CREDIT MANAGEMENT AND INCIDENCE OF NON PERFORMING LOAN IN NIGERIAN DEPOSIT MONEY BANKS

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Banks today are the largest financial institutions around the world, with branches and subsidiaries throughout the world. These banks offer different products and services to public, and because of their high liquidity, these intermediary operations are quite

risky. Therefore the banks are faced with diverse risks in the course of carrying out their operations. In view of the risks inherent in bank lending and the need to minimize or contain the risk (since they cannot be avoided entirely), and in view of the need for liquidity and profitability consistence with safety and regulatory constraints, the central issue in managing the lending portfolio is balancing the potential risk with returns. This involves credit management and credit analysis(Uwalomwa, Uwuigbe & Oyewo, 2019). The borrower‟s ability to repay the loan has to be determined, the borrower capacity and capital have to be assessed (Nwankwo, 2016).

Credit creation is the main income generating activity of banks (Kargi, 2011) Due to the increasing spate of non-performing loans; the Basel II Accord emphasized credit risk management practices. Compliance with the Accord means a sound approach to tackling credit risk has been taken and this ultimately improves bank performance.

Deposit money banks are exposed to a variety of risks among them; interest rate risk, foreign exchange risk, political risk, market risk, liquidity risk, operational risk and credit risk; and what banks does is to manage these challenges especially the credit aspect. In some instances, deposit money banks and other financial institutions have approved decisions that are not vetted; there have been cases of loan defaults and non-performing loans, massive extension of credit and directed lending. Policies to minimize on the negative effects have focused on mergers in banks, better banking practices but stringent lending, review of laws to be in line with the global standards, well capitalized banks which are expected to be profitable, liquid banks that are able to meet the demands of their depositors, and maintenance of required cash levels with the central bank which

means less cash is available for lending. This has led to reduced interest income for the commercial banks and other financial institutions and by extension reduction in profits. Credit risk is the possibility that the actual return on an investment or loan extended will deviate from that, which was expected.

Agu, and Ogbuagu (2019) defines credit risk as losses from the refusal or inability of credit customers to pay what is owed in full and on time. The main sources of credit risk include, limited institutional capacity, inappropriate credit policies, volatile interest rates, poor management, inappropriate laws, low capital and liquidity levels, directed lending, massive licensing of banks, poor loan underwriting, reckless lending, poor credit assessment, laxity in credit assessment, poor lending practices, government interference and inadequate supervision by the central bank. To minimize these risks, it is necessary for the financial system to have; well-capitalized banks, exposure within acceptable limit in order to provide a framework of the understanding the impact of credit risk management on banks profitability.

1.2 Statement of Problem

Deposit money banks (DMBs) create loans from deposits from customers and these loans are major income generating source for majority of the banks. However this intermediation function of DMBs is associated with enormous risks to both the banks and the deficit units. Banks are now working so hard to attract the massive number of people who are not banking with them. This has led to an increase in banks‟ surplus units and

deficit units as well. With the aim of increasing revenue and gaining a large portion of the market share, many banks have given out loans and advances which could not be recovered leading to a massive growth in Non-Performing Loans (NPLs) in their accounts. This has become a worrisome situation for banks and other stakeholders. In 2019, Credit Management and Bank Performance of Listed Banks in Nigeria revealed that ratio of non-performing loans and bad debt do not have a significant negative effect on the performance of banks in Nigeria. While secured and unsecured loan ratio and bank‟s performance was not significant (Uwalomwa, Uwuigbe & Oyewo, 2019). The Effect of Credit Risk on the Banking Profitability: A case on Bangladesh, 2019 finds a robust negative and significant effect of Non-Performing Loan to Gross Loan (NPLGL), Loan Loss Reserve to Gross Loan (LLRGL) on all profitability indicators. The analysis also finds a negative and significant effect of Capital Adequacy Ratio (CAR) on Return on Average Equity (ROAE). It also reveals that the effect of the implementation of Basel II is significantly positive on Net Interest Margin (NIM) but significantly negative on ROAE (Abu, Sajeda & Mustafa, 2019). With respect to the issues raised, it can be said that the effect credit management has on a bank‟s financial strength (profitability) cannot be undermined.

However, the study carried out by Ogboi. (2013) on the topic “Impact of Credit Risk Management and Capital Adequacy of the Financial Performance of Commercial Banks in Nigeria” showed that sound credit risk management and capital adequacy impacted positively on the banks financial performance with the expectation of loan and advances which was found to have a negative impact on bank‟s profitability. In the study

“Loan Management and the Performance of Nigeria banks” there is no significant relationship between effective loan management and the performance of banks (Lawrence, 2013). This implies that, banks in Nigeria experience high profit irrespective of the huge credit risk exposure, conflicting with views shared by other researchers. The Prime concern of this study is to examine credit management and non performing loan in deposit money banks Nigeria.

1.3 Research Questions

The following are the research questions of this study:

i. To what extent does bank size affect profitability of Nigerian deposit money banks?

ii. What is the effect of non-performing loans on the profitability of Nigerian deposit money banks?

iii. To what extent does loan loss provisions affect profitability of Nigerian deposit money banks?

1.4 Objectives of the Study

The main objective of this study is to examine credit management and the incidence of nonperforming loan in deposit money banks, while the specific objectives are:

i. To examine the effect of bank size on the profitability of Nigerian deposit money banks.

ii. To examine the effect of non-performing loans on the profitability of deposit money banks in Nigeria.

iii. To determine the extent to which loan loss provisions affect profitability of deposit money banks in Nigeria.

1.5 Statement of Hypotheses

The following hypotheses are stated in their null and alternative form were tested in course of this research work:

Hypothesis One

Ho: Bank size has no significant effect on the profitability of Nigerian deposit money banks.

H1: Bank size has a significant effect on the profitability of Nigerian deposit money banks.

Hypothesis Two

Ho: Non-performing loans has no significant effect on the profitability of Nigerian deposit money banks.

H1: Non-performing loans has a significant effect on the profitability of Nigerian deposit money banks.

Hypothesis Three

Ho: Loan loss provisions have no significant effect on the profitability of Nigerian deposit money banks.

H1: Loan loss provisions have a significant effect on the profitability of Nigerian deposit money banks.

1.6 Significances of Study

The study will help bank management to boost the bank's profitability. In addition, the degree to which credit is controlled has a bearing on the progress and sustainability of deposit money banks and the economy at large. The purpose of this research is to discover effect of liquidity on the profitability of banks in Nigeria. The customers and investors need to know whether their deposits are managed or utilized efficiently, so it is an eye-opener. The research would serve as an incarnation of knowledge to individuals, management and practitioners in the banking and non-bank financial industry. The result would also be useful in academic field.

1.7 Scope of the Study

This research work covers liquidity and profitability of deposit money banks in Nigeria. This study is limited to the effect Liquidity has on the profitability of only the deposit money banks in Nigeria from 2015 to 2020 This study intends to focus on all the existing Deposit Money Banks in Nigeria. Thus, the Micro-finance banks and other banks will not be included in our study.

1.8 Limitation of the Study

The limitations of this study are itemized below:

i. Smallness of the sample size as the research could not be carried out on a larger population.

ii. Inappropriate measurement of the variables.

iii. Problem of determining the appropriate statistical tools for data analysis.

iv. Challenges in sourcing for secondary data which is the most important for the study.

1.9 Operational Definition of Terms

Credit risk: Credit risk is the possibility of losing the outstanding loan partially or totally, due to credit events (default risk). Credit events usually include events such as bankruptcy, failure to pay a due obligation, repudiation/moratorium or credit rating change and restructure.

The credit risk management strategies: The credit risk management strategies are procedures banks adopted in the mitigation or reducing the negative effect of credit risk

Non-performing loans: It is the major determinant of credit risk in deposit money banks. It is the ratio of non-performing loans to total loans which reveals the quality of a bank's loan portfolio.

Liquidity: liquidity refers to the ability of a bank to ensure the availability of funds to meet financial commitments or maturing obligations at a reasonable price at all times.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Conceptual Review

2.1.1 Liquidity

According to Olagunji (2017), liquidity refers to the ability of a bank to ensure the availability of funds to meet financial commitments or maturing obligations at a reasonable price at all times. Put differently, bank liquidity means banks having money when they need it particularly to satisfy the withdrawal needs of their customers. The survival of deposit money banks depends greatly on how liquid they are, since illiquidity being a sign of imminent distress can easily erode the confidence of the public in the banking system and results to run on deposit.

Liquid assets should be marketable or transferable. This means they are expected to be converted to cash easily and promptly, and are redeemable prior to maturity. Another quality of liquid assets is price stability. Based on this characteristic, bank deposits and short term securities are more liquid than equity investments due to the fact that the prices of the former are fixed than the prices and value of the later (Richard, 2018). According to Greuning and Bratanovic (2019), banking liquidity represents the capacity of a bank to finance itself efficiently the transactions. The liquidity risk for a bank is the expression of the probability of losing the capacity of financing its transactions respectively of the probability that the bank cannot honor its obligations to its clients (withdrawal of deposits, maturity of other debt, and cover additional funding requirements for the loan portfolio and investment). The management of the liquidity risk presents important at least from two points of view: primarily an inadequate level of liquidity may lead to the need to attract additional sources of with higher costs reducing profitability of the bank that will lead ultimately insolvency; and secondly an excessive liquidity may lead to a decrease of the return on assets and in consequence poor financial

performance. A bank has a potential of appropriate liquidities when it is in the condition to obtain the funds immediately and at a reasonable cost when these are necessary. In practice, achieving and maintaining optimum liquidity is a real art of bank management. Greuning and Bratanovic (2016) noted that maintaining an adequate degree of liquidity in the whole banking system is extremely important, because the registration of a liquidity crisis at a single bank can have negative repercussions over the whole banking system thanks to the risk of contagion through interbank settlements. The sophistication of liquidity management and liquidity risk depends on the size and characteristics of each bank as do the nature and complexity of activities held by it. The management of liquidity policies of a bank has to include a decisional structure for the risk management, a pattern (a strategy) for approaching operations and funding, a set of exposure limits to liquidity risk and a set of procedures for planning liquidities after alternative scenarios including crisis situations.

2.1.2 Profitability

The issue of profitability is a contentious subject that a bank has to consistently face. Profit is the disparity between expenses and revenue over a period of time, normally one year. As explained by Heibati, Nourani and Dadkhah (2018), a business is organic; it survives and grows. Therefore, it is important that a bank earns profit for its long term survival and growth. It is also necessary that enough profit must be earned to maintain the activities of the business to be able to obtain funds for expansion and growth of the bank.

Agbada and Osuji (2018) argued that corporate profit planning remains one of the most difficult and time consuming aspects of bank management because of the many

variables involved in the decision which are outside the control of the bank. It is even more difficult if the bank is operating in a highly competitive economic environment, such as that of Nigeria.

According to Tabari (2018), the profitability variable is represented by two alternative measures: the ratio of profits to assets i.e. the return on assets (ROA) and the returns to equity ratio (ROE). In principle, return on assets (ROA) reflects the ability of a bank's asset to generate profit, although it may be biased due to off-balance-sheet activities. ROE indicates the returns to shareholders on their equity and equals ROA times the total assets-to-equity ratio.

The issue of bank profitability and performance efficiency has been widely discussed in the scientific literature. It has also been considered in a number of theoretical and empirical researches of different kind. However, return on assets (ROA) and return on equity (ROE) have always been mentioned among the main indicators characterizing bank performance. Bourke (2017) was one of the first who discovered in his research that exactly the internal factors of bank performance, such as net income before and after tax against total assets, capital and reserves factors, have the greatest impact on profitability indicators. In turn, the studies conducted in the USA and Europe demonstrate that a great concentration of banks and financial institutions surpass profitability.

At the same time, Ramlall (2018) discovered a positive relationship between the size of the bank and profitability – the larger the bank is, the more profitable it is in comparison with a smaller bank thus demonstrating the effect of economy of scale. In contrast, Sufian (2017) states that large size of the banks may leave a negative impact on bank

profitability. He notes that small banks can earn higher profit because they have lower expenses and better performance efficiency. Berger (2017) correlates it with routine practical activities of an enterprise and states that profitability grows along with the increase of the operational efficiency. Despite difference of opinion, all scholars agree that banks' profitability and efficiency indicators consist of external and internal factors. Rasiah (2018) in his research found asset portfolio mix, loans and interest income, investments, non-interest income earning assets, total expenses, operating expenses, personnel expenses, liability composition, deposit composition, liquidity ratios, capital structure as internal factors influencing bank profitability. In turn, external factors comprise regulations, inflation, interest rate, short and long terms effects of interest rate on assets, market share, market growth, firm size. Pimentel (2019) defines profitability as the final measure of economic success achieved by a company in relation to the capital invested in it. This economic success is determined by the magnitude of the net profit accounting generated as a percentage of the assets invested in. To achieve an appropriate return over the amount of risk accepted by the shareholders is the main objective of companies operating in capitalist economies. After all, profit is the propulsive element of any investments in different projects.

2.1.3 Non- Performing Loans

It is the major determinant of credit risk in deposit money banks. It is the ratio of non-performing loans to total loans which reveals the quality of a bank's loan portfolio. That the percentage of the total loans and advances that is on the verge of going bad. A higher

ratio sends a signal that the management was not efficient when evaluating loan applications. Again it shows that there is a higher probability the most of the loans might not be recovered. (Pimentel 2019) Non-Performing credit facilities should be classified into three categories namely: sub-standard, doubtful or lost on the basis of criteria specified by the Banking laws in a country.

2.1.4 Loan Loss Provision

The guideline further states that licensed banks are required to make adequate provisions for perceived losses based on the credit portfolio classification system prescribed above in order to reflect their true financial condition. Two types of provisions (that is specified and general) are considered adequate to achieve this objective. Specific provisions are made on the basis of perceived risk of default on specific credit facilities while general provisions are made in recognition of the fact that even performing credit facility harbors some risk of loss no matter how small. Consequently, all licensed banks shall be required to make specific provisions for non-performing credits as directed by the regulatory authorities (Berger 2017).

2.2 Theoretical Framework

2.2.1 Liquidity Theory

Longworth (2018) noted that liquidity was an instrumental factor during the recent financial crisis. As uncertainty led funding sources to evaporate, many banks quickly

found themselves short on cash to cover their obligations as they came due. In extreme cases, banks in some countries failed or were forced into mergers. As a result in the interest of broader financial stability, substantial amounts of liquidity were provided by authorities in many countries, including Canada and the United States. Since liquid assets such as cash and government securities generally have a relatively low return, holding them imposes an opportunity cost on a bank. In the absence of regulation, it is reasonable to expect banks will hold liquid assets to the extent they help to maximize the firm's profitability. Beyond this, policymakers have the option to require larger holdings of liquid assets, for instance, if it is seen as a benefit to the stability of the overall financial system. While regulation can make the financial system more resilient to liquidity shocks, calibration should recognize any associated costs to the efficiency of financial intermediation as this could result in higher borrowing costs for other agents in the system.

2.2.2 Quantitative Liquidity Theory

Baumol's (2009) inventory management model and Miller and Orr's (1966) model which recognized the dynamics of cash flows are some of the earlier research efforts attempted to develop models for optimal liquidity and cash balances, given the organization's cash flows the focus was on using quantitative models that weighed the benefits and costs of holding cash (liquidity). These earlier models help financial managers understand the problem of cash management, but they rest on assumptions that do not hold in practice. The trade-off model postulates that firms identify their optimal level of cash holdings by weighting the marginal costs and marginal benefits of holding cash. The benefits related

to cash holdings are: reduces the likelihood of financial distress, allows the pursuance of investment policy when financial constraints are met, and minimizes the costs of raising external funds or liquidating existing assets. The main cost of holding cash is the opportunity cost of the capital invested in liquid assets. A firm that currently pays dividends can raise funds at low cost by reducing its dividend payments, in contrast to a firm that does not pay dividends. Firms will trade-off holding cash and investing it depending on its investment needs.

Miller and Orr (2017) model of demand for money by firms suggests that there are economies of scale in cash management. This would lead larger firms to hold less cash than smaller firms. Also, it is argued that the fees incurred in obtaining funds through borrowing are uncorrelated with the size of the loan, indicating that such fees are a fixed amount. Thus, raising funds is relatively more expensive to smaller firms encouraging them to hold more cash than larger firms. Firms with more volatile cash flows face a higher probability of experiencing cash shortages due to unexpected cash flow deterioration. Thus, cash flow uncertainty should be positively related with cash holdings. Barclay and Smith (2009) however provideevidence that firms with the highest and lowest credit risk issue more short-term debt while intermediate credit risk firms issue long-term debt. If we consider that firms with the highest credit rating have better access to borrowing. It is expected that these firms will hold less cash for precautionary reasons, which would cause debt maturity to be positively related to cash holdings.

2.2.3 Liquidity Motive Theory

The economics and finance literature analyze possible reasons for firms to hold liquid assets. Keynes (1936) identified three motives on why people demand and prefer liquidity. The transaction motive, here firms hold cash in order to satisfy the cash inflow and cash outflow needs that they have. Cash is held to carry out transactions and demand for liquidity is for transactional motive. The demand for cash is affected by the size of the income, time gaps between the receipts of the income, and the spending patterns of the cash available. The precautionary motive of holding cash serves as an emergency fund for a firm. If expected cash inflows are not received as expected cash held on a precautionary basis could be used to satisfy short-term obligations that the cash inflow may have been bench marked for. Speculative reason for holding cash is creating the ability for a firm to take advantage of special opportunities that if acted upon quickly will favor the firm.

Almeida (2002) proposed a theory of corporate liquidity demand that is based on the assumption that choices regarding liquidity will depend on firms' access to capital markets and the importance of future investments to the firms. The model predicts that financially constrained firms will save a positive fraction of incremental cash flows, while unconstrained firms will not. Empirical evidence confirms that firms classified as financially constrained save a positive fraction of their cash flows, while firms classified as unconstrained do not. The cost incurred in a cash shortage is higher for firms with a larger investment opportunity set due to the expected losses that result from giving up valuable investment opportunities. Therefore, it is expected that there be a positive relation between investment opportunity and cash holdings. The theory also predicts that

firms with better investment opportunities have greater financial distress costs because the positive Net Present Value (NPV) of these investments disappears (almost entirely) in case of bankruptcy. In this case, firms with better investment opportunities will keep higher levels of cash to avoid financial distress. To the extent that liquid assets other than cash can be liquidated in the event of a cash shortage, they can be seen as substitutes for cash holdings. Consequently, firms with more liquid asset substitutes are expected to hold less cash. It is generally accepted that leverage increases the probability of bankruptcy due to the pressure that rigid amortization plans put on the firm treasury management. To reduce the probability of experiencing financial distress, firms with higher leverage are expected to hold more cash. On the other hand, to the extent that leverage ratio acts as a proxy for the ability of the firms to issue debt it would be expected that firms with higher leverage (higher ability to raise debt) hold less cash. Thus, the predicted relationship between cash holdings and leverage is ambiguous.

2.3 Empirical Review

2.3.1 Liquidity and Profitability

The liquidity profitability trade-off has been of interest to scholars for quite a long time now. The number of empirical studies that have been carried out to ascertain the relationship between liquidity and profitability of deposit money banks has increased. These studies provided the theoretical and analytical framework that supports this work. However, to make the review of the empirical evidence specific to the topic of the study, a special section is devoted to the research carried out on Nigerian banks.

In a study on the determinants of the Tunisia banking profitability for ten banks for the period 1980 to 2000, Naceur (2017) carried out research on interest margin and profitability using panel regression data analysis they find out that high net interest margin and profitability are likely to associate with banks with high amount of capital and large over-heads and they recommended that banks shoul continually review their interest charge as this will help them improve their profitability.

The profitability of European banks during the 1990s was investigated by Goddard (2016) using pooled cross-sectional time-series and dynamic panel models of data analysis. Their objective was to determine profitability incorporates size, diversification, risk, ownership type, as well as dynamic effects. They found that despite intensifying competition there is significant persistence of abnormal profit from year to year. The evidence for any consistent or systematic size-profitability relationship was relatively week. By calculating the parameters of banks' performance in four groups of profitability, liquidity, efficiency and capital. They recommended that business organization should ensure to expand on the size of their firm as this will in turn have positive impact on their profitability.

Heibati (2009) examined and compared the performance of private banks in Iran and Arabic countries of Persian Gulf area using chi square analysis. The empirical results from regression analysis of cross-country panel data of the banks showed statistically significant relationship between liquidity and profitability of the banks especially during initial years of their activity and they suggested that the liquidity of banks should always be monitored as this will help them maintain appropriate level of liquidity.

The effect of liquid asset holdings on the profitability of U.S. and Canadian banks was investigated by Bordeleau (2018). The empirical results from ordinary least squares regression analysis of panel data of the banks recommended that profitability is improved for banks that hold some liquid assets. However, there is a point at which holding-further liquid assets minimizes a bank's profitability, all else equal. Furthermore, the empirical results from the study also indicated that this relationship varies depending on a bank's business model and the state of the economy.

Javaid (2017) analyzed the determinants of top ten banks' profitability in Pakistan over the period 2016 to 2008. They focused on the internal factors only. They used the pooled ordinary least square (POLS) method to investigate the impact of assets, loans, equity, and deposits on one of the major profitability indicators of banks which is return on assets (ROA).

The empirical results found strong evidence that these variables have a strong influence on profitability. However, the results showed that higher total assets may not necessarily lead to higher profits due to diseconomies of scale. Also, higher loans contribute toward profitability but the impact is not significant. Equity and deposits have significant impact on profitability. They recommended that banks should put in place appropriate measure to giving out loan to its customer as this will in turn affect their profitability positively.

Imad (2017) studied a balanced panel data set of Jordanian banks for the purpose of investigating the nature of the relationship between the profitability of banks and their liquidity level for ten banks over the period 2001 to 2018. Using two measures of bank's

profitability: the rate of return on assets (ROA) and the rate of return on equity (ROE), they employed the STATA computer package in analyzing the data. The results showed that the Jordanian bank's liquidity explain a significant part of the variation in banks' profitability. High Jordanian bank profitability tends to be associated with well-capitalized banks, high lending activities, low credit risk, and the efficiency of credit management. Results also showed that the estimated effect of size did not support significant scale economies for Jordanian Banks. They recommended that the capital structure of banks shoul be well capitalized as this will affect their profitability.

The relationship between liquidity and the profitability of banks listed on the Ghanaian Stock Exchange was investigated by Lartey and Boadi (2018). The study was carried out on seven of the nine listed banks. The researchers made use of the longitudinal time dimension model. Specifically the panel method time series analysis and profitability ratios were computed from the annual financial reports of the seven banks. The trend in liquidity and profitability were determined by the use of time series analysis. It was revealed that for the period 2019 to 2018, both liquidity and profitability had a downward trend. The main liquidity ratio was regressed on the profitability ratio. The result revealed that there was a positive and statistically significant relationship between liquidity and profitability of the listed banks. And they recommended that banks should ensure the existent of finance managers that are knowledgeable in liquidity management.

2.3.2 Non Performing Loan and Profitability

Taiwo and Abayomi (2018) evaluates the impact of non-performing loans on bank profitability of some selected DMBs in Nigeria their objective was to determine the impact of non-performing loans on bank profitability of some selected DMBs in Nigeria. They Employed ordinary least square method of data analysis (OLM). The result from Panel Least square (PLS) estimate found that non-performing loans has a significant impact on the profitability of Nigerian banks and they recommend that drastic measure should be put in place so as to retrieve loan in the hands of customers that are not well utilized. Poudel (2018) studied the factors affecting deposit money banks performance in Nepal for the period of 2001-2018 and used a linear regression analysis technique. The study revealed a significant inverse relationship between deposit money bank performance measured by ROA and credit risk measured by default rate and capital adequacy ratio. In this study, the apriori assumption is that non-performing loans has a negative impact on profitability. Additionally, there are other internal variables such as capital adequacy, bank size and age that could affect the profitability (ROA & ROE) of a bank. The 2019 Credit Management and Bank Performance of Listed Banks in Nigeria revealed that ratio of non-performing loans and bad debt do not have a significant negative effect on the performance of banks in Nigeria. While secured and unsecured loan ratio and bank's performance was not significant and they recommended that other measure should be taken so as to improve profitability. (Uwalomwa, Uwuigbe & Oyewo 2019). Saeed and Zahid (2016) studied the impact of credit risk on profitability of the deposit money banks and the result showed that credit risk indicators had a positive association with profitability of the banks. They recommended that sound management of credit risk is a significant element of an all-inclusive method to risk management as a whole

and vital to the future progress of any financial institution. Banks play a major role in the credit market because they assemble deposits from the various surplus units and make them available to the deficit unit for development activities. This implies that banks give out loan to borrowers from deposits made by the public with the objective of increasing their profitability. Now, since banks make huge profit through their role as financial intermediaries, it beholds on them to find pragmatic ways of managing credit risk and thereby guarding and enhancing their profitability (Muhammad & Garba 2019).

2.3.3 Loan Loss Provision and Profitability

Alalade, Binuyo and Oguntodu (2019) examine the impact of loan loss provision and profitability of banks in Lagos state. The research hypothesis was tested and analyzed in relation to loan loss provision and its significant effect on banks‟ profitability. They employed the Ordinary Least Square (OLM) method of data analysis. It was also the aim of this research to evaluate how effective it is for a bank to manage its credit risk (loan loss provision) effectively to enhance profitability. Data for the study was an obtained through the administering structured questionnaires which were answered by respondents. Correlation coefficient was used to decide whether or not credit risk management has an impact on profitability. The results revealed that loan loss provision reduces the profit and therefore recommended that management of credit risk (loan loss provision) should be of great importance to management of bank in Lagos state. More comprehensively, Kolapo (2018) used panel data analysis in studying the effect of loan loss provision on banks‟ performance using ROA as a measure for performance. The result was that an increase in nonperforming loans or loan losses provision diminishes profitability (ROA), while an increase in total loan

and advances enhance profitability. They recommended that before giving out a loan, field audit should be carried out on the customer so as to know their credit worthiness as this will help to reduce the incidence of loan loss.

2.4 Summary of the Review

The liquidity profitability trade-off has been of interest to scholars for quite a long time now. The number of empirical studies that have been carried out to ascertain the relationship between liquidity and profitability of deposit money banks has increased. These studies provided the theoretical and analytical framework that supports this work. Profitability and liquidity as performance indicators are very important to the major stakeholders: shareholders, creditors and tax authorities. The shareholders are interested in the profitability of banks because it determines their returns on investment. Depositors are concerned with the liquidity position of their banks because it determines the ability to respond to their withdrawal needs, which are normally on demand or on a short notice as the case may be. The tax authorities are interested in the profitability of the banks in order to determine the appropriate tax obligation (Olagunji 2017).

The contradictory nature of liquidity and profitability can be explained by the intuitive reasoning that a bank operating with high liquidity (and in the process tying down investable funds) may have a low insolvency risk, but with a trade-off of low profitability. Conversely, a bank operating at a low liquidity level (and thus freeing investible funds) may face high insolvency risk, but with a tradeoff of higher profitability.

In the Nigerian case, the operating environment is so competitive and tense that any deposit money bank that hopes to survive must ensure an astute management of its profitability viz-a-viz its liquidity level as both variables can make or mar its future. It is therefore self -evident that every deposit money bank needs to strike the right balance between its liquid assets and total assets to maintain its liquidity (meeting short-term obligations to depositors and creditors) and remain profitable (adding value to shareholders wealth).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design

The research design adopted for the study is cross-sectional research design it is sufficient and suitable for determining the relationship that exists between credit management and the incidence of non performance loan in deposit money banks.

3.2 Description of Population of the Study

The population of the study consists of all deposit money banks quoted on the Nigeria Stock Exchange between 2015 and 2020. With a population of 45 deposit money banks.

3.3 Sample Size

Data were gathered from the published financial statements of the selected deposit money banks listed on the Nigerian Stock Exchange (NSE) as at 2015 till 2020 in order to guide against data omission and ensure uniformity in presentation, some banks, because of the following factors, were excluded. Banks that ceased to operate at any point during period of study were excluded.

Also excluded were banks that had problems with the NSE and Securities and Exchange Commission (SEC) regarding their financial reports and banks that had course to change their financial accounting year-end at any time during the period of study. The data obtained in relation to the variables is between the periods of 2015-2020 hence, the sample size for this study is 45 deposit money banks.

3.4 Sampling Techniques

The study examines credit management and the incidence of nonperforming loan in money deposit banks. However, the purposive sampling method was used in this study.

3.5 Source of Data Collection

The study used panel data generated from secondary source. The data were extracted from the annual reports and accounts of the some banks obtained from the NSE fact book for the years 2015 to 2020 editions published by the Nigeria Stock Exchange.

3.6 Method of Data Presentation

Data obtained from secondary data were analyzed using STATA Computer Software. The study used regression analysis to investigate the impact of independent variables on dependent variable. A multiple linear regression model was used to establish the significance of the model. The results obtained from the model are presented in tables to aid and ease the analysis.

3.7 Model Specification

The regression model used is as shown below:

ROA= f (BKSZ, NPL, LLP/CL)…….(1)

Where;

ROA= $\alpha_0+\alpha_1$BKSZ +α_2NPL +α_3LLP/CL +ε…….(2)

ROE= $\alpha_0+\alpha_1$BKSZ +α_2NPL +α_3LLP/CL +ε…….(3)

Where;

ROA: Return on Assets

BKSZ: Bank Size

NPL: Non-Performing Loan

LLP: Loan loss provision

CL: Classified Loan

α_0= Constant

ε= Error Term.

$\alpha_1 - \alpha_3$ = Estimation Parameters

3.8 Measurement of Variables

The model adopted for this study is underpinned to the model of (Taiwo and Abayomi 2013) in their study "Credit Management Spur Higher Profitability? Evidence from Nigeria Banking Sector" which measured profitability with Return on Asset (ROA) and Return on Equity (ROE) for models 1 and 2 respectively as a function of bank size, Non-performing Loan to credit management indicators. However, the study improved on the model by incorporating ratio of Loan Loss Provision to classified loan (LLP/CL).

ROA and ROE are Dependent Variables while BKSZ, NPL, LLP are Independent Variables.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Presentation and Analysis of Data

Table 4.1 presented a summary of the descriptive statistics for the dependent and independent variables for 45 observations. For the independent variable, it shows that discretionary accrual (a proxy for profitability) has a mean value of 0.0223, and a standard deviation of 0.0602. The maximum of discretionary accrual is 0.1491 while the minimum is -0.3106.

For the dependent variable, the profitability is measured by bank size, overall bank size has a mean value of 25.3391 and a standard deviation of 25977.

The other two variables have comparably higher mean value as well as standard deviation.

TABLE 4.1 Descriptive Statistics

Variable	Obs	Mean	Std. Dev	Min	Max	Prob (Chi2)
Prof	45	0.0223	0.0602	-0.3106	0.1491	0.0000
Bksz	45	25.3391	2.5977	20.4526	28.6695	0.0418
Npl	45	0.5117	1.0482	0.0004	4.0330	0.0000
Llp	45	0.3097	09191	-0.0530	4.3010	0.0000

Source: Researcher Computation using STATA (2022)

TABLE 4.2 Correlation Matrix

	prof	**Bksz**	**Npl**	**Llp**
Prof	1.0000			
Bksz	0.0965	1.0000		
Npl	-0.4406	-0.1716	1.0000	
Llp	-0.5415	-0.3901	0.7239	1.0000

Source: Researcher Computation using STATA (2022)

Table 4.2 below shows that the measure of Profitability has mixed correlations with the various explanatory variables used in the study. The table below shows negative correlation in Non-performing loan with profitability as well as loan loss provision. The table shows that no two of the explanatory variables are perfectly correlated or nearly so. Thus, the problem of multicolinearity is absent in this model.

TABLE 4.3 Regression Result

Source	SS	df	MS	Number of Obs = 45 F(3, 41) = 6.17
Model	0.0496	3	0.0165	Prob> F = 0.0015
Residual	0.1099	41	0.0027	R-square = 0.3112
Total	0.1595	44	0.0036	Adj R-squared = 0.2608 Root MSE = 0.0518

Prof	Coef	Std err	t	P>/t/	(95% conf.	Interval)
Bksz	-0.0009	0.0009	-0.96	0.345	-0.0028	0-00099
Npl	-0.0033	0.0038	0.87	0.392	-0.0044	0.0110
Llp	0.0036	0.0101	0.35	0.726	-0.01698	0.0242
Cons	0.0424	0.0237	1.79	0.082	-0.0056	0.09044

Source: Researcher's computation using STATA (2022)

Table 4.3 shows that the explanatory variables do not account for much of the systematic variations in the dependent variables. The table shows a very low R-square and Adjusted R-square of 0.3112 and 0.2608 respectively.

This low value of the R-square statistic suggests that there are many other variables in explaining changes in the dependent variables. P-value of the F-statistic (0.0015) shows that the model overall is suitable for estimating the stated model.

4.2. Hypotheses Testing

Testing Statistics

The statistical tool used in testing the stated hypothesis is the regression test procedure, which uses the individual significance test (t-test) and the overall significance test (F-test). The goodness of fit of the model is tested using the coefficient of determination. The estimation of these statistics is done using STATA computer software.

Significance Level

The level of significance adopted in this study is testing the stated hypothesis of the study is 5%. This level is usually considered adequate for studies in management and other behavioral sciences.

Decision Rule

The critical P- value used in these tests is 0.05. Thus, the researcher accepts a given alternative hypothesis as being accepted if calculated p-value is less than or equal to 0.05, otherwise the researcher accepts the null hypothesis that there is no significant effect.

Hypothesis I

H_0: Bank size has no significant effect on Profitability

H_1: Bank size has a significant effect on Profitability.

Computation

The test statistic is computed by STATA software and the results are as shown in Table 4.5.

Table 4.5 Regression Result on Profitability and Board size.

Variable	Coefficient	t-test statistic	P-value
Bksz	-0.0009	-0.96	0.345

Source: Extracted from table 4.3 (STATA Computations)

Decision

With a coefficient of -0.0009 the results indicate that bank size positively impacts profitability, while the probability value 0.345 indicates that the positive impact is

significant. This leads to the rejection of the alternative hypothesis, thus accepting the null hypothesis that bank size insignificantly affects profitability and that such effect is negative.

Hypothesis II

H_o: Non performing loan has no significant effects on profitability.

H_1: Non performing loan has significant effects on profitability.

Computation

The test statistic is computed by STATA software and the results are as shown in Table 4.6.

Table 4.6: Regression Results on Profitability and Non-performing loan.

Variable	Coefficient	t-test statistic	P-value
Npl	-0.00033	0.87	0.392

Source: Extracted from table 4.3 (STATA Computations)

Decision

With a coefficient of -0.0033 the results indicate that board Non-performing Loan negatively impacts Profitability, while the probability value of 0.392 indicates that the negative impact is not significant. This leads to the acceptance of the null hypothesis, thus rejection of the alternative. The researcher accepts that Non-performing loan does not significantly affect Profitability, and that such effect negative.

Hypotheses III

H_o: Loan loss provision does not significantly affects Profitability.

H_i: Loan loss provision significantly affects Profitability.

Computation

The test statistic is computed by STATA software and the results are as shown in Table 4.7.

Table 4.5: Regression Results on Audit Lag and Firm size.

Variable	Coefficient	t-test statistic	P-value
Llp	0.0036	0.35	0.726

Source: Extracted from table 4.3 (STATA Computations)

Decision

With a coefficient of 0.0036 the results indicate that loan loss provissionpositively impacts Profitability, while the probability value of 0.35 indicates that the positive impact is insignificantbecause it is greater than 0.05. This leads to the acceptance of the null hypothesis, thus rejecting the alterative hypothesis. The researcher accepts Loan loss provision does not significantly affect Profitability though such effect is negative.

4.3 Discussion of Findings

This study sought to empirically examine the relationships between Profitability and liquidity in deposit money bank in Nigeria. The study used forty five (45) Deposit money banks. The study adopted the multiple regression analysis and adopted pooled data regression estimation technique. The explanatory variables used in the model employed are Bank size (bksz), Non-performing loan (npl), and Loan loss provision (llp).

Decision to Hypothesis 1

With a coefficient of -0.0009 the results indicate that bank size negatively impacts profitability, while the probability value 0.345 indicates that the positive impact is significant. This leads to the non-acceptance of the alternative hypothesis, thus accepting

the null hypothesis that bank size insignificantly affects profitability and that such effect is negative.

Decision to Hypothesis II

With a coefficient of -0.0033 the results indicate that Non-performing loan negatively impacts profitability, while the probability value of 0.392 indicates that the negative impact is not significant. This leads to the rejection of the null hypothesis, thus acceptance of the alternative. The researcher reject that Non-performing loan does not significantly affect profitability, and that such effect positive.

Decision to Hypothesis III

With a coefficient of 0.0036 the results indicate that loan loss provision positively impacts profitability, while the probability value of 0.726 indicates that the negative impact is insignificant because it is greater than 0.05. This leads to the rejection of the null hypothesis, thus accepting the alternative hypothesis. The researcher rejects that loan loss provision does no significance to profitability, though such effect is positive.

CHAPTER FIVE

SUMMARY OF FINDINGS CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

Having examined liquidity and profitability of deposit money banks in Nigeria, the following findings from the study are summarized below:

i. Bank size has a significant effect on the profitability of Nigerian deposit money banks.

ii. Non-performing loans does not have a significant effect on the profitability of Nigerian deposit money banks

iii. Loan loss provisions have a significant effect on the profitability of Nigerian deposit money banks.

5.2 Conclusion

The peculiar nature of operation of deposit money banks differentiate them from other business firms whereas other business firms are able to control their liabilities; deposit money banks have very liquid control over their liquidities. This is because a high proportion of these liabilities are repayable on demand and as such volatile. In order to be profitable, banks must. Invest at least some proportion of these highly volatile funds into earning assets-loans and investment while at the same time retaining a proportion of these funds in nor-earning assets reserves to provide funds to meet payment obligations loan demand withdrawals.

The need then arises for the balancing out of assets-earning and non-earnings in such a manner as to satisfy the two basic requirements of commercial banks, liquidity and profitability. Another important factor that crops up is the differential relationship between yield and riskiness of assets. Highly profitable assets are less liquid and hence more risky, while less profitable assets are highly liquid and less risky.

5.3 Recommendations

The researcher therefore advances the following recommendations in line with the findings of the research:

i. Since bank size has a significant effect on the profitability of Nigerian deposit money banks therefore all deposit money banks should put size into consideration and expand when necessary so as to improve their profitability.

ii. Banks must put in place sound credit-granting process, strictly hold fast to know your customer (KYC) system, applying effective measures in measuring and monitoring of credit and ensure effective controls over credit risk.

iii. The deposit money bank should ensure guarantee of credits which would serve as a shield against credit loss of customer's fund. Small deposit money bank which are poorly capitalized should not offer certain categories of credit facilities. Thus, the worth of capital for a bank serves as a shield against loss of depositors‟ funds. Nigerian deposit money banks should be well capitalized even without the regulatory eyes of the authority.

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Appendix

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Cons	0.0424	0.0237	1.79	0.082	-0.0056	0.09044

Source: Researcher's computation using STATA (2022)