studies that investigated the effect of non-performing loan on the financial performance of commercial banks. While the debate on the usefulness of these non-performing loan factors in explaining financial performance of commercial banks is still rampant and inconclusive, extant empirical evidence can be sifted to identify some of these non-performing loans factors that have been frequently established by studies as important factors determining banks performance. This section presents empirical review of previous studies on the non-performing loans and financial performance in developed and emerging markets.

Credit risk is a serious threat to the performance of banks; therefore, various researchers have examined the impact of credit risk on banks in varying dimensions. Credit risk management greatly influences or prevents the failure of a bank. This is because the failure of a bank is influenced to a large extent by the quality of credit decisions and thus the quality of the risk assets. Credit risk management provides a leading indicator of the quality of banks credit portfolio (McNaughton 1994).

Nwosu, Okedigba, and Anih, D. O (2020) examined the extent to which non-performing loans affect commercial bank profitability, and to suggest measures toward mitigating their impact on the banking sector in Nigeria. Data on a sample of 18 commercial banks, covering first quarter of 2014 to fourth quarter of 2018 were analysed using the panel fixed effect and auto-regressive distributed lag models. Empirical results showed a negative, and statistically significant impact of non-performing loans on banks' profitability. Most of the coefficients of other determinants of bank profitability were in line with apriori

expectations. The study showed that lower bank profitability can be explained by higher volume of non-performing loan, increased liquidity ratio and inflation, while higher profitability could be as a result of increase in bank size and capital adequacy ratio. Based on the findings, the study advised the need for the risk management team of banks to strengthen their credit management strategies, and consider offering professional advice to the loan customers on possible ways of efficiently investing their loan to ensure the needed return on investment is attained. Eniafe Abimbola (2020) investigated the impact of non-performing loans on Money deposit banks' performance in Nigeria. Hypotheses were set and data were sourced from secondary data. The study used the confirmed ECM model (via residual and least square method of analyses. The results revealed that non-performing loans have impact Deposit Money Banks performance within the period of study; whereas, the impact of the individually independent variables (net interest margin and deposit to loan.) varied. The study recommends, amongst others that, effective credit policy that is reflected in flexible tenure, restructuring of credit terms and conversion should be adopted in the Deposit Money banks. This policy could help reducing the tempo of nonperforming loan, such that as return on equity is increasing, the possibility of default would decline considerably.

Partovi and Matousek (2019) studied the link between bank output and NPLs in the Turkish financial banks between December 2002 to December 2017, using the Data Envelopment Analysis Framework developed by Aparicio, Pastor, and Zofio (2015). Results suggest that the situation with bank management in the banking sector in that area, and, therefore, NPLs, has a negative impact on technical quality. Accordingly, Turkish banks may differ in the degree of effectiveness and rely on their ownership structure.

Messai and Jouini (2013) found the problem loans vary negatively with the growth rate of GDP and profitability of banks' assets, and positively with the unemployment rate, the loan loss reserves to total loans, and the real interest rate. In Nepal, GDP depends on agriculture and remittance which is unstable and poor. Although GDP growth increases, citizen paying back capacity is still low due to unstable GDP sector. Thus, GDP growth is higher though it gives significant with NPL.

Sources of Data

The data used for this study was derived from the Central Bank of Nigeria Statistical Bulletin Annual Reports and the Nigerian Deposit Insurance Corporation (NDIC) for a period of 31 years (1990-2020) the variable from which data were sourced which includes two dependent variables namely, return on assets (ROA) and return on equity (ROE), and the five independent variables namely, total loans and advances, non-performing loans, provision for loan losses, lending rate of banks, and inflation rate. This is statistically prudent because the issue that bothers and affect deposit money banks profitability which represent the independent and dependent variables respectively correspond to different time series over the period of the study. Essentially, the decision on the variables to be included in the study was guided by data availability.

Model Specification

To effectively study the impact of non-performing loans on the profitability of Deposit money banks in Nigeria, we used a multivariate econometric regression models based on the dependent variable, here profitability was decomposed into ROA and ROE, that is

$$ROA = f(TLA, NPL, PLL, LDR, INF) \dots \dots \dots (1)$$

$$ROE = f(TLA, NPL, PLL, LDR, INF) \dots \dots \dots (2)$$

Expressing equation 1 and 2 in econometric forms yield:

$$ROA = \beta_0 + \beta_1 TLA + \beta_2 NPL + \beta_3 PLL + \beta_4 LDR + \beta_5 INF + ut \dots \dots \dots (3)$$

$$ROE = \beta_0 + \beta_1 TLA + \beta_2 NPL + \beta_3 PLL + \beta_4 LDR + \beta_5 INF + ut \dots \dots \dots (4)$$

Where:

ROA: Return on asset

ROE: Return on equity

TLA: Total loans and advances

NPL: Non performing loans

PLL: provision for loan losses

LDR: lending rate

INF: Inflation rate

β_0 = Constant Term or Intercept

$\beta_1 - \beta_5$ = Coefficients

ut = Stochastic or Error Term

Analysis of ARDL Results

In this section, the results of the estimated ARDL models for the relationships are presented and analysed. It should be noted that the dynamic from of the ARDL estimates suggests that both the long run and short run estimates are presented. The stable estimates are however based on the long run relationships. The results of the models are presented separately for the ROA and the ROE estimates.

Results for ROA

In Table 4.5, the results of the short run and long run estimates for the dynamic relationships are presented for ROA. The cointegrated results were obtained based on the lag selection test performed earlier. The diagnostic test in each of the equations based on the adjusted R-squared values and the LM test for serial correlation. In the estimates, the R-squared value is very large at 0.86, showing that non-performing loans, total loans and other provision for loan losses explain about 86 percent of short-term variations in the bank profitability outcomes in Nigeria.

Table 4.5: Estimated relationship between loan policy and ROA

<i>Long run</i>			
Variable	Coefficient	t-Statistic	Prob.
LTLA	-20.94	-2.577	0.023
LNPL	-29.49	-4.152	0.001
LPLL	10.08	1.542	0.147
LR	-3.832	-3.040	0.010
INFL	1.075	4.000	0.002
CointEq(-1)	-0.9018	-7.47384	0

<i>Short run</i>			
Variable	Coefficient	t-Statistic	Prob.
D(LTLA)	-2.430	-1.139	0.275
D(LTLA(-1))	15.64	4.773	0.000
D(LNPL)	4.545	0.534	0.602
D(LNPL(-1))	26.22	3.909	0.002
D(LPLL)	5.327	1.635	0.126
D(LPLL(-1))	10.81	3.744	0.003
D(LR)	0.146	0.379	0.711
D(LR(-1))	1.804	3.628	0.003
D(INFL)	0.700	3.402	0.005
C	27.24	0.996	0.338
R-sq.	0.860		
Adj. R-sq.	0.794		
Serial Correlation LM Test	0.839 (0.456)		

Source: Regression output using E-views 10 (2022).

Considering the short run results, it is seen that the coefficient of total loans and advances is significant at the first lag, indicating that total loans in the banking sector has a positive but delayed impact on short run movements in the return on assets of the banks. The coefficient of non-performing loans is also significant and positive after the first lag. The coefficients of lagged lending rate and current inflation rates are also positive and significant in the short run result.

For the stable estimates (after all adjustments are completed), the results of the long run estimates are considered. In the result, the coefficient of TLA is significant but negative.

ROE Results

Table 4.6: Estimated relationship between loan policy and ROE

<i>Long run</i>			
Variable	Coefficient	t-Statistic	Prob.
LTLA	2.220	5.221	0.000
LNPL	-1.815	-4.860	0.000
LPLL	-1.600	-4.663	0.000
LR	0.221	3.794	0.002
INFL	-0.075	-5.959	0.000
CointEq(-1)	-1.583	-9.309	0.000

<i>Short run</i>			
Variable	Coefficient	t-Statistic	Prob.
D(LTLA)	0.898	4.555	0.000
D(LTLA(-1))	-1.044	-3.336	0.005
D(LNPL)	-3.000	-4.371	0.001
D(LNPL(-1))	-1.226	-1.879	0.081
D(LPLL)	-0.452	-1.609	0.130
D(LPLL(-1))	1.270	4.357	0.001
D(LR)	-0.068	-1.844	0.086
D(LR(-1))	-0.163	-4.108	0.001
C	1.919	1.434	0.174
R-sq.	0.862		
Adj. R-sq.	0.807		
Serial Correlation LM Test	0.706 (0.513)		

Source: Regression output using E-views 10 (2022).

The results for the return on equity (ROE) are presented in Table 4.6. In the result, the adjusted R-squared value is also high at 0.8, while the LM test statistic is insignificant. This implies that the null hypothesis of no serial correlation cannot be rejected in this case. For the individual variables in the short run estimates, the coefficients of current and lagged NPL are significant at the 1 percent level and negative. This shows that non-performing loans has a strong negative impact on ROE of the banks in the short run. Unlike the ROA, the result shows that ROE responds immediately to rising non-performing loans within the banking sector in Nigeria. The coefficient of total loans is only positive at the current estimate, indicating the loans advances tend to have immediate and significant positive impact on ROE in the short run. The coefficient of LR in the short run equation is negative and significant at the first lag. This also shows that rising lending rate has a short run impact on return on equity for the banks. The coefficient of the error correction term is significant and has the expected negative sign. This shows that any deviations from long run

equilibrium have the tendency to be restored over time. The time path for long run adjustment is however oscillatory given that the coefficient of the error term is greater than one in absolute values.

Bound Cointegration Test Results

F-Bounds Test		Null Hypothesis: No levels relationship		
ROA Equation				
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	5.46	10%	2.08	3
K	5	5%	2.39	3.38
		2.50%	2.7	3.73
		1%	3.06	4.15
ROE Equation				
Test Statistic	Value	Signif.	I(0)	I(1)
F-statistic	8.67	10%	2.08	3
K	5	5%	2.39	3.38
		2.50%	2.7	3.73
		1%	3.06	4.15

Source: Regression output using E-views 10 (2022).

In the Bounds test result in Table 4.4, the following procedure is used for evaluation: if at the 5 percent significance level, the estimated F-value is greater than both the lower test (I0 Bounds) and the upper test (I1 Bounds) values, then there is no cointegration among the variables. If the estimated F-value lies between the two Bounds values, then there is need to proceed with a lesser structure of the ECM analysis by applying the Josselus procedure. From the Table, the computed F values for the tests for both equations are all greater than both the lower and upper Bounds values at the 5 percent levels.

Discussion of Findings

The result of the effect of non-performing loans on banks' profitability based on the analysis from the data showed that the coefficients of most of the variables of interest are in conformity with the apriori expectations and propositions of other empirical research. The p-values for almost all variables are less than 0.05, indicating a significant relationship between the dependent variables and the independent variables at the 5 per cent level of significance. In Table 4, the fixed effect panel regression and panel ARDL approaches gave similar results in terms of the signs of the coefficients. This shows that the results are consistent, irrespective of the methodology used.

The estimated results from all the models indicate that non-performing loans ratio show a statistically significant but negative influence on DMBs profitability, the result show the coefficient of the non-performing loans (NPL) variable which is -29.49 (p-value = 0.001 <

0.01) for ROA equation and -1.815 (p-value = 0.000 < 0.01) for the ROE equation. This implies that an increase in NPL will cause a decrease in the profitability of the banks under review, supporting the bad management hypothesis that increased exposure to credit risk is usually associated with an increase in operating costs, which leads to decreased profitability. The result is consistent with Gizaw et al. (2015) who found that increases in NPLs will reduce profitability in banks and vice versa. NPLs have opportunity costs, in that the non-interest-earning assets (mainly in the form of money) could have been invested elsewhere for earnings. Besides this, banks are also required to make provisions for losses on non-performing assets (PLL), which in turn affect profitability, and there is a cost associated with bad loans recovery.

The empirical results showed that Bank Size positively affect banks' profitability in all the models in line with the findings of Laryea et al. (2016). Banks that are bigger have the resources and better ability in their selection and diversification of credit. This is true because as the bank size increases, so does its ability to invest and make profit.

Summary of Findings

In the study, the effect of non-performing loans on financial performance or profitability of deposit money banks (DMBs) was examined by considering the aggregate banking sector in Nigeria.

The following findings were made in the study:

1. That non-performing loans have significant but negative impacts on both ROA and ROE in the long run. The short run impacts were however found to be positive for ROA and negative for ROE which is shown as -29.49 (p-value = 0.001 < 0.01) for ROA equation and -1.815 (p-value = 0.000 < 0.01) for the ROE equation.
2. That total loans and advances disbursed by DMBs in Nigeria have significant negative long run impact on ROA of the banks, but significant and positive impact on the long run. This is show as follows: 20.94 (p-value = 0.023 < 0.05) for the ROA equation and 2.22 (p-value = 0.000 < 0.01) for ROE equation.
3. That provision for loan losses among DMBs in Nigeria exerted significant but negative impact on ROE profitability measure in the long run which is shown as 10.08 (p-value = 0.147 > 0.005) for ROA equation and -1.60 (p-value = 0.000 < 0.01) for the ROE equation.

Conclusion

A sound banking sector is indispensable for a healthy, vibrant and sustainable economy. Thus, the success of finance system (and economic growth) in the country is largely dependent on the performance of banks. Though banks offer many services, most of them are related to credit and cash management which are critical aspects of liquidity among the banks. Thus, appropriate strategies for the management of lending activities contributes greatly to bank performance, productivity and long run stability of the system. The study has shown that, indeed, lowering the non-performing loans can aid good cash management

that is critical for ensuring improvements in performance for the banks in the sampled countries. It is also clear from the study that risks that require rising provisions for loan losses within the banking sector in Nigeria limits profitability in the long run. Essentially, risk-controlling in credit activities is a critical issue in the banking industry which requires bank managers and experts to come up with strategic liquidity management solutions that can minimize credit risks and bad debts.

Recommendations

The results obtained in the study provided effective background for policy directions. The policy recommendations from the study therefore include:

1. There is evidence from the study that overall long-term profitability of DMBS depends strongly on the amount of non-performing loans in the system. Hence, the DMBS in Nigeria need to evolve strong liquidity and asset management strategies that help to lower the proportion of non-performing loans. This can be done by concentrating on efficient lending policy within the banks as well as striking a balance between lending and liquidity.
2. The DMBS do not need to continue to increase loan disbursements, especially in periods of poor macroeconomic performance when default rates are high. In the study, it is shown that the focus of the banks should be on stimulating lending patterns that deliver long run profitability goals for the banks.
3. The role of the monetary authority in ensuring effective lending and liquidity management of the banks has also been demonstrated in the study through the relevance of the lending rate in the estimations. The Central Bank of Nigeria should seek to maintain monetary policy rates that will help banks manage loan disbursements effectively, especially in the long run. The act of the CBN to always tend to push the banks into more lending systems, need to be checked given that our study has shown that overt loan activities may hamper bank profitability in terms of asset management.
4. In meeting short-term loan requirements of customers, DMBS in the Nigeria need to be more efficient in the provisions for loan losses. Increasing these provisions with anticipation of high losses has been shown to hamper profitability in the banks.

Finally, the study showed that macroeconomic stability, through stable prices can help to improve bank profitability in Nigeria in the long run. Hence, there is need to maintain stable prices through appropriate central bank provisions.

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APPENDIX A

YEA R	ROE Billion Naira	ROA Billion Naira	(TLA) TOTAL LOANS AND ADVANCES Billion Naira	(NPL) NON- PERFORMING LOANS Billion Naira	(PLL) PROVISIONS FOR LOAN LOSSES Billion Naira	(LDR) LENDING RATE %	(INF) INFLATI ON RATE %
1990	19.89	0.4212	423.08	19.5	251.84	27.7	3.6
1991	18.486	0.3822	684.82	22.4	191.8	20.8	23
1992	16.6	0.57	581.01	18.47	256.12	31.2	48.8
1993	20.06	0.909	624.04	21.6	462.1	36.09	61.3
1994	24.02	0.67	592.11	24.06	315.86	21	76.8
1995	26.77	0.71	581.82	30.17	304.34	20.79	51.6
1996	37.01	0.809	621.2	40.29	256.82	20.86	14.3
1997	41.96	0.4	520.42	49.91	204.41	23.32	10.2
1998	42.56	1.42	482.41	49.46	302.2	21.34	11.9
1999	57.88	1.461	501.82	70.59	401.22	27.19	0.2
2000	92.88	2.52	6780.12	93.4	301.11	21.55	14.5
2001	153.8	6.66	5721.41	138.2	801.92	21.34	16.5
2002	85.68	5.41	4870.84	205.83	486.9	30.19	12.2
2003	71.52	4.91	6280.24	245.71	981.81	22.88	23.8
2004	91.95	8.71	7041.11	337.69	511.81	20.82	10
2005	8.9	1.39	602.82	358.81	406.9	19.49	11.6
2006	55.81	1.89	5011.71	184.96	304.62	18.7	8.5
2007	85.24	13.06	3010.09	231.46	259.97	18.36	6.6
2008	103.44	13.01	6,443.09	303.24	258.86	18.7	15.1
2009	(486.8)	45.22	8,150.88	751.27	1,789.06	22.62	12
2010	137.16	334.23	7,018.27	857.27	930.14	22.51	11.8
2011	(2.59)	22.25	6,685.85	927.41	263.62	22.42	10.3
2012	221.5	26.24	7,723.72	997.76	230.9	23.79	12
2013	204.98	23.06	9,488.32	989.8	275.38	24.69	8
2014	231.28	26.04	12,143.25	1137.09	280.42	25.74	8
2015	180.08	23.18	12,148.36	1,063.66	526.64	26.71	9.6

2016	117.57	13.85	14,872.31	936.08	928.63	27.29	18.6
2017	60.56	6.18	14,662.14	1288.54	1,262.50	30.6	15.4
2018	146.06	13.21	56,982.70	1501.18	1,618.45	28.16	11.4
2019	210.09	27.403	59,097.27	1903.04	5,063.97	30.57	11.98
2020	328.55	44.9	61,012.01	2190.34	4,366.82	28.64	15.75

Source: Nigerian Deposit Insurance Corporation (NDIC) & Central Bank of Nigeria
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