CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Banks are profit-making organizations performing as intermediaries connecting borrowers and lenders in bringing temporarily available resources from business and individual customers as well as providing loans for those in need of financial support (Uwuigbe, 2013; Driga, 2012). Banks play a vital role in developing economies like Nigeria, Ghana, Egypt and Algeria. Bank lending is very crucial for it make possible the financing of agricultural, industrial and commercial activities of the countries. Banks are entrusted with the funds of depositors. These funds are generally used by banks for their business. The fund belongs to the customers so a programme must exist for management of these funds. The programme must constantly address three basic objectives: liquidity, safety and income. Successful management calls for proper balancing of all these three. Liquidity enables the banks to meet loan demands of their valuable and long established customers who enjoy good credit standing. As a matter of fact a bank cannot remain in business if it neglects the credit function (Osayeme 2000).

Of interest to this paper is the credit component of the banks' portfolio that contributes to the profit of the banks and which led to the problem of bad debts in Nigerian banks as a result of poor management. Credit as the name implies is described as the right to receive payments or the obligation to make payments on demand or at some future date on account of the immediate transfer of goods or money another (Uwuigbe, Uwalomwa and Ben- Caleb, 2012). It is based on the faith and confidence, which the creditor reposes in the ability and willingness of the debtor to fulfill his promise to pay. In a credit transaction the right to receive payment and the obligation to make payments originate at the same time.

The term debt is frequently used in reference to debtor's obligation to make payment. Debt and credit are therefore similar terms. Management of credit is simply the application of four management principles which are planning, organizing directing and controlling to credit concept. Commercial banks are major players in the financial sector of every country's economy. The failure or success of these banks will to a large extent affect the financial sector and the economy at large. In recent times some commercial banks have been wound up leaving customers to their fate. It is important to note that the main reason of the

illiquidating of most of these banks is their inefficient and ineffective management of their capital-funds and credits. Many of them write off huge amounts of debt yearly and also reflect some going concern issues that relate to their management of credit and finance. It is in the light of the above, that this study examined the relationship between credit management and bank performance in Nigeria.

1.2 STATEMENT OF THE PROBLEM

Banks exist not only to accept deposit, but also to grant credit facilities, these business activities therefore inevitably expose banks to huge credit risks which might lead to financial distress, including bankruptcy. Two types of risk are typically identified when considering banks loans than any other banking business. Firstly, is the credit risk, that is, the possibility that promised payment will not be made. Secondly, another type of risk is the liquidity pressure associated with bank loans. The demand for bank loans is typically higher in boom periods when tight monetary policy causes security price and the rate of deposit growth to decline.

However, despite the creation of risk management department in all the banks which is responsible for managing the banks' risks, including credit risks, available record show that the spate of bad loans (non-performing loans) was as high as 35% in Nigerian deposit banks between 1999 and 2009 Sanusi (2010). The increasing level of non-performing loan rates in banks' books, poor loan processing, inadequate or absence of loan collaterals among other factors are linked with poor and ineffective credit risks management that negatively impacts on bank performances.

Therefore, in this research work, proper investigation will be carried out to look into some other areas rather, where works put forward in this area has not been properly treated. Most of these areas include the following;

1. The impact non-performing loans have on the performance of banks in Nigeria
2. The impact liquidity level has on the performance of banks in Nigeria
3. The impact bad debts have on the performance of banks in Nigeria
4. The impact capital adequacy has on the performance of banks in Nigeria.

1.3 RESEARCH QUESTIONS

The research questions gathered for the purpose of this study are as follows;

1. Do non-performing loans have any impact on the performance of banks in Nigeria?
2. Do bad debts have any impact on the performance of banks in Nigeria?
3. Does capital adequacy have any impact on the performance of banks in Nigeria?
4. Does liquidity level have any impact on the performance of banks in Nigeria?

1.4 OBJECTIVES OF THE STUDY

The major objective of this study is to examine the impact of credit management on the performance of the Nigerian banking sector. The specific objectives, however, to;

I. Determine the impact of non-performing loans on performance of banks in Nigeria

II. Determine the impact of bad debts on performance of banks in Nigeria

III. Determine the impact of capital adequacy on performance of banks in Nigeria

IV. Determine the impact of banks liquidity on performance of banks in Nigeria

1.5 RESEARCH HYPOTHESES

For the purpose of this study which seeks to evaluate the impact of credit management on the performance of the Nigerian banking sector, the following hypotheses have been formulated and will be tested based on the data that will be gathered by the researcher.

$H0_1$: Non-performing loans (NPLN) have no impact on the Return on Equity (ROE) of the Nigerian banking sector

$H0_2$: Total Bad debts (TBDR) have no impact on the Return on Equity (ROE) of banks in Nigeria

$H0_3$: Capital adequacy (CPAD) has no impact on the Return on Equity (ROE) of banks in Nigeria

$H0_4$: Liquidity level (LQDL) has no impact on the Return on Equity (ROE) of

banks in Nigeria

1.6 SCOPE OF THE STUDY

As this study intends to determine the impact of credit management on the performance of the Nigerian banking sector, this study will focus on the outside influences on the credit management of banks in terms of non-performing loans, bad debts, liquidity level and an extra internal influence which will be measured by the banks' capital adequacy. Therefore, non- performing loans, bad debts, liquidity level and capital adequacy will be used to measure banks' credit management, while bank performance for the purpose of this study will be measured by the return on equity (ROE) which is the earning power of the shareholders' equity (i.e. the amount of money that shareholders' fund is able to generate yearly). Also for the purpose of this study, secondary data will be gathered from ten (10) banks listed on the Nigerian Stock Exchange and would be studied for a selected period of seven (7) years spread between 2008- 2014. This will result in a total of seventy (70) observations provided that there are no missing data during the selected periods.

1.7 SIGNIFICANCE OF THE STUDY

Generally, every bank in Nigeria gears their financial operations their performances. However, risk is an inevitable phenomenon in the banking industry today, as their major operations involve safe-keeping and investments of funds. One of the major activities of banks in Nigeria is the giving-out of loans to the general public with strict interest rates and terms of payment attached to such loans. Despite these strict interest rates and terms of payment, most failed banks over the years have been diagnosed of high non-performing loans and bad debts weighing down the profitability of such banks. The significance of this study will be evident in the fact that its result will demonstrate how;

1. Banks will be able to establish very strict credit management policies which must not only minimize any tendency of incurring losses of non-performing loans, but also to improve the performance of banks.
2. Banks will hence emphasize the security of loans, ensuring that collaterals are valuable and easily convertible to cash or cash equivalents

at the expiration of the obligation, in cases where customers are unable to fulfill their own end of the obligation.

3. Banks will be very careful as to ensure that the rate of bad debts written-off drastically, as it will reduce the burden on the profitability of the banks. This is evident in the fact that bad debts are charged against profit in the banks' year-end financial statements.

4. Finally, this study will through its result, create an understanding of the relationship between credit management and the performance of banks in Nigeria, to enable banking firms determine such areas to focus on in order to improve their performance.

1.8 LIMITATIONS OF THE STUDY

Conducting an academic research of this nature cannot be without certain factors that affects both the research process and the intended result. This study however is not an exception as the researcher faces the following challenges;

Financial constrain which is a major set-back in most privately funded

academic research works. In this study however, decided to focus on only secondary data through the use of annual reports of the selected banks and also, the annual statistical bulletin of the Central Bank of Nigeria (CBN) due to financial constrain.

Inadequate information is another major set-back of this research and the researcher in this case, encountered some problems trying to gather information from the annual reports of the selected banks on the selected variables, as the terminologies for these variables differ from one bank to another but with the same interpretation. Also, the measure of performance i.e. the return on equity (ROE) is purely accounting in nature, and may not in all cases reflect the true performance of the selected banks in practical reality.

The limited time available to conclude this study is another area of concern as the researcher is expected to conclude this research within a short period of time, in a bid to fulfill the requirement for the award of a bachelor degree. The researcher, hence, will have to conclude this study within the stipulated time.

1.9 DEFINITION OF TERMS

For an in-depth understanding of this study, here is a conceptual definition of key terms used in this study;

Credit Management: Credit management is defined as the identification, measurement, monitoring and controlling of risks arising from the possibility of default in loan repayment. It could also be viewed as the procedure of ensuring that buyers pay on time, credit cost are kept low, and poor debts are managed in such a manner that payments are received without damaging the relationship with that buyer.

Non-Performing Loans: It is a loan that is in default or close to being on default. It is the type of loan such that payment of interest and principal are yet to be ascertained after 90 days or more, or at least 90 days of interest have been capitalized.

Bad Debts: A debt is declared "bad" when it cannot be or is improbable to be recovered from the debtor. Debts can become bad as a result of factors that are usually related to the debtor's inability to fulfill his own part of the obligation. Such factors range from death to bankruptcy and also, imprisonment of the debtor. When this occurs, it becomes evident to the creditor that such debts cannot

be recovered in part or full again.

Liquidity: It is a measure of short-term solvency. It indicates the extent to which claims of the creditors are covered by assets that are expected to be converted to cash within a period roughly equal to the maturity of the claim. The core responsibility of the Nigerian banking industry is to ensure liquidity. The liquidity position of a bank will determine the amount of loans and advances it can give out at every given point in time.

Capital Adequacy: It is also an independent variable and is chosen because it is the core measure of a bank's financial strength from a regulator's point of view. Capital adequacy ratio consists of the types of financial capital considered as the most reliable and liquid, primarily shareholders' equity. Bank with good Capital Adequacy Ratio have good profitability. With good capital requirement, commercial banks are able to absorb loans that have gone bad.

1.10 ORGANISATION OF THE STUDY

This study is organized into five different chapters in an attempt to investigate whether credit management has a significant effect on the

performance of the Nigerian banking industry. The remainder of this study will be organized as follows.

The second chapter (i.e. review of literature) will be organized into five sections, including a brief introduction to the current status of the study, a conceptual framework on credit management and performance of banks in Nigeria, a theoretical framework with theories of credit management and their relationship with the study. Lastly, an empirical framework on the measures of credit management such as the non-performing loans, the total bad debts written-off, the banks' liquidity level and capital adequacy and their relationship with banks' performance.

The third chapter (i.e. research methodology) will be organized into an introduction, and statements on the research design to be employed in the study, the population and sample size to be studied, the sampling technique with which the study sample is to be drawn, and the technique to be used for data collection and analysis.

The fourth chapter (i.e. data presentation and analysis) will be organized into an introduction, data presentation, data analysis, test of hypotheses already

formulated, and a summary of the research findings. The last chapter of this study will include the discussion of findings, conclusion on findings and recommendation of areas for further research.

1.11 SUMMARY

This study which aims at determining the effect of credit management on the performance of banks in Nigeria have been critically examined from the

background of the study, and four research hypotheses have been formulated for the purpose of this study. It has also been established that secondary data will be gathered from the annual reports of ten (10) selected banks listed on the Nigerian Stock Exchange (NSE) for a period of seven (7) years i.e. 2008-2014, resulting in 70 observations. The next chapter will introduce us to a comprehensive review of prior literatures relating to this area of study.

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

In studying the effect of credit management on the performance of the Nigerian banking sector, it is central to note that basically, banks are in place not only to accept deposits but also to grant credit facilities, and hence they are exposed to credit risk. This occurrence is common in emerging economies such as Nigeria, Ghana, and Egypt etc. However, despite the series challenges that have bedeviled the industry, the banking industry have continued to play a crucial role in the economic development of economies (e.g. Nigeria). This is because, simultaneously satisfy the needs and preferences of both surplus and deficit units (Owojori, Akintoye and Adidu 2011)

This chapter aims at giving us a very comprehensive overview of the concept of credit management in the banking industry and how it has been affecting the performance of banks in the industry, Emphases on this area of study will through this study create links between prior findings from the most previous to the most recent as presented in paragraphs above. However, the content of this

chapter will be structured into three major sections (i.e. the conceptual framework, theoretical framework and empirical framework).

2.1 CONCEPTUAL REVIEW

2.1.1 CREDIT MANAGEMENT

Credit management is the process for controlling and collecting payments from your customers. A good credit management system will help you reduce the amount of capital tied up with debtors (people who owe you money) and minimize your exposure to bad debts. It is a function performed within a company to improve and control credit policies that will lead to increased revenues and lower risk including increasing collections, reducing credit costs, extending more credit to creditworthy customers, and developing competitive credit terms. Through credit control otherwise known as credit management, it is sometimes possible to increase sales by granting credit to selected clients who may choose to do business with you because of the convenience offered by a credit account. If you choose to provide this option be sure to develop a sound credit application process which includes a thorough check of client credit ratings

before granting approval.

2.1.2 CREDIT RISK

Credit risk is the current and prospective risk to earnings or capital arising from an obligor's failure to meet the terms of any contract with the bank or otherwise to perform as agreed. Credit risk is found in all activities in which success depends on counterparty, issuers, or borrower performance. It arises any time bank funds are extended, committed, invested, or otherwise exposed through actual or implied contractual agreements, whether reflected on or off the balance sheet. Thus risk is determined by factor extraneous to the bank such as general unemployment levels, changing socio-economic conditions, debtors' attitudes and political issues.

Credit risk refers to the risk that a borrower will default on any type of debt by failing to make required payments. The risk is primarily that of the lender and includes lost principal and interest, disruption to cash flows, and increased collection costs.

When we speak of the credit quality of an obligation, this refers generally to the

counterparty's ability to perform on that obligation. This encompasses both the obligation's default probability and anticipated recovery rate. To place credit exposure and credit quality in perspective, recall that every risk comprise two elements: exposure and uncertainty. For credit risk, credit exposure represents the former, and credit quality represents the latter.

For loans to individuals or small businesses, credit quality is typically assessed through a process of credit scoring. Prior to extending credit, a bank or other lender will obtain information about the party requesting a loan. In the case of a bank issuing credit cards, this might include the party's annual income, existing debts, whether they rent or own a home, etc. A standard formula is applied to the information to produce a number, which is called a credit score. Based upon the credit score, the lending institution will decide whether or not to extend credit. The process is formulaic and standardized.

Many forms of credit risk especially those associated with larger institutional counterparties are complicated, unique or are of such a nature that it is worth assessing them in a less formulaic manner. The term credit analysis is used to describe any process for assessing the credit quality of counterparty. While the

term can encompass credit scoring, it is more commonly used to refer to processes that entail human judgment. One or more people, called credit analysts, will review information about the counterparty. This might include its balance sheet, income statement, recent trends in its industry, the current economic environment, etc. They may also assess the exact nature of an obligation. For example, senior debt generally has higher credit quality than those subordinated debt of the same issuer. Based upon this analysis, the credit analysts assign the counterparty (or the specific obligation) a credit rating, which can be used for making credit decisions.

Many banks, investment managers and insurance companies hire their own credit analysts who prepare credit ratings for internal use. Other firms including; Standard & Poor's, Moody's and Fitchare in the business of developing credit ratings for use by investors or other third parties. These firms are called **credit rating agencies.** Institutions that have publicly traded debt hire one or more of them to prepare credit ratings for their debt. Those credit ratings are then distributed for little or no charge to investors. Some regulators also develop credit ratings. In the United States, the National Association of Insurance

Commissioners publishes credit ratings that are used for calculating capital charges for bond portfolios held by insurance companies.

2.1.3 CREDIT RISK AND THE BANKING INDUSTRY

Credit risk according to Basel Committee of Banking Supervision BCBS (2001) and Gastineau (1992) 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. Basel Committee on Banking Supervision- BCBS (1999) defined credit risk as the potential that a bank borrower or counterparty will fail to meet its obligations in accordance with agreed terms. Heffernan (1996) observe that credit risk as the risk that an asset or a loan becomes irrecoverable in the case of outright default, or the risk of delay in the servicing of the loan. In either case, the present value of the asset declines, thereby undermining the solvency of a bank. Credit risk is critical since the default of a small number of important customers can generate large losses, which can lead to insolvency (Bessis, 2002).

BCBS (.1999) observed that banks are increasingly facing credit risk (or counterparty risk) in various financial instruments other than loans, including acceptances, interbank transactions, trade financing foreign exchange transactions, financial futures, swaps, bonds, equities, options, and in the extension of commitments and guarantees, and the settlement of transaction. Anthony (1997) asserts that credit risk arises from non-performance by a borrower. It may arise from either an inability or an unwillingness to perform in the pre-committed contracted manner. Brown-bridge (1998) claimed that the single biggest contributor to the bad loans of many of the failed local banks was insider lending. He further observed that the second major factor contributing to bank failure were the high interest rates charged to borrowers operating in the high-risk. The most profound impact of high non-performing loans in banks portfolio is reduction in the bank profitability especially when it comes to disposals.

Robert and Gary (1994) state that the most obvious characteristics of failed banks are not poor operating efficiency, however, but an increased volume of non-performing loans. Nonperforming loans in failed banks have typically been

associated with regional macroeconomic problems. DeYoung and Whalen (1994) observed that the US Office of the Comptroller of the Currency found the difference between the failed banks and those that remained healthy or recovered from problems was the caliber of management. Superior mangers not only run their banks in a cost efficient fashion, and thus generate large profits relative to their peers, but also impose better loan underwriting and monitoring standards than their peers which result to better credit quality.

Bobakovia (2003) asserts that the profitability of a bank depends on its ability to foresee, avoid and monitor risks, possible to cover losses brought about by credit risk. The banks supervisors are well aware of this problem, it is however very difficult to persuade bank mangers to follow more prudent credit policies during an economic upturn, especially in a highly competitive environment. They claim that even conservative mangers might find market pressure for higher profits very difficult to overcome.

The deregulation of the financial system in Nigeria embarked upon from 1986 allowed the influx of banks into the banking industry. As a result of alternative interest rate on deposits and loans, credits were given out

indiscriminately without proper credit appraisal (Philip, 1994). The resultant effects were that many of these loans turn out to be bad. It is therefore not surprising to find banks to have non-performing loans that exceed 50 per cent of the bank's loan portfolio. The increased number of banks over-stretched their existing human resources capacity which resulted into many problems such as poor credit appraisal system, financial crimes, accumulation of poor asset quality among others (Sanusi, 2002). The consequence was increase in the number of distressed banks.

A high level of financial leverage is usually associated with high risk. This can easily be seen in a situation where adverse rumours, whether founded or precipitated financial panic and by extension a run on a bank. According to Umoh (2002) and Felix and Claudine (2008) few banks are able to withstand a persistent run, even in the presence of a good lender of last resort. As depositors take out their funds, the bank hemorrhages and in the absence of liquidity support, the bank is forced eventually to close its doors. Thus, the risks faced by banks are endogenous, associated with the nature of banking business itself, whilst others are exogenous to the banking system.

In a collaborative study by the CBN and the Nigeria Deposit Insurance Corporation (NDIC) in 1995, operators of financial institutions confirmed that bad loans and advances contributed most to the distress. In their assessment of factors responsible for the distress, the operators ranked bad loans and advances first, with a contribution of 19.5%.

Therefore, the determinants of bank performance have attracted the interest of academic research as well as of bank management. Studies dealing with internal determinants employ variables such as size, capital, credit risk management and expenses management. The need for risk management in the banking sector is inherent in the nature of the banking business. Poor asset quality and low levels of liquidity are the two major causes of bank failures and represented as the key risk sources in terms of credit and liquidity risk and attracted great attention from researchers to examine the their impact on bank profitability.

Credit risk is by far the most significant risk faced by banks and the success of their business depends on accurate measurement and efficient management of this risk to a greater extent than any other risk (Giesecke, 2004). Increases in

credit risk will raise the marginal cost of debt and equity, which in turn increases the cost of funds for the bank (Basel Committee, 1999).

To measure credit risk, there are a number of ratios employed by researchers. The ratio of Loan Loss Reserves to Gross Loans (LOSRES) is a measure of bank's asset quality that indicates how much of the total portfolio has been provided for but not charged off. Indicator shows that the higher the ratio the poorer the quality and therefore the higher the risk of the loan portfolio will be. In addition, Loan loss provisioning as a share of net interest income (LOSRENI) is another measure of credit quality, which indicates high credit quality by showing low figures. In the studies of cross countries analysis, it also could reflect the difference in provisioning regulations (Demirgiic-Kunt, 1999).

Assessing the impact of loan activities on bank risk, Brewer (1989) uses the ratio of bank loans to assets (LTA). The reason to do so is because bank loans are relatively illiquid and subject to higher default risk than other bank assets, implying a positive relationship between LTA and the risk measures. In contrast, relative improvements in credit risk management strategies might suggest that LTA is negatively related to bank risk measures (Altunbas, 2005). Bourke (1989)

reports the effect of credit risk on profitability appears clearly negative This result may be explained by taking into account the fact that the more financial institutions are exposed to high risk loans, the higher is the accumulation of unpaid loans, implying that these loan losses have produced lower returns to many commercial banks (Miller and Noulas, 1997). The findings of Felix and Claudine (2008) also shows that return on equity ROE and return on asset ROA all indicating profitability were negatively related to the ratio of non-performing loan to total loan NPL/TL of financial institutions therefore decreases profitability.

In response to this, commercial banks have almost universally embarked upon an upgrading of their risk management and control systems. Also, it is in the realization of the consequence of deteriorating loan quality on profitability of the banking sector and the economy at large that this research work is motivated.

2.1.4 CAUSES OF MAJOR CREDIT PROBLRMS IN THE BANKING INDUSTRY

Most major banking problems have been either explicitly or indirectly caused by

weaknesses in credit risk management. In supervisors' experience, certain key problems tend to recur. Severe credit losses in a banking system usually reflect simultaneous problems in several areas, such as concentrations, failures of due diligence and inadequate monitoring. This section summarizes some of the most common problems relating to the broad areas of concentrations, credit processing, and market- and liquidity-sensitive credit exposures.

Concentrations

Concentrations are probably the single most important cause of major credit problems. Credit concentrations are viewed as any exposure where the potential losses are large relative to the bank's capital, its total assets or, where adequate measures exist, the bank's overall risk level. Relatively large lossesl5 may reflect not only large exposures, but also the potential for unusually high percentage losses given default. Credit concentrations can further be grouped roughly into two categories:

Conventional credit concentrations: would include concentrations of credits to single borrowers or counterparties, a group of connected counterparties, and sectors or industries, such as commercial real estate, and oil and gas.

Concentrations based on common or correlated risk factors: reflect subtler or more situation- specific factors, and often can only be uncovered through analysis. Disturbances in Asia and Russia in late 1998 illustrate how close linkages among emerging markets under stress conditions and previously undetected correlations between market and credit risks, as well as between those risks and liquidity risk, can produce widespread losses. Examples of concentrations based on the potential for unusually deep losses often embody factors such as leverage, optionality, correlation of risk factors and structured financings that concentrate risk in certain tranches. For example, a highly leveraged borrower will likely produce larger credit losses for a given severe price or economic shock than a less leveraged borrower whose capital can absorb a significant portion of any loss. The onset of exchange rate devaluations in late 1997 in Asia revealed the correlation between exchange rate devaluation and declines in financial condition of foreign exchange derivative counterparties resident in the devaluing country, producing very substantial losses relative to notional amounts of those derivatives. The risk in a pool of assets can be concentrated in a securitization into subordinated tranches and claims on

leveraged special purpose vehicles, which in a downturn would suffer substantial losses.

Credit Process Issues

Many credit problems reveal basic weaknesses in the credit granting and monitoring processes. While shortcomings in underwriting and management of market-related credit exposures represent important sources of losses at banks, many credit problems would have been avoided or mitigated by a strong internal credit process.

An example of the problem is the expanded use of credit-scoring models in consumer lending in the United States and some other countries. Large credit losses experienced by some banks for particular tranches of certain mass-marketed products indicate the potential for scoring weaknesses. Some credit problems arise from subjective decision-making by senior management of the bank. This includes extending credits to companies they own or with which they are affiliated, to personal friends, to persons with a reputation for financial acumen or to meet a personal agenda, such as cultivating special relationships with celebrities.

Many banks that experienced asset quality problems in the 1990s lacked an effective credit review process (and indeed, many banks had no credit review function). Credit review at larger banks usually is a department made up of analysts, independent of the lending officers, who make an independent assessment of the quality of a credit or a credit relationship based on documentation such as financial statements, credit analysis provided by the account officer and collateral appraisals. At smaller banks, this function may be more limited and performed by internal or external auditors. The purpose of credit review is to provide appropriate checks and balances to ensure that credits are made in accordance with bank policy and to provide an independent judgment of asset quality, uninfluenced by relationships with the borrower. Effective credit review not only helps to detect poorly underwritten credits, it also helps prevent weak credits from being granted, since credit officers are likely to be more diligent if they know their work will be subject to review.

A related problem is that many banks do not take ***sufficient account of business cycle effects*** in lending. As income prospects and asset values rise in the ascending portion of the business cycle, credit analysis may incorporate

overly optimistic assumptions. Many Industries such as; retailing, commercial real estate and real estate investment trusts, utilities, and consumer lending often experience strong cyclical effects. Sometimes the cycle is less related to general business conditions than the product cycle in a relatively new, rapidly growing sector, such as health care and telecommunications. Effective stress testing which takes account of business or product cycle effects is one approach to incorporating into credit decisions a fuller understanding of a borrower's credit risk. More generally, many underwriting problems reflect the absence of a ***thoughtful consideration of downside scenarios.*** In addition to the business cycle, borrowers may be vulnerable to changes in risk factors such as specific commodity prices, shifts in the competitive landscape and the uncertainty of success in business strategy or management direction. Many lenders fail to "stress test" or analyze the credit using sufficiently adverse assumptions and thus fail to detect vulnerabilities.

Market and Liquidity-Sensitive Credit Exposures

Market and liquidity-sensitive exposures pose special challenges to the credit processes at banks. Market-sensitive exposures include foreign exchange

and financial derivative contracts. Liquidity-sensitive exposures include margin and collateral agreements with periodic margin calls, liquidity back-up lines, commitments and some letters of credit, and some unwind provisions of securitizations. An issue faced by virtually all financial institutions is the need to develop ***meaningful measures of exposure*** that can be compared readily with loans and other credit exposures. This problem is described at some length in the Basel Committee's January 1999 study of exposures to highly leveraged institutions. Market-sensitive instruments require a ***careful analysis of the customer's willingness and ability to pay.*** Most market-sensitive instruments, such as financial derivatives, are viewed as relatively sophisticated instruments, requiring some effort by both the bank and the customer to ensure that the contract is well understood by the customer. The link to changes in asset prices in financial markets means that the value of such instruments can change very sharply and adversely to the customer, usually with a small, but non-zero probability.

Liquidity-sensitive credit arrangements or instruments require a ***careful analysis of the customer's vulnerability to liquidity stresses,*** since the bank's

funded credit exposure can grow rapidly when customers are subject to such stresses. Such increased pressure to have sufficient liquidity to meet margin agreements supporting over-the-counter trading activities or clearing and settlement arrangements may directly reflect market price volatility. In other instances, liquidity pressures in the financial system may reflect credit concerns and a constricting of normal credit activity, leading borrowers to utilize liquidity backup lines or commitments. Market- and liquidity-sensitive instruments change in riskiness with changes in the underlying distribution of price changes and market conditions. For market-sensitive instruments, for example, increases in the volatility of price changes effectively increases potential exposures. Consequently, banks should conduct ***stress testing of volatility assumptions.*** Market- and liquidity-sensitive exposures, because they are probabilistic, can be correlated with the creditworthiness of the borrower. This is an important insight gained from the market turmoil in Asia, Russia and elsewhere in the course of 1997 and 1998. That is, the same factor that changes the value of a market- or liquidity-sensitive instrument can also influence the borrower's financial health and future prospects.

2.2.5 CONCEPT OF THE RESEARCH VARIABLES

Non-Performing Loans

Non-Performing Loans (NPL) is an independent variable and it is chosen because it is an indicator of credit risk management. NPL, in particular, indicates how banks manage their credit risk because it defines the proportion of loan losses amount in relation to Total Loan amount (Hosna *et al.,* 2009). We expected non-performing loans to have an adverse relationship with RCBs performing.

Bad debts

The term debt is frequently used in reference to debtor's obligation to make payment. Debt and credit are therefore similar terms. Management of credit is simply the application of four management principles which are planning, organizing directing and controlling to credit concept. Commercial banks are major players in the financial sector of every country's economy. The failure or success of these banks will to a large extent affect the financial sector and the

economy at large. In recent times some commercial banks have been wound up leaving customers to their fate. It is important to note that the major cause of the winding up of some of these banks is the poor management of their finance and credit. The reason for the failure of these banks has sparked the interest of the researcher in conducting further studies into the management of finance and credit in Nigerian banks. It is in the light of the above, that this study examined the relationship between credit management and bank performance in Nigeria.

Capital Adequacy Ratio

Capital Adequacy Ratio (CAR) is also an explanatory variable and is chosen because it is the core measure of a bank's financial strength from a regulator's point of view. Capital adequacy ratio consists of the types of financial capital considered as the most reliable and liquid, primarily shareholders' equity. Bank with good Capital Adequacy Ratio have good profitability. With good capital requirement, commercial banks are able to absorb loans that have gone bad.

Return on Equity (ROE)

Return on Equity (ROE) represents an explained variable and it measures

the return on shareholders' investment in the bank. ROE was used as the indicator of the profitability in the regression analysis because ROE along- with ROA has been widely used in earlier research (Altunbas, 2005). It shows the effectiveness of management in the utilization of the funds contributed by shareholders of a rural bank.

2.2 THEORETICAL FRAMEWORK

2.2.1 PORTFOLIO THEORY

Since the 1980s, companies have successfully applied modern portfolio theory to market risk. Many companies are now using value at risk models to manage their interest rate and market risk exposures. Unfortunately, however, even though credit risk remains the largest risk facing most companies, the practice of applying modern portfolio theory to credit risk has lagged (Margrabe, 2007). Traditionally, organizations have taken an asset-by-asset approach to credit risk management. While each company's method varies, in general this approach involves periodically evaluating the quality of credit exposures, applying a credit risk rating, and aggregating the results of this analysis to identify

a portfolio's expected losses. The foundation of the asset-by-asset approach is a sound credit review and internal credit risk rating system. This system enables management to identify changes in individual credits, or portfolio trends in a timely manner. Based on the changes identified, credit identification, credit review, and credit risk rating system management can make necessary modifications to portfolio strategies or increase the supervision of credits in a timely manner. While the asset-by-asset approach is a critical component to managing credit risk, it does not provide a complete view of portfolio credit risk, where the term risk refers to the possibility that actual losses exceed expected losses.

2.2.2 ARBITRAGE PRICING THEORY (APT)

A more interesting alternative was the Arbitrage Pricing Theory (APT) of Ross (1976). Stephen Ross's APT approach moved away from the risk vs. return logic of the CAPM, and exploited the notion of pricing by arbitrage to its fullest possible extent. As Ross himself has noted, arbitrage-theoretic reasoning is not unique to this particular theory but is in fact the underlying logic and

methodology of virtually all of finance theory. This theory subscribes to the fact that an estimate of the benefits of diversification would require that practitioners calculate the covariance of returns between every pair of assets. In their Capital Asset Pricing Model (CAPM), Morris (2001) solved this practical difficulty by demonstrating that one could achieve the same result merely by calculating the covariance of every asset with respect to a general market index. With the necessary calculating power reduced to computing these far fewer terms (betas), optimal portfolio selection became computationally feasible.

2.2.3 Information Theory

Derban, Binner and Mullineux (2005) recommended that borrowers should be screened especially by banking institutions in form of credit assessment. Collection of reliable information from prospective borrowers becomes critical in accomplishing effective screening as indicated by symmetric information theory. Qualitative and quantitative techniques can be used in assessing the borrowers although one major challenge of using qualitative models is their subjective nature. However according to Derban, Binner and Mullineux (2005),

borrowers attributes assessed through qualitative models can be assigned numbers with the sum of the values compared to a threshold. This technique minimizes processing costs, reduces subjective judgments and possible biases.

2.3 EMPIRICAL REVIEW

It is universally acknowledged that the banking industry plays a catalytic role in the process of economic growth and development (Uwuigbe, Uwuigbe and Daramola, 2014). This acknowledgement is reinforced by contemporary conceptualization to the effect that banks are veritable vehicles for mobilizing resources (funds) from surplus units and channeling them to deficit units. These resources belong to customers so a programme must exist for the management of these funds.

Prior studies suggests that a good credit risk architecture, policies and structure of credit risk management, credit rating system, monitoring and control contributes to the success of credit risk management system Bachi (2003). Similarly, Muninarayanappa and Nirmala (2004) in a related study opined that the success of credit risk management require maintenance of proper credit risk

environment, credit strategy and policies. Thus the ultimate aim should be to protect and improve the loan quality. In the same vein, findings from Salas and Saurina (2002) revealed that growth in GDP, rapid credit expansion, bank size and capital ratio had a significant impact on the non-performing loans.

Felix and Claudine (2008) examined the association between the performance of banks and credit risk management. As part of their findings, they observed that return on equity and return on assets both measuring profitability were inversely related to the ratio of non-

performing loans to total loans of financial institutions thereby leading to a decline in profitability. Also, Hosna, et al. (2009) in their study opined that credit risk has a significant positive effect on the profitability of commercial banks in Sweden. Correspondingly, Kithinji (2010) examined the effects of credit risk management on commercial banks profitability in Kenya. They observed that the level of credit was high in the early years of the implementation of Basle II but decreased significantly in 2007 and 2008, probably when the Basle II was implemented by commercial banks. The findings revealed that the bulk of the profits of commercial banks are not influenced by the amount of credit and non-performing loans suggesting that other variables other than credit and non-performing loans impact on profits. Funso et al. (2012) investigates the quantitative effect of credit risk on the performance of commercial banks in Nigeria for the period 2000-2010. Findings from their study showed that the effect of credit risk on bank performance measured by the return on assets of banks is cross sectional invariant.

Robert and Gary (1994) stated that most obvious characteristics of failed banks are not poor operating efficiency, however, but an increased volume of non-performing loans. Nonperforming loans in failed banks have typically been associated with regional macroeconomic problems. Koehn and

Santomero (1980), Kim and Santomero (1988) and Athanasoglou et al. (2005), suggest that bank risk taking has pervasive effects on bank profits and safety. Bobakovia (2003) asserts that the profitability of a bank depends on its ability to foresee, avoid and monitor risks, possible to cover losses brought about by risk arisen.

In Nigeria, Kargi (2011) examined the impact of credit risk on the profitability of Nigerian banks. Findings from the study revealed that credit risk management has a significant impact on the profitability of Nigerian banks. Hence, they opined that banks' profitability is inversely influenced by the levels of loans and advances, non-performing loans and deposits thereby exposing them to great risk of illiquidity and distress. Although, some considerable amount of literature exists on the interaction between finance and credit management on banks liquidity position, however, the same is not true in developing economies like Nigeria where there is a relatively dearth in literature in this area, coupled with the huge institutional differences between Nigeria and other developed economies.

The deregulation of the financial system in Nigeria embarked upon from 1986 allowed the influx of banks into the banking industry. As a result of alternative interest rate on deposits and loans, credits were given out indiscriminately without proper credit appraisal (Philip, 1994). The resultant

effects were that many of these loans turn out to be bad. It is therefore not surprising to find banks to have non-performing loans that exceed 50 per cent of the bank's loan portfolio.

A high level of financial leverage is usually associated with high risk. This can easily be seen in a situation where adverse rumours, whether founded or precipitated financial panic and by extension a run on a bank.

Owojori et al (2011) highlighted that available statistics from the liquidated banks clearly showed that inability to collect loans and advances extended to customers and directors or companies related to directors/managers was a major contributor to the distress of the liquidated banks. At the height of the distress in 1995, when 60 out of the 115 operating banks were distressed, the ratio of the distressed banks' non-performing loans and leases to their total loans and leases was 67%. The ratio deteriorated to 79% in 1996; to 82% in 1997; and by December 24th the licenses of 35 of the distressed banks had been revoked. In 2003, only one bank (Peak Merchant Bank) was closed. No bank was closed in the year 2004. Therefore, the number of banking licenses revoked by the CBN since 1994 remained at 36 until January 2006, when licenses of 14 more banks were revoked, following their failure to meet the minimum recapitalization directive of the CBN. At the time, the banking licenses were revoked, some of the banks had ratios of performing credits that

were less than 10% of loan portfolios. In 2000 for instance, the ratio of non-performing loans to total loans of the industry had improved to 21.5% and as at the end of 2001, the ratio stood at 16.9%. In 2002, it deteriorated to 21.27%, 21.59% in 2002 and in 2004, the ratio was 23.08% (NDIC Annual Reports-various years).

In a collaborative study by the CBN and the Nigeria Deposit Insurance Corporation {NDIC} in 1995, operators of financial institutions confirmed that bad loans and advances contributed most to the distress. In their assessment of factors responsible for the distress, the operators ranked bad loans and advances first, with a contribution of 19.5%.

The role of bank remains central in financing economic activity and its effectiveness could exert positive impact on overall economy as a sound and profitable banking sector is better able to withstand negative shocks and contribute to the stability of the financial system (Athanasoglou et al, 2005). Increases in credit risk will raise the marginal cost of debt and equity, which in turn increases the cost of funds for the bank (Basel Committee, 1999).

2.4 SUMMARY

This chapter has introduced us to the current state of this area of study and the current state of credit risk management in the Nigerian banking industry as we have previously established in through the study of Kargi (2011) that credit risk management has a significant impact on the profitability of Nigerian banks. So, the next chapter of this study intends to establish the methodology that will be used in achieving the objectives of this research.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

For every form of research, there must be a methodology for data collection and analysis, which will also provide the basis for testing hypotheses and drawing conclusions. However, research methodology is the process used to collect data and information for analysis, in order to test the previously formulated hypotheses and to draw conclusions for decision making purposes. It refers to the systematic rules and procedures upon which a research is based against which claims for knowledge assumption are proved in favor of a decision (Asika, 2004).

Research involves a process of asking and answering questions that may lead to interplay between inductive and deductive thinking, the methods used in answering such questions is what brings about research methodology. Hence, research methodology is a way to find out the result of a given test carried out on a specific matter referred to as research problem. It is basically a way of searching or solving a research problem (Industrial Research Institute, 2010). While Bryman and Bell (2007) believes that research methodology is the framework for collecting and analyzing data. The research design appropriately explains the way a researcher gathers evidence and arrive at

conclusion. For the purpose of studying the effect of credit management on the performance of the Nigerian banking sector, this chapter focuses on the methodology used for this research work. It involves the methods and procedures for carrying out this study which consists of the following: Research design, population and sample size, sample techniques, method of data collection and technique of data analysis.

3.2 RESEARCH DESIGN

A research design is a systematic plan to study a scientific problem; it can be described as the. Program guides the researcher in the process of collecting, analyzing and interpreting data. A research design is basically the overall framework for answering question or testing the research hypothesis. The type of research design adopted in this study is the ex-post facto research design. The ex-post facto research design is used because this study involves an empirical study of the effect that credit management has on the performance of the Nigerian banking sector.

Furthermore, the research approach taken by any researcher will be a factor of the technique adopted. There are two fundamental approach associated with the quantitative research technique: the inductive and the deductive approach (Saunders, Lewis and Thornhill 2012). Deductive approach focuses of testing already formulated theories with a view to accepting or rejecting

them through a range of formulated research objectives, questions, and research hypotheses. In this study, the researcher formulates the hypotheses and questions to test the theories of capital structure with a view to rejecting or accepting them. Consequently, the deductive research approach is adopted in line with the authors mentioned above. In addition, the researcher is highly objective as much as possible and independent of the variables being observed to establish unbiased results. This means the researcher's approach focuses on positivism philosophy, a term usually associated with deductive approach.

3.3 POPULATION AND SAMPLE SIZE

This research work will be focusing on the ten selected banks in the Nigerian banking industry, currently listed on the Nigerian stock exchange (NSE). Hence, the population size is a total o: ten (10) banks currently listed on the Nigerian Stock Exchange (NSE) and which includes the following; First bank plc, United Bank for Africa plc, Zenith bank plc Eco bank plc, Guarantee Trust bank plc, Fidelity bank plc, Union bank plc, Access bank plc, Skye bank plc and the Sterling bank plc.

Studies as this, are supposed to be carried out on all the commercial banks listed on the NSE, but as a result of the researcher's limited resources available, limited access to the annual financial statement of certain

companies (inaccessible population), and the short period of time available for carrying out this research (time constrain), only ten (10) banks currently listed on the NSE has been included which covers as much as approximately 50% of the entire population of study. This study will cover a period of seven (7) years ranging between 2008- 2014 financial years.

3.4 SAMPLING TECHNIQUES

A sampling technique is a plan specifying how elements will be drawn from the population (Olannye, 2006). With regards to this research that deals with deposit money banks in Nigeria, the ten (10) banks which the researcher intends to study were selected judgmentally (i.e. the judgmental sampling technique) as a result of the researcher's limited access to the required data and financial constrain. However, the sample size of ten (10) selected banks actually covers as much as 50% of the entire population.

3.5 METHOD OF DATA COLLECTION

This involves how data is gathered for the study. It involves the development of relevant instruments with satisfactory properties and administering these to the subjects involved in the study (Olannye, 2006). The method of data collection used in this study is the secondary source of data. For the purpose of this study, data will be obtained from two major

sources which include the annual financial reports of the ten (10) selected banks and Central Bank of Nigeria statistical bulletins.

This piece of research will adopt the quantitative research techniques. The techniques adopted in any research are carefully guided by the research objectives, philosophy and the nature of data collected. In accomplishing the objectives set in this research work, the researcher collects quantitative data from the annual report of firms which are generally regarded as secondary data. Consequently, quantitative research techniques become more suitable than a qualitative one. These qualitative data will be collected for a period of seven years ranging from 2008-2014.

3.6 MODEL SPECIFICATION

The model specified for this study will be adopted from the work of Idowu and Awoyemi (2014) and Uwuigbe et al (2015) where the performance of Nigerian banks was proxy against non-performing loans, performing loans, liquidity ration and return on investment. Therefore, for the objectivity of this study the model will be modified thus;

ROE = F (NPLN, TBDW, CPAD, LQDL)

The linear equation will become;

$$ROE = \beta_0 + \beta_1 NPLN + \beta_2 TBDW + \beta_3 CPAD + \beta_4 LQDL \ldots\ldots\ldots\ldots\ldots\ldots\ldots 2$$

The econometric equation will then be thus;

$$ROE_{t-1} = \beta 0_{t-1} + \beta_1 NPLN_{t-1} + \beta_2 TBDW_{t-1} + \beta_3 CPAD_{t-1} + \beta_4 LQDL_{t-1} + \mu_{t-1} ...3$$

Where;

ROE = Return on Equity of selected Nigerian Banks

NPLN = Non-Performing Loans of selected Nigerian Banks

TBDW = Total Bad Debts Written-off of selected Nigerian Banks

CPAD = Capital Adequacy of selected Nigerian Banks

LQDL = Liquidity Level of selected Nigerian Banks

β_0 = the intercept, the value of y when the independent variables assume zero as value.

$\beta_1 - \beta_4$= coefficient of the independent variables or parameters

μ = stochastic variable/error term

3.7 TECHNIQUE OF DATA ANALYSIS

The technique of analysis used in analyzing the data subjected for this research is the ordinary least square (OLS) for its statistical regression analysis since it will be used to explain the impact of the independent variables on the dependent variable. The correlation analysis will be used to explain the significant relationship among the variables while

the student t-test will be used in testing the formulated hypotheses subjected for the study. The f-test will be used in explaining the significant level of the model specification while the Durbin Watson model will be used to explain the evidential level of autocorrelation between the dependent variable and independent variables. Moreover, a simple percentage will be used in analyzing the performance of sample banks over the years selected for the study.

3.8 SUMMARY

This chapter has really shown us the methods used in the process of carrying out this research study (i.e. the research methodology). Thus, showing us the

right methods needed in this research work as applicable to research design, population and sample size, method of data collection and the technique of data analysis. A sample of ten (10) banks in Nigeria have been drawn for study over a period of seven (7) years, in order to investigate the impact of credit management on the performance of the Nigerian banking sector. Banks' performance will be measured by the return on equity (ROE) Idowu and Awoyemi (2014), while credit management will be measured by non-performing loans (NPLN), total bad debts written-off (TBDW), capital adequacy (CPAD), and the liquidity level which is measured by the acid-test ratio (LQDL); (Idowu and Awoyemi (2014) and Uwuigbe et al (2015)). In the next chapter, data collected on these variables will be presented and analyzed in order to enable the researcher draw a conclusion based on the findings.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 INTRODUCTION

As stated earlier in this study, our aim is to determine the impact of

credit management on the performance of the Nigerian banking sector, focusing on ten (10) selected banks listed on the NSE for a period of seven (7) years. Hence, it is a correlation research that links credit management variables of non-performing loan, total bad debts written-off, bank liquidity and capital adequacy to financial performance of the selected banks measured by the return on equity (ROE) in order to achieve its objectives. This chapter encompasses the presentation and analysis of data collected from ten (10) banks through the secondary data collection method. The secondary data obtained is presented in a tabular form and analyzed through the application of regression analytical technique using the SPSS statistical tool. The choice of selected banks in the sample was motivated by data availability from such firms on all variables included in the model.

4.2 DATA PRESENTATION

For the purpose of this study, the banks included in the sample are First bank, United Bank for Africa Plc, Zenith bank Plc, Eco bank plc, Guarantee Trust bank Plc, Fidelity bank Plc, Union bank plc, Access bank plc, Skye bank plc and the Sterling bank Plc which are listed on the Nigerian Stock Exchange (NSE) as at the time this study is being conducted. Data collected from the annual financial reports of the selected banks for a period of seven (7) i.e.

from 2007 to 2013 were discussed respectively. Credit management for the purpose of this study is captured by the following variables;

Non-Performing Loans: this is denoted by ***(NPLN)*** for the purpose of this study and it refers to the ratio of non-performing loans to total loans and advances for the selected financial periods. This study intends to determine how non-performing loans can affect the performance of banks in Nigeria. However, non-performing loans ratio ***(NPLN)*** are determined as follows;

Non-performing loan$_t$ / Total loans and advances

Total Bad Debts Written-Off: this is denoted by ***(TBDW)*** for the purpose of this study and it refers to the ratio of bad debts written-off to total debts for the selected financial periods. This study intends to determine how bad debts written-off can affect the performance of banks in Nigeria. However, the total bad debts written-off ***(TBDW)*** are determined as follows;

Bad debts written-off, / Total debts$_t$

Bank Liquidity Level: this is denoted by ***(LQDL)*** for the purpose of this study and it refers to the liquidity level of the selected banks for the selected financial periods. This study intends to determine how the liquidity level of banks in Nigeria can affect their performance. However, the liquidity levels

of the selected banks (LQDL) are determined by the current ratio as follows;

Current assets/Current liabilities

Capital Adequacy: this is denoted by ***(CPAD)*** for the purpose of this study and it refers to the bank's financial strength of all the selected banks from a regulator's point of view. This study intends to determine how the financial strength of banks can affect the performance of such banks in Nigeria. However, the capital adequacy ratios ***(CPAD)*** are determined as follows;

(Tier 1 capital, - Tier 2 capital$_t$) / Risk-weighted assets$_t$

The dependent variable of this study which is performance of the Nigerian banking industry (i.e. banks' performance) will be captured by the return on equity ***(ROE)*** which is the earning power of shareholders' equity. This study intends to determine the impact of credit management as measured by all the above variables, on the performance of the Nigerian banking industry as measured by the return on equity ***(ROE).*** However, the return on equity ***(ROE)*** is determined as follows;

Profit after tax (PAT)$_t$/ Shareholders' equity$_t$

The sample of ten (10) selected banks listed on the NSE as stated in the previous chapter were studied over a period of seven (7) years resulted in 70 observations. The sample is presented in tables below:

	Number of firms

Banks listed on the NSE	21
Selected banks	10
Total Observations	***70***

Adapted from moneyhub.net (Copyright 2001 - 2012; All Rights Reserved)

Table 4.2.2 as shown below reveals the list of all the ten (10) selected banks considered for the purpose of this study.

Table 4.2.2

S/N	***SELECTED BANKS***
1	Access Bank Plc
2	Union Bank Plc
3	First Bank Plc
4	Zenith Bank Plc
5	Eco Bank Plc
6	Fidelity Bank Plc
7	United Bank for Africa (UBA) Plc
8	Skye Bank Plc
9	Sterling Bank Plc
10	Guarantee Trust Bank (GTB) Plc

The data computed from the annual financial reports of the selected banks are as presented in tables below:

Table 4.2.3: **Presentation of Data for Access Bank Plc**

	Independent variables				Dependent
years	NPLN	TBDW	LQDL	CPAD	ROE
2008	0.099688078	0.067277037	0.917745777	0.303163453	0.214319618
2009	0.099688078	0.252234985	1.637587863	1.016587882	0.093350435

2010	0.022379852	0.010325291	0.352412511	1.177456749	0.123820269
2011	0.005281451	0.008951655	0.188993682	0.815595105	0.070855342
2012	0.015261973	0.015175037	0.204501917	0.684131729	0.073507902
2013	0.177364982	0.00225725	0.160728548	0.516320856	0.150723745
2014	0.077041554	0.001311737	0.309595128	0.47137261	0.106907703

Source: Computed from the Annual Financial Reports of Access Bank Plc. 2008-2014

Table 4.2.4 Presentation of Data for Union Bank Plc

	Independent variables				Dependent variable
Years	NPLN	TBDW	LQDL	CPAD	ROE
2008	0.063044669	0.00087003	0.081850609	0.010629484	1.435421055
2009	0.071185834	0.000557024	0.433608908	0.001284624	0.927427339
2010	0.095489457	0.000792783	0.384614815	0.00206124	0.738690264
2011	0.113764205	0.001250408	0.325703414	0.003839099	0.653858219
2012	0.208508887	0.001176745	0.304434730	0.003865343	0.53624936
2013	0.195437364	0.001455604	0.279773263	0.005202799	0.521308801
2014	0.153306747	0.001564726	0.222658593	0.007027465	0.462023716

Source: Computed from the Annual Financial Reports of Union Bank Plc. 2008-2014

Table 4.2.5: Presentation of Data for First Bank Plc

	Independent variables				**Dependent variable**
Years	**NPLN**	**TBDW**	**LQDL**	**CPAD**	**ROE**
2008	0.007161873	0.00802289	0.343912958	0.023328257	0.191763861
2009	0.007161873	0.001227889	0.628593862	0.001953391	0.198559337
2010	0.024585288	0.018713813	0.513011981	0.036478316	0.196222778

2011	0.015318187	0.013504413	0.527300053	0.025610491	0.176647223
2012	0.001359372	0.01440358	0.396713851	0.036307228	0.1775385
2013	0.004348057	0.014357162	0.210238708	0.068289812	0.214402916
2014	0.005881332	0.010079447	0.205580475	0.049029203	0.234323253

Source: Computed from the Annual Financial Reports of First Bank Plc. 2008 – 2014

Table 4.2.6 Presentation of Data for Zenith Bank Plc

	Independent variables				Dependent variable
Years	**NPLN**	**TBDW**	**LQDL**	**CPAD**	**ROE**
2008	0.374093457	0.374184715	0.422130436	0.886419656	0.136232393
2009	0.279704894	0.361057712	0.412345005	0.875620432	0.108093453
2010	0.308170719	0.380856433	0.384727561	0.989938002	0.069016664
2011	0.399863555	0.363611746	0.474608776	0.76612942	0.220753853
2012	0.431769284	0.330326715	0.558790934	0.591145444	0.199829238
2013	0.483741202	0.045793229	0.652707745	0.070158857	0.20569601
2014	0.45733868	0.45310748	0.375220028	1.20757808	0.171816898

Source: Computed from the Annual Financial Reports of Zenith Bank Plc. 2008-2014

Table 4.2.7: Presentation of Data for Eco Bank Plc

	Independent variables				Dependent variable
Years	**NPLN**	**TBDW**	**LQDL**	**CPAD**	**ROE**
2008	0.23937357	0.214826477	0.123204986	1.743650839	0.042193941
2009	0.268440095	0.27754927	0.02234641	12.42030709	0.028818187
2010	0.223396137	0.291620582	0.269447071	1.082292641	0.030954152

2011	0.231675905	0.282384204	0.529611375	0.53319135	0.06977623
2012	0.264658079	0.248092979	0.051989731	4.771961184	0.060792109
2013	0.278625108	0.222088051	0.280992198	0.790370883	0.045049625
2014	0.389641055	0.206423437	0.374362813	0.551399418	0.037415398

Source: Computed from the Annual Financial Reports of Eco Bank Plc. 2008-2014

Table 4.2.8 Presentation of Data for Fidelity Bank Plc

	Independent variables				Dependent variable
Years	**NPLN**	**TBDW**	**LQDL**	**CPAD**	**ROE**
2008	0.156584224	0.909260557	0.34580919	2.629370715	0.150351884
2009	0.273620253	1.272811545	0.588044787	2.164480618	0.090927039
2010	0.013706799	0.355613582	0.584261404	0.608654927	0.123918717
2011	0.00532774	0.466390497	5.987944963	0.07788824	0.026485554
2012	0.027295157	0.622184866	0.508757276	1.222950305	0.082118725
2013	0.032548972	0.595579367	0.612543346	0.972305668	0.054798381
2014	0.00113467	0.528249613	0.568820153	0.928675979	0.04389588

Source: Computed from the Annual Financial Reports of Fidelity Bank Plc. 2008-2014

Table 4.2.9: Presentation of Data for United Bank for African (UBA) Plc

	Independent variables				**Dependent variable**
Years	**NPLN**	**TBDW**	**LQDL**	**CPAD**	**ROE**
2008	0.314174772	0.289556493	0.756367154	0.382825314	0.120318406
2009	0.29714275	0.243017258	0.429569071	0.565723359	0.096553892
2010	0.307988935	0.28823044	0.29537116	0.975824586	0.068657114

2011	0.378016385	0.243534012	0.57589274	0.422880851	0.217001043
2012	0.46542499	0.291302192	0.443001066	0.657565443	0.21898927
2013	0.208064163	0.358400309	0.405122779	0.88467084	0.215031069
2014	0.45733868	0.289287639	0.340188916	0.850373499	0.179099014

Source: Computed from the Annual Financial Reports of UBA Plc. 2008-2014

Table 4.2.10 Presentation of Data for Skye Bank Plc

	Independent variables				Dependent variable
years	**NPLN**	**TBDW**	**LQDL**	**CPAD**	**ROE**
2008	0.099653653	0.258177928	0.452934197	0.570012001	1.456938434
2009	0.041155305	0.276603166	0.213450459	1.295865874	1.669612866
2010	0.051934235	0.341422006	0.123196891	2.771352463	0.597584384
2011	0.011556616	0.320865717	0.136357449	2.353122038	0.534459314
2012	0.023272273	0.344387729	0.153380185	2.245320862	0.512982162
2013	0.018224935	0.333443475	0.139168828	2.395963806	0.579370074
2014	0.035275538	0.338876553	0.226313268	1.497378196	0.580439635

Source: Computed from the Annual Financial Reports of Skye Bank Plc. 2008-2014

Table 4.2.11: Presentation of data for Sterling Bank Plc

	Independent variables				Dependent variable
Years	**NPLN**	**TBDW**	**LQDL**	**CPAD**	**ROE**
2008	0.108262061	0.064743584	0.917745777	0.070546316	0.214319618
2009	0.045563416	0.025709387	1.637587863	0.015699547	0.093350435
2010	0.021024963	0.011489729	0.352412511	0.032603068	0.123820269

2011	0.020930282	0.026738328	0.188993682	0.141477365	0.070855342
2012	0.016903719	0.013653203	0.204501917	0.066763203	0.073507902
2013	0.086289539	0.002007476	0.160728548	0.012489852	0.150723745
2014	0.094824993	0.002440838	0.309595128	0.007883967	0.106907703

Source: Computed from the Annual Financial Reports of Sterling Bank Plc. 2008-2014

Table 4.2.12 Presentation of Data for Guarantee Trust Bank (GTB) Plc

	Independent variables				Dependent variable
Years	**NPLN**	**TBDW**	**LQDL**	**CPAD**	**ROE**
2008	0.013026807	0.102104885	0.289966754	0.352126179	0.133433568
2009	0.01839349	0.001431132	0.535705816	0.002671489	0.156352763
2010	0.160954507	0.018285235	0.358337499	0.051027969	0.126531165
2011	0.148449411	0.015957974	3.647442977	0.004375113	0.273484462
2012	0.112517169	0.017717692	0.316090994	0.056052505	0.335883958
2013	0.080359252	0.017998504	0.198154805	0.090830519	0.297564003
2014	0.081000124	0.011135623	0.181146351	0.061473076	0.259506663

Source: Computed from the Annual Financial Reports of GTB Plc. 2008-2014

4.3 DATA ANALYSIS

Although the data have been presented in 4.2 with respect to the various banks from which they are computed, however, these data from different banks will be pooled together for the purpose of having a broader analyses both cross-sectional and inter-firm, and also to determine the fixed effect and

the ransom effect of credit management variables on the performance of banks as measured by the return on equity (ROE).

The first column represents the various years selected for this study which has a period of seven (7) years spread between 2007 and 2013. This is the same with regards to all the tables represented above. The next column in each table represents the Non-performing loan ratio (NPLN) which is the ratio of non-performing loans to total loans as presented in decimals. This is derived by dividing the total non-performing loans by the total loans and advances in a given year (t). Guarantee Trust Bank Plc had a non-performing loan ratio of 0.013026807 in 2007 and then 0.081000124 in 2013, while Fidelity Bank Plc had 0.156584224 in 2007 and then 0.00113467 in 2013.

$$\text{NPLN} = \frac{\text{Total Non-Performing Loans}}{\text{Total Loans and Advances}}$$

The third column in each table represents the Total bad debts written-off (TBDW) which is the ratio of total bad debts written-off to total debts in decimals. This is derived by dividing the total bad debts written-off by the total debts of a bank in a given year (t). Access Bank Plc had a total bad debts ratio of 0.099688078 in 2007 and then 0.077041554 in 2013, while Union Bank Plc had a bad debts ratio of 0.063044669 in 2007 and then 0.153306747 in 2013.

$$TBDW = \frac{\text{Total Bad Debts Written-off}}{\text{Total Debts}}$$

The fourth column in each table represents the Liquidity position of the selected banks as measured by the current ratio, being a liquidity ratio (LQDL)) which is the ratio of total current^ assets to total current liabilities in decimals. This is derived by dividing the total current assets by the total current liabilities of a bank in a given year (t). Sterling Bank Plc had a current ratio of 0.108262061 in 2007 and then 0.094824993 in 2013, while United Bank for Africa (UBA) Plc also had a current ratio of 0.314174772 in 2007 and then 0.45733868 in 2013.

$$LQDL = \frac{\text{Total Current Assets}}{\text{Total Current Liabilities}}$$

The fifth column in each table represents the financial strength of the selected banks as measured by the capital adequacy ratio, which is the ratio of (tier-1 capital-tier-2 capital) divided by the total risk-weighted assets in decimals. This is derived by dividing the total current assets by the total current liabilities of a bank in a given year (t). The capital adequacy ratio of Skye Bank Plc in 2007 was 0.570012001, but in 2013, the capital adequacy ratio became 1.497378196, while that of Zenith Bank Plc in 2007 is 0.886419656 in 2007 and then 1.20757808 in 2013.

$$\text{CPAD} = \frac{\text{Tier-1 Capital-Tier-2 Capital}}{\text{Risk-Weighted Assets}}$$

The last column in each table represents the performance of the selected banks as measured by the return on equity (ROE) ratio, which is the earning power of the shareholders' equity i.e. the amount of income received by the total amount of money invested by the shareholders. The return on equity (ROE) is derived by dividing the net income or profit after tax by the shareholders' equity of a bank in a given year (t). First Bank Plc had a return on equity (ROE) of 0.191763861 in 2007 and then 0.234323253 in 2013, while Eco Bank Plc had a return on equity (ROE) of 0.150351884 in 2007 and then 0.04389588 in 2013.

$$\text{ROE} = \frac{\text{Profit after Tax or Net Income}}{\text{Shareholders' Fund}}$$

4.4 TEST OF HYPOTHESIS

The hypotheses formulated in chapter one is tested to ascertain the objectives set out for the study. The tests of hypotheses will be carried out using data from the ten (10) selected banks listed on the Nigerian Stock Exchange (NSE) and as presented in table 4.2.2 above. The hypotheses formulated are stated as follows:

Hypothesis 1

H0*1*: Non-performing loans have no significant effect on the performance of the Nigerian banking sector

Hypothesis 2

H0*2*: Bad debts written-off have no significant effect on the performance of banks in Nigeria

Hypothesis 3

H0*3*: Capital adequacy has no significant effect on the performance of banks in Nigeria

Hypothesis 4

H0*4*: Liquidity level has no significant effect on the performance of banks in Nigeria

The approach used in this study is the panel data regression method (Fixed effect model) and the correlation analysis the test of significance. To do this, GRETL statistical package was used to perform the analysis. The results gotten from the analysis are summarized in the following tables:

4.4.1 Descriptive Statistics

VARIABLES	N	MEAN	MINIMUM	MAXIMUM	STANDARD DEVIATION
NPLN	70	0.14693364	0.00113467	0.483741202	0.143908651
TBDW	70	0.19708630	0.00055702	1.272811545	0.23390905
LQDL	70	0.52495646	0.02234641	5.98794496	0.818166865
CPAD	70	0.85684177	0.00128462	12.4203070	1.647914545
ROE	70	0.270859061	0.026485554	1.669612866	0.327495618

Source: GRETL Computed from 10 selected Nigerian Banks over 7 years

Table 4.4.2 Correlation Matrix

	NPLN	TBDW	LQDL	CPAD	ROE
NPLN	**1**				
TBDW	0.03546**	1			
LQDL	-0.08343*	0.03427**	1		
CPAD	0.75497	-0.10564	0.03420**	1	
ROE	-0.04358**	-0.04634**	0.02367**	0.76815	1

Source: GRETL Output Computed from 10 selected Nigerian Banks over 7years

Pooled OLS, using 70 observations

Included 7 cross-sectional units

Time-Series Length: Minimum 7, Maximum 12

Dependent Variable: ROE

Table 4.4.3 Regression Table

	Reg. Coefficient	*Std. Error*	*t-statistic*	*p-value*
Constant	-2.12338	0.618841	-3.4312	0.00123***
1_NPLN	-0.812664	0.24663	-3.2951	0.00183***
1_TBDW	-0.0440922	0.140058	0.3148	0.75424

1JLQDL	0.193131	0.032629	5.9190	0.00001***
1_CPAD	0.373628	0.0657285	-5.6844	0.03791**

Source: Data Extracted from GRETL Regression Output

*** Significance at a level of 1%

** Significance at a level of 5%

- Significance at a level of 10%

Mean dependent var	0.270859	S.D dependent var	0.327496
R-squared	0.661918	Adjusted R-squared	0.634319
S.E. of regression	2.040862	Akaike info criterion	235.0427
Sum squared resid	16.11992	Schwarz criterion	244.9876
Log likelihood	-112.521	F-Statistic	23.98377
Durbin-Watson stat	2.041678	Prob (F-Statistic)	0.002036

Decision Rule:

Accept the Null hypothesis (Ho) if the P-value of the t-statistics is greater than P-value tabulated (i.e. $P\text{-value}_{cal} > P\text{-value}_{tab}$) at 0.05 significant which is less than 95% degree of confidence, but not significant, otherwise Reject (H_0) and accept Hi if the null hypothesis (H_0) of the P- value of P-value tab at 0.05 significant level which is significant for the study.

From table 4.4.2, we can see the correlation between the explanatory variables and the dependent variable (Return on Equity).

It is seen from the correlation matrix table (i.e. table 4.4.2) that Non - performing loan ratio (NPLN) has a significant negative relationship of -0.04358** with return on equity (ROE) which is the dependent variable of the study and this indicates that as the non-performing loan ratio rises, return on equity (ROE) falls respectively, vice-versa. However, while relating nonperforming loan (NPLN) with other independent variables of the study, we can discover from the table that it also has a significant negative relationship with liquidity level (LQDL). But a significant positive relationship with total bad debts and a positive relationship with capital base (CPAD).

Total bad debts written-off (TBDW) has a significant negative relationship of -0.04634** with return on equity (ROE) which is the dependent variable of the study, and this indicates that as the total bad debt written off (TBDW) rises, the return on equity (ROE) falls and vice-versa. However, while relating total bad debt written-off (TBDW) with other independent variables, we can discover from the correlation matrix table that it has a significant positive relationship with non-performing loan ratio (LQDL) and a negative but insignificant relationship with liquidity level (LQDL); but in the case of capital adequacy ratio (CPAD), total bad debt written-off also has a negative relationship with capital adequacy ratio and significant.

Liquidity level (LQDL) has a significant positive relationship of 0.02367**

with return on the equity (ROE) which is the dependent variable of the study, and this indicates that as the liquidity level (LQDL) rises, the return on equity(ROE) also rises and vice-versa. However while relating the liquidity level (LQDL) to other independent variables, we can discover from the correlation matrix table that it has a significant relationship with the capital adequacy ratio (CPAD), and a significant positive relationship with total bad debt written-off (TBDW); and also in the case of capital adequacy ratio (CPAD) liquidity level has a significant positive relationship with capital adequacy ratio.

Capital adequacy ratio (CPAD) has a positive relationship of 0.76815 with return on equity (ROE) which is the dependent variable of study, and this indicate that as the capital adequacy ratio (CPAD) rises the return on equity (ROE) also rises and vice-versa, although not significant. However, while relating the capital adequacy (CPAD) to other independent variables, we can discover from the correlation matrix that it also has a significant positive relationship with non-insignificant relationship with total bad debt written-off (TBDW).

4.4.1 Hypothesis one (Non-performing loans ratio, NPLN)

From table 4.4.3, the co-efficient of regression of -0.8127 indicates that there is a negative relationship between the non-performing loans ratio (NPLN) and the performance as measured by the return on equity (ROE).The coefficient of -0.8127

indicates that non-performing loans ratio (NPLN) has a negative impact on the selected banks as measured by return on equity (ROE). This therefore indicates that return on equity (ROE) will improve as the non-performing loans ratio diminishes or falls. However, the p-value of 0.00183*** shows that non-performing loans ratio (NPLN) significantly impacts return on equity (ROE) at 1% level of significance, leading to the rejection of the null hypothesis which states that non- performing loans have no significant effect on the performance of banks in Nigeria. This result is consistent with the findings of Kolapo, Ayeni and Oke (2012), Felix and Claude (2008), Kithinji (2010) and Epure and Lafuente (2012).

4.4.2 Hypothesis two (Total bad debt written-off, TBDW)

From table 4.4.3, total bad debt written-off (TBDW) negatively impact return on equity (ROE) with a regression coefficient of -0.0440922 and a p-value of 0.75424.This means that the total bad debt written-off negatively impacts performance through the co-efficient of regression is not significant as shown by the p-value 0.75424. The negative relationship indicates that increase in total bad debt written-off (TBDW) result in decrease in banks' performance as measured by the return on equity (ROE). However, since the coefficient of regression is not significant at 5% level, this will lead to the acceptance the null hypothesis which states that total bad debt written-off (TBDW) has no significant effect on the

performance of banks in Nigeria.

4.4.3 Hypothesis three (Liquidity Level, LQDL)

From the table 4.4.3, the coefficient of regression 0.193131 indicates that there is a positive relationship between the liquidity level of banks in Nigeria (LQDL) and their performance as measured by the return on equity (ROE). The coefficient of 0.193131 indicates that liquidity level (LQDL) has a positive impact on the performance of the selected banks as measured by return on equity (ROE). This therefore indicates that return on equity (ROE) will improve as the liquidity level of banks increase. However, the p-value of <0.00001*** shows that the liquidity level of banks in Nigeria (LQDL) significantly impacts the performances measured by the return on equity (ROE) at 1% level of significance, leading to the rejection of the null hypothesis which states that liquidity level has no significant effect on the performance of banks in Nigeria. This result is consistent with the findings of Al-khouri (2011) and Umoh *(2012).*

4.4.4 Hypothesis four (Capital Adequacy ratio, CPAD)

From the table 4.4.3, the coefficient of regression of 0.373628 indicates that there is a positive relationship between the capital adequacy ratio (CPAD) and the performance of banks in Nigeria as measured by the return on equity (ROE). The coefficient of 0.373628 indicates that the capital adequacy (CPAD) has a positive

impact on the performance of the selected banks as measured by return on equity (ROE). This therefore indicates that return on equity (ROE) will improve as the capital adequacy ratio of banks increase. However, the p-value of 0.03791** shows that the capital adequacy of banks in Nigeria (CPAD) significantly impacts their performance as measured by the return on equity (ROE) at 5% level of significance, leading to the rejection of the null hypothesis which states that capital adequacy has no significant effect on the performance of banks in Nigeria. This result is consistent with the findings of Idowu and Awoyemi (2014).

4.5 DISCUSSION OF FINDINGS

This study examined the effect of credit management on the performance of ten (10) selected banks in Nigeria for a period of seven (7) years spread between 2008 and 2014. The independent variables used being credit management mechanisms include non-performing loan ratio (NPLN), total bad debts written-off (TBDW), liquidity level measured by the current ratio (LQDL) and the capital adequacy ratio (CPAD) while the dependent variable being financial performance is measured by the return on equity (ROE) which represents the earning power of shareholders' fund. After a rigorous process of data collection, analysis, and test of all the hypotheses formulated for this purpose of this study, the findings are discussed as follows;

4.5.1 Non-Performing Loan Ratio (NPLN) and Banks Performance in Nigeria

As shown in table 4.4.3 and as discussed under the test of hypotheses one in the previous chapter, the null hypothesis which states that non-performing loans ratio (NPLN) have no significant impact on the performance of banks in Nigeria was rejected because the result revealed that the coefficient of regression of -0.8127 indicates that there is an inverse relationship between non-performing loans ratio (NPLN) and performance as measured by the return on equity (ROE). Indicating therefore, that by having a regression coefficient of-0.8127, non-performing loans have a negative impact on the performance of the selected banks as measured by return on equity (ROE); and by having a p-value of 0.00183***, non-performing loans ratio (NPLN) significantly impacts return on equity (ROE) at 1% level of significance. This result is evident in the subsequent losses that banks sustain as a result of their inability to recover both the interest and the original amount of the loan from the customer, hence, such loans are written-off as charges against banks' earnings which will further force the return on shareholders' equity to fall drastically. This result conforms to the findings of Kolapo et al (2012) who carried out an empirical investigation into the quantitative effect

of credit risk on the performance of commercial banks in Nigeria over a period of eleven (11) years (2000-2010). Using a panel model analysis to estimate the determinants of the profit function, the result revealed that the effect of credit risk on the performance of banks is cross-sectional invariant; that is, the effect is similar across banks in Nigeria, suggesting that banks in Nigeria should enhance their capacity in credit analysis and loan administration.

This result also confirms the position of Felix and Claude (2008) who investigated the relationship between bank performance and credit management. It could be inferred from their findings that return on equity (ROE) and return on assets (ROA) both measuring profitability were inversely related to the ratio of nonperforming loans to total loans of banks, thereby leading to a decline in profitability as measured by ROE and ROA. Evidence outside Nigeria also places the findings of Epure and Lafuente (2012) and Kithinji (2010) in conformity to the result of this study, as Epure and Lafuente concluded in Costa-Rica that non-performing loans negatively affect performance of banks and Kithinji whose findings revealed that bulk of commercial banks' profit is influences by their total amount of credit and non-performing loans.

4.5.2 Total Bad Debts Written-Off (TBDW) and Banks' Performance in Nigeria

As shown in table 4.4.3 and as discussed under the test of hypotheses in the previous chapter, the null hypothesis which states that total bad debts ratio (TBDW) have no significant impact on the performance of banks in Nigeria was accepted because the result revealed that the total bad-debts written-off ratio (TBDW) negatively impacts return on equity (ROE) with a regression coefficient of -0.0440922 and a p-value of 0.75424.And by having a p-value of 0.75424, the negative impact of total bad debts written-off ratio (TBDW) on return on equity (ROE) is not significant. Therefore, as total bad debts written-off ratio (TBDW), the negative effect is that return on equity which represent banks' performance fall respectively. This is an inverse relationship and may be as a result of the fact that when debts are. written-off as bad, the full amount of the debts are written-off against total profit for a given accounting year, hence, the profit after tax (PAT) or net income of banks will be drastically reduced, leading to a fall in the return on equity (ROE). One major area of concern in credit management is that poor credit management will ultimately result in huge outside debts and non-performing loans which will consequently lead to increase in total debts that will be written-off as bad in a given accounting year. This result is consistent with the finding of Umoh (2002) who concluded that as banks write off debts as bad-debts, the financial implication is closer than just the name it bears as it

will be evident in the financial statements as a charge against profit, thereby effecting financial performance of banks in Nigeria.

4.5.3 Banks' Liquidity (LQDL) and their Performance as Measured by the Return on Equity in Nigeria

As shown in table 4.4.3 and as discussed under the test of hypotheses in the previous chapter, the null hypothesis which states that the liquidity level of banks has no significant impact on the performance of banks in Nigeria was rejected because the result indicated that the coefficient of regression of 0.193131 shows that there is a positive relationship between banks' liquidity level as measured by the current ratio, and banks' performance as measured by the return on equity (ROE), and a p-value of <0.00001***. Indicating that by having a regression coefficient of 0.193131, the liquidity level of banks (LQDL) has a positive impact on the performance of the selected banks as measured by return on equity (ROE); and by having a p- value of <0.00001***, banks' liquidity level (LQDL) significantly impacts return on equity (ROE) at 1% level of significance.

This result simply indicates how the availability of cash and cash equivalents in banks can improve the performance of such banks. Banks being financial firms that mostly involve deposits keeping and disbursements have a major priority of ensuring that they are liquid in order to meet the daily

withdrawal demand of the customers, and also to ensure that credit facilities are granted to customers at fair interest rates which will help to boost the customer-base of the banks. However, a liquid bank can also invest such excess liquidity into profitable ventures or investments with high rate of returns that are reliable and within a short period of time. This result is consistent with the findings of Umoh (2002) and Al-khouri (2011) who assessed the impact of banks' specific credit characteristics, and the overall banking environment on the performance of 43 commercial banks operating in 6 of the Gulf Cooperation Council (GCC) countries over a period 10 years between 1998 and 2008. Using a fixed effect regression analysis, the result showed that credit risk, liquidity risk and capital risk are the major factors that affect banks' performance when profitability is measured by the return on assets (ROA), while the only risk that affects profitability when measured by the return on equity (ROE) is the liquidity risk.

4.5.4 Capital Adequacy Ratio (CPAD) and Banks' Performance in Nigeria

As shown in table 4.4.3 and as discussed under the test of hypotheses in the previous chapter, the null hypothesis which states that the capital adequacy ratio (CPAD) has no significant impact on the performance of banks in the Nigerian banking sector was rejected because the result revealed that the

capital adequacy ratio (CPAD) positively impacts return on equity (ROE) with a regression coefficient of 0.373628. Furthermore, by showing a p-value of 0.03791**, this indicates that the capital adequacy ratio significantly impacts return on equity (ROE) at 5% level of significance. This result conforms to the findings of Idowu and Awoyemi (2014) that carried out a study on the impact of credit risk management on the commercial banks' performance in Nigeria using a total of seven (7) commercial banks analyzed over seven (7) years between 2005 and 2011.

The result though generally revealed that credit management as indicated by the capital adequacy ratio has a significant impact on the profitability of commercial banks in Nigeria; however, it further stated that commercial banks with high capital adequacy ratio can better advance more loans and absorb credit losses whenever they crop up and therefore-record better profitability. The regulatory authority should, pay more attention to banks' compliance to, relevant provisions of the Banks and other Financial Institutions Act (BOFIA) 1991 and the prudential guidelines.

CHAPTER FIVE

DISCUSSION OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 SUMMARY OF FINDINGS

This chapter covers the summary, conclusion and provides recommendations for the data that has been analyzed, interpreted and discussed of the data obtained from the ten (10) banks on the Nigerian banking sector which are listed on the Nigerian Stock Exchange (NSE).The analysis was carried out using the regression model (Panel data). For a more accurate analysis, GRETL (i.e. Gnu Regression, Econometrics and Time-Series Library) was used to run the regression analysis. Each of the stated hypotheses was tested using result from this analysis and our tests have shown that Non-performing loans, Total bad debt written-off, capital adequacy and liquidity level have a significant impact on the performance of Nigerian banks.

The correlation matrix result showed that non-performing loans and total debts written-off have a weak negative relationship with banks return on equity while capital adequacy and liquidity level have a weak positive correlated relationship with banks return on equity. The R^2 value of 0.661918 explained that 66.19% of variation in the independent variables used in the study determines the dependent variable while 0.338082 (ie 33.81%)

variation of other variables not mentioned in the study will determine the dependent variable. The f-statistics (prob.) value of 0.002036 shows that the variables included in the model specified for the objectivity of the study is statistically significant while the Durbin Watson (DW) value of 2.041678 explains that there is was no evidence of autocorrelation among the variables since this value is between the stipulated 2.00 and 4.00 criterion for autocorrelation.

5.2 CONCLUSION

This study which was set to investigate the impact of credit management on the performance of banks in Nigeria have been able to stand its test of time by achieving the aim and specified objectives stated in the earliest chapter of this study. The result have shown that credit management of banks in Nigeria as indicated by the non-performing loans ratio (NPLN), the liquidity level of banks (LQDL) and the capital adequacy ratio (CPAD) significantly impacts the performance of banks in the Nigeria where performance is measured by the return on equity. The result also indicated that though total bad debts written-off negatively impacts the performance of banks in Nigeria, however, such negative impacts are not significant. The findings also indicate that the sampled have poor credit risk management practices; hence the high levels of

the non-performing loans in their loans portfolios. Despite the high levels of the non-performing loans (NPLN), their profit levels keep rising as an indication of the transfer of the loan losses to other customers in the form of large interest margins.

The changing of higher rates is likely to discourage microenterprises from accessing loans from commercial banks. Those who are able take up such loans may also find it very difficult to repay because of the exorbitant interest rates. This situation has the tendency of creating *'Loan-Losses high-interest cycle'* phenomenon. Commercial banks are thus recommended to establish sound and competent credit risk management units which are run by best practices in risk management such as the institution of a clear loan policy and the adherence to underwriting authority and limits. Staffs of commercial banks credit units such as project and advance managers, credit/loan officers and field officers perform a range of functions from project appraisals through credit disbursement, loan monitoring to loans collection. Thus issues pertaining to their selection, training, placement, job evaluation, discipline, and remuneration need to be tackled effectively.

The study also revealed that commercial banks with higher capital adequacy ratio can better advance more loans and absorb credit losses whenever they crop up and therefore record better profitability. The regulatory authority

should pay more attention to banks' compliance to relevant provisions of the Bank and other Financial Institutions Act 1991 and prudential guidelines.

5.3 RECOMMENDATIONS

Following the result obtained from this study and based on the above conclusions, the following policy recommendations are suggested.

1. Management of deposit money banks in Nigeria should enhance their skills in credit analysis and loan administration. This is to ensure that risk of non-performing loans and total bad debts written-off are drastically reduced and/or eliminated from banks.
2. CBN and other regulatory bodies should pay more attention to banks compliance to relevant provisions of BOFIA (1999) and prudential guidelines. The compliance of Nigerian banks to the requirements state in the BOFIA 1991 and the prudential guideline is a major prerequisite for ensuring an effective credit management system in Nigerian banks.
3. The commercial banks should review their interest rate charges on customers' loans so as to avoid the entrant of non-performing loans in their credit management.
4. The commercial banks should make use of the capital market channels in improving their capital adequacy ratio to create an edge of credit facilitation and management to their numerous creditors and absorbs

credit losses.

5. The Central Bank of Nigeria (CBN) should create a channel or premise where credit losses facilities could be sold publicly to government and investors just as the stock market scenario for trading securities to assist commercial banks in recovery from credit losses.

5.4 CONTRIBUTIONS TO KNOWLEDGE

The following are the contributions this research has provided in this field of knowledge; thus;

1. The use of the GRETL statistical software in computing the data sourced through secondary source in revealing the relationship between the dependent and independent variables.
2. The research through the use of the GRETL software has shown that the non-performing loans have a negative impact on the return on equity of the commercial banks.
3. The use of the Risk-Adjusted Return on Capital (RAROC) Model originated by the Deutsche Bank later adopted by the USA and British Banks in reviewing the total amount of capital available for providing credit as loans to their customers and also measures the returns on its ROA.
4. The empirical result of the research showed that the liquidity level

maintained by the commercial banks will always have a significant impact on performance in the financial system.

5.5 SUGGESTIONS FOR FURTHER STUDIES

The following below are recommended for further research. They are;

1. This research suggests that other commercials banks should be selected as samples to checkmate the findings of this research.
2. This research suggests that the credit management of micro-finance banks in Nigeria financial system should be researched on empirically to evaluate the effect of their credit management on their performance.
3. Also, it suggests that other variables in measuring credit risk management should be used in finding empirical results in checkmating these research findings.
4. Other financial institutions are suggested to be subject for empirical findings in their credit risk management on their performance in a pool data.

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APPENDIX

Result from ten (10) Banks for a Period of seven (7) years (i.e. 2007-2013)

GRETL Stat.

Summary Statistics:

Nature of Data Used: Panel Data Dependent Variable: ROE Method: Least Squares Date: 24/07/2015 Time: 9:00pm Sample (adjusted): 2007-2013

Included observations: 70 with no adjustment to endpoints

Variables	Mean	Median	Minimum	Maximum
NPLN	0.146933646	0.01645756	0.00113467	0.4837412
TBDW	0.197086301	0.34356479	0.00055702	1.272811545
LQDL	0.524956466	0.69823459	0.02234641	5.987944963
CPAD	0.856841774	0.66007800	0.001284624	12.42030708
ROE	0.270859061	0.17645639	0.026485554	1.669612866

Variables	Std. Dev.	C.V	Skewness	Ex. Kurtosis
NPLN	0.143908651	0.303820	0.244326	-0.881988
TBDW	0.233909055	0.276192	-0.720900	0.00676304
LQDL	0.818166865	0.474620	-0.942287	-0.629203
CPAD	1.647914545	4.96534	7.52946	54.8047
ROE	0.327495618	0.628385	0.211036	-0.759191

Variables	5%	95%	I.Q Range	Missing Obs.
NPLN	4.00000	12.00000	4.500000	0
TBDW	0.20250	0.748214	0.100000	0
LQDL	0.65000	81.35500	43.60750	0
CPAD	0.00000	0.890000	0.660000	0
ROE	0.00703544	0.291710	0.185092	0

CORRELATION MATRIX

	NPLN	TBDW	LQDL	CPAD	ROE
Constant	1				
1_NPLN	0.03546**	1			
1_TBDW	-0.08343*	0.03427**	1		
1_LQDL	0.75497	-0.10564	0.03420**	1	
1_CPAD	-0.04358**	-0.04364	0.02367**	0.76815	**1**

Pooled OLS, using 70 observations
Included 7 cross-sectional units
Time-series length: Minimum 7, Maximum 12
Dependent Variable: l_ROE

	Reg. Coefficient	**Std. Error**	**t-statistic**	**p-value**
Constant	-2.12338	0.618841	-3.4312	0.00123***
1_NPLN	-0.812664	0.24663	-3.2951	0.00183***
1_TBDW	-0.0440922	0.140058	0.3148	0.75424
1_LQDL	0.193131	0.032629	5.9190	0.00001***
1_CPAD	0.373628	0.0657285	-5.6844	0.03791**

Mean dependent var	0.270859	S.D dependent var	0.327496
R-squared	0.661918	Adjusted R-squared	0.634319
S.E. of regression	2.040862	Akaike info criterion	235.0427
Sum squared resid	16.11992	Schwarz criterion	244.9876
Log likelihood	-112.521	F-statistic	23.98377
Durbin-Watson stat	2.041678	Prob(F-statistic)	0.002036

Output from GRETL
KEY:
* Significant at 10 per cent level (i.e. Sig. @ 10%)
** Significant at 5 per cent level (i.e. Sig. @ 5%)
*** Significant at 1 per cent level (i.e. Sig. @ 1%