KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI, GHANA

Effect of Non-Performing Loans on Banks' Profitability: Evidence from Ghana

By

Leonard Felix Baka (MSc Accounting and Finance)

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DECLARATION

I hereby declare that this submission is my own work towards the award of MSc Accounting and Finance and that, to the best of my knowledge, it contains no material previously published by another person nor any material which has been accepted for the award of any other degree of the University, except where due acknowldgement has been made in the text.

Leonard Felix Baka ……..……. ……..……

(PG7226819) Signature Date

Certified by:

Mr. Kwasi Poku ……..……. ……..……

(**Supervisor's Name**) Signature Date

Certified by:

Dr. Daniel Domeher ……..……. ……..……

(Head of Department) Signature Date

DEDICATION

This thesis is dedicated to my mother, Comfort Akpakli, if not for her prayers and mammoth support, I would not have made it this far and to my late father Charles Baka.

ACKNOWLEDGEMENT

To God be the glory. I really appreciate the time, guidance and vivid suggestions by my supervisor, Mr. Kwasi Poku throughout the study. To my brother from another mother Nditsi Wonder Y. D. R, I say I am forever grateful for your support, suggestions and advice. I am also thankful to all lecturers of KNUST School of Business (IDL) for their diverse roles played in the successful completion of my MSc in Accounting and Finance. I cannot end without expressing my sincerest gratitude to my Godfather, Mr Emmanuel Addy for pushing me beyond my limit and to all my sisters and brother from another mother, Maylove Marquaye, Eunice, Debora. Evans Yeboah, Edem Kwame Owusu, David Akonor, Elvis Otoo, Basha Mohammed, Emmauel Baffoe to mention but a few, I thank you for being there for me when I needed you most, God bless you all.

ABSTRACT

The enormous risks of non-performing loans (NPLs) faced by financial institutions especially commercial banks is a major concern in the industry. This has become topical in Ghana in the face of the recent banking sector clean up that resulted in the revocation of licenses of seven commercial banks. The general objective of the study was to assess the effects of NPLs on the performance of commercial banks in Ghana with specific intent on examining the factors contributing to the increase in NPLs as well as to examine the effect of NPLs on the profitability of commercial banks in Ghana for a seven year duration between 2012 and 2018.

The study adopted the quantitative research design. The target population for the study was all 23 commercial banks in Ghana. A sample of eight (8) commercial banks were selected using the purposive approach for the study. This research used secondary data from audited financial statements of eight licensed and registered commercial banks in Ghana. The research used descriptive analysis and panel regression analysis methods to analyze data using the Statistical Package for Social Sciences (SPSS) software.

The results showed that 2017 was the year in which the highest rate of NPLs occurred of 19% a percentage point higher than the average of 18% over the seven year duration under study. It came to light however, that the lowest rate of NPLs occurred in the 2014 financial year with a rate of 12% while the industry average was 21%. The measure of the profitability of the banks was through a proxy of return on assets (ROA). The results indicated that the lowest year of profitability was 2017 when a 12.7% return on asset was made. In 2013 however the banks recorded the best return on assets of 18.4% and an NPL of 13%. The years 2012, 2014, 2015, 2016 and 2018 saw ROAs of 14.7, 16.3, 17.5, 15.6 and 13.3 percent respectively. This shows the Return on Assets (ROA) and NPL have an inverse relationship.

The findings also showed that the 2017 financial year was the worst year of NPLs which was 19% with corresponding adverse effect on the profitability of the banks and also on the capital adequacy ratios and loanable funds leading to liquidity crunch. The correlation between variables show that real significance exists between NPLs, capital adequacy ratio, liquidity ratio, Interest rate and total assets with return on assets. It was further revealed that interest rates, liquidity and NPLs are significantly correlated with ROA, but interest and liquidity ratio are not significantly correlated with NPL while liquidity ratio negatively and significantly influences the ROA. High interest rates are responsible for high NPLs and subsequently decrease in return on assets.

The pro-active recommendations made to management to help reduce NPLs in banks include but not limited to: that there should be at all times regular and effective monitoring, ensuring frequency in refresher courses for credit officers and managers, there must be provision of security and guarantees for credit facilities, a strict use of credit reference bureau and finally regular supervision and sanctioning by the regulator in the industry to prevent blatant disregard for the laws of the industry.

TABLE OF CONTENT

DECLARATION i
DEDICATION ii
ACKNOWLEDGEMENT iii
ABSTRACT iv
LIST OF TABLES viii
LIST OF FIGURES ix
LIST OF ABBREVIATIONS x
INTRODUCTION 1
1.1 Background of the Study 1
1.2 Problem Statement 3
1.3 Research Objectives 5
1.4 Research Questions 5
1.5 Significance of the Study 5
1.6 Scope of the Study 6
1.7 Summary of Methodology 6
1.8 Limitations of the Study 7
1.9 Organization of the Study 7
CHAPTER TWO 9
LITERATURE REVIEW 9
2.0 Introduction 9
2.1 Theoretical Literature 9
2.1.1 Bad management hypothesis 9
2.1.2 Moral Hazard Concept 10
2.1.3 Information Asymmetry Theory 10
2.1.4 Financial Accelerator Theory 10
2.2.1 Performing Loans 11
2.2.2 Definitions and Concept of Non-Performing Loans 13
2.2.3 Causes of Loan Default/ Non- Performing Loans 15
2.2.3.1 Credit Culture 15
2.2.3.2 High Interest Rates 16
2.2.3.3 Unemployment 17
2.2.3.4 Competence of Staff 17

2.2.3.5 Credit Management Techniques....18
2.3 Implications/Effects of NPLs....20
2.3.1 Non-Performing Loans and Interest Rate Variables....20
2.3.2 NPLs and Loan Growth....21
2.3.3 NPLs and Diversification Opportunities....22
2.3.4 NPLs and Macroeconomic Determinants....23
2.3.5 NPLs and Loan Loss Reserves....24
2.3.6 Non-Performing Loans and Operating Profits....24
2.3.7 Non-Performing Loans and Loanable Funds....25
2.4 Loan Classification....26
3.0 Introduction....33
3.1 Research Design....33
3.2 Population of the Study....34
3.3 Sample Size and Sampling Techniques....34
3.4 Data Collection....34
3.4.1 Sources of Data....34
3.5 Data Analysis....35
3.5.2 Measurement of Variables....37
3.6 Reliability....39
3.7 Ethical Considerations....40
CHAPTER FOUR....41
DATA PRESENTATION AND DISCUSSION OF FINDINGS....41
4.0 Introduction....41
4.1 Descriptive Statistics....41
4.1.1 Trend Analysis of NPLs....41
4.1.3 Return on Assets Trend from 2012 – 2018....42
4.1.4 Trend of NPL and ROA....43
4.2. Correlation Results....43
4.3 Regression Results....44
4.4 Discussion....46
4.5 Conclusion....48
CHAPTER FIVE....49
SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS....49

5.0 Introduction 49
5.1 Summary of Findings 49
5.1.1 Non-Performing Loans 49
5.1.2 Return on Assets 50
5.1.3 Relationships between Variables 50
5.2 Conclusions 50
5.3 Recommendations 51
5.3.1 Regular and Effective Monitoring 52
5.3.2 Refresher Training Courses for Credit Officers and Managers 52
5.3.3 Provision of security and guarantees for Credit Facility 53
5.3.5 Bank of Ghana Regular Supervision and Sanctioning 54
REFERENCES 55

LIST OF TABLES

Table 4.1: Correlation between Variables…….44

Table 4.2: Coefficient Results of Independent and Control Variables……..…46

LIST OF FIGURES

Figure 4.1: Graph of ROA between 2012 – 2018……....…41

Figure 4.2: Graph of ROA between 2012 – 2018……..…42

Figure 4.3:Trend Graph of NPL and ROA……..…..…43

LIST OF ABBREVIATIONS

NPL	Non-Performing Loan
UBA	United Bank for Africa
NIB	National Investment Bank
ROA	Return on Assets
GDP	Gross Domestic Product
GHL	Ghana Home Loans
SPSS	Statistical Package for Social Sciences
CAR	Capital Adequacy Ratio
TA	Total Assets

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The emergence of COVID-19 has brought to the fore the catalytic role played by financial institutions (central banks, commercial, universal banks, and savings and loans as well as microfinance companies) in their economies (Scoop & Drake, 2020). In Ghana, the economy over the years has been driven largely by credit facilities from the banks and other financial industry actors who in their ordinary course of business have played and continue to play a pivotal role in our socio-economic development (Kargi, 2011; Nyarko-Baasi, 2018). For this singular financial intermediation role, the banking industry has to be congratulated. This shows that the survival of the other industries or sectors in Ghana hinges mostly on the financial sector, especially the banks for various credits and this has contributed to the sustainability of the Ghanaian economy. While celebrating them for their role, in Ghana today, however, all banks are reporting high percentages of bad loans (non-performing loans) in their books. The challenge of banks making losses is a banking sector risk all over the world but controlling, reducing, and managing this risk to the lowest minimum achievable is the ultimate aim of every bank and for this exists the Central banks of the world for regulatory activities (Basel Committee on Banking and Supervision, 2015) . The losses of banks are generally a result of the inability of debtors to settle their indebtedness to the banks as scheduled at the time of credit advancement (Nyarko-Baasi, 2018).

(Pricewaterhouse Coopers, 2019; Bank of Ghana, 2018; Bank of Ghana, 2017) in their various reports concluded that after the withdrawal of the licenses of banks during the famous banking sector cleanup in Ghana which began in 2017 reported that large

percentages of the loans granted by banks inopportunely became non-performing facilities on the books of these banks and finally result in bad debts which are written off and have negative consequences on the total financial performance. Non-performing loans may be described as those monetary assets from which, as initially or previously planned, financial institutions no longer collect interest and/or installment payments. Because the loans avoid producing revenue for the financial institution, they are referred to as non-performing. The problem of non-performing loans is becoming a serious problem that threatens the sustainability of Ghana's various commercial banks. The main reasons for the challenge are diverse which is not constant across varied literature, this assertion is supported by (Mombo, 2013; Kargi, 2011; Pricewaterhouse Coopers, 2019) all discoursed that the worsening of non-performing loans situations of banks has been at the pivotal point of affairs of causing bank's distress and further economic crises. Because of this, financial institutions should develop the means of checking the conduct of borrowers.

It has been observed through the 90's and 2000's that credit requesting institutions and lenders have significantly increased their management of credit risk, primarily in the developing countries (Kolapo & Oke, 2012). Accordingly, the specialists maintained their position that banking firms have to amend their loan granting modes or directives. There should be a review of a risk level of a likely client which is the basic activity relating to lending by a bank. This includes but is not limited to; monitoring borrower's behavior and compiling management report; gathering receivables as they decrease due and dealing with those who default loans; accepting the danger of clients not honoring their debts or resulting in defective loan assets; making credit granting decision to comply with credit.

1.2 Problem Statement

It is a fact that banks are faced with the risk of non-performing loans globally. Banks and savings and loans companies especially commercial banks are very important not only in providing financial intermediation to the financially incapable but also in providing loans to them. This notwithstanding, commercial banks experience incidents of non-performing loans with Ghana's NPLs rate reaching a high of 21.6% in 2017 and value of GHC7.4 billion and averaging 14.7% over the past five financial years (Bank of Ghana, 2018). Many scholars have argued that increasing the minimum capital requirements is needed to eliminate some banks through mergers and acquisitions and purchase to make banks perform better, a move the Bank of Ghana has undertaken coupled with new regulations aimed at strengthening the sector. Credit crystallizes when loans and other advances become non-performing and almost irrecoverable.

Adusei (2018) asserts in his work on the determinants of NPLs in Ghanaian Banks that the proliferation of financial institutions with its attendant competition makes loans more available and handy within the Ghana banking industry via various terms loans. The main objective that underpins the establishment of all financial institutions is to maximize owners' equity through the issue of loans to customers, this helps in financing the activities of private businesses to help build the nation's economy as a whole. These credits issued by these institutions ended up as non-performing loans, owing to the refusal to pay these loans back to the banks as agreed.

Oni (2018) asserted that the rapid changes in the regulatory policy and legal regimes of nations are the major reasons for NPLs in Africa. He posited that changes in capital requirements, qualification to serve as directors, qualifications to own financial

institution which are not stringently supervised to ensure adherence leave loopholes that result in inefficiencies and NPLs.

The default rate of loans in the country has been on the increase and worrying to all. In recent times, Ghana as a country has had challenges with some financial institutions. The financial sector had been in a considerable state of turmoil and the Bank of Ghana (BoG) in 2017 has cracked the whip at the banking industry to restore sanity. Seven banks already identified as undercapitalized have had their licenses revoked or consolidated and over 450 microfinance institutions because of insolvency have their licenses revoked and shut down. In Ghana, most of the distresses of these financial institutions that are faced with crises have hovered around the issue of Non–performing loans (NPLs).

The NPLs negatively affect the profitability of these commercial banks. Non-performing loans are not only inversely related to the performance of banks, they pose adverse repercussions. Typical among them is that future clients would most likely refuse credits. This is due to the reduction of loanable funds at the banks. Non-performing loans upset the economy which accounts for the rigorous procedures regulators put in place through the Basel accords to reduce the NPLs in banks. Ghana's central government contributed largely to the non-performing loan portfolio as a result of defaulting to pay for contracts signed with contractors which were delivered with loans from banks (Pricewaterhouse Coopers, 2019). The importance of NPLs to the survival of commercial banks in the ever-competitive banking industry motivated this study whose purpose was to unearth the effects of NPLs on the financial performance of banks in Ghana within the periods 2012 to 2018.

1.3 Research Objectives

The overreaching purpose of this research work is to assess the effect of non-performing loans on the performance of commercial banks in Ghana.

The specific objectives are:

1. Examine the factors contributing to the increase in Non-Performing Loans (NPLs) in Ghana between the periods (2012-2018).
2. Examine the effect of Non-Performing Loans (NPLs) on the profitability of commercial banks in Ghana.

1.4 Research Questions

As a result of the above objectives, the following research questions become pertinent:

The specific questions are:

1. What are the factors responsible for Non-Performing Loans (NPLs) in Ghana between the periods 2012 to 2018?
2. What are the effects of Non-Performing Loans (NPLs) on the profitability of banks in Ghana between 2012 and 2018?

1.5 Significance of the Study

The credit portfolios of financial institutions are the leading assets through which these banks earn their income. The financial performance accomplishments of banks are critical to their endurance or survival. Subsequently, credit facilities assume a significant influence and accordingly, accepted that better credit management occurs because of solid advances dispensed by banks. Given the criticalness of a sound advance portfolio, an examination should be attempted to determine the financial performance of banks even with the financial sector being cleaned up in Ghana. The result of this research

would empower banks to receive practical components to control the issue of a developing non-performing credit portfolio in the establishments and subsequently improve their financial performance and benefit. Besides, the study would be good for the Ghanaian banking and non-banking institutions since the credit granting foundations in the nation work inside a similar climate and manage clients of comparable qualities. Thirdly, the task could fill in as a wellspring of reference for other related research works later. Accordingly, it would contribute monstrously to the advancement of banks and their administration, an establishment that assumes a huge part of the economy.

1.6 Scope of the Study

The study focuses on non-performing loans among commercial banks in Ghana. Thus, the study seeks to unearth the significant roles played by NPLs on the financial performance of commercial financial institutions considering a trend of seven years. The overreaching objective for restricting the scope to these banks includes the significant contributions of these institutions in the banking industry in Ghana through the provision of credit to the business community thereby extending the frontiers of credit financing within the past decade. Generally, this research work looks at trends of the NPLs and the effect on the returns these banks make. Finally, it is worthy of note the research was limited to eight (8) commercial banks in Ghana.

1.7 Summary of Methodology

The research design used is quantitative approach to inquiry. The target population for the study was all commercial banks in Ghana. As of June 2020, there are twenty three licensed banks in Ghana. The sample size was 8 of the 23 commercal banks in Ghana at thee time while sampling technique used was purposive. On data collection the study

utilized secondary data from published audited financial statements of the sampled banks that are active participants in the Ghana banking industry. In analyzing data the Statistical Package for Social Sciences (SPSS) was used to generate tables and charts to aid meaning of the various variables used.

1.8 Limitations of the Study

While the representation in this work were done with the highestof ethical considerations, the following limitations are likely to hinder the general application of the findings and recommendations:

- The recommendations are limited to only the commercial banks in Ghana and not all deposit taking institutions in Ghana.
- The time frame was limited to allow the researcher to use more years to enable the researcher do a comparative analysis over a period of time.
- The pandemic also limited the researcher to only the financial statements of these banks instead adding some interviews and questionnaires to allow for insight into issues that may not be captured on the face of the financial statements.

1.9 Organization of the Study

The study in its entirety is chaptered into five. The first of the five chapters dealt with introductory sections such as the background to the study, the categorical statement that motivated the study, the specific questions that guided the research, the general and specific objectives of the study, the justification for the study, the scope of the study, the methodology overview and the organization of the study. The second chapter presents the review of literature related to the commercial banks, meaning and causes of non-

performing loans, performing loans, how loans are classified and provisioning, the consequence of NPLs for commercial banks, ways of ensuring a reduction in the adverse effects of non-performing credit facilities of banks as well as the hindrances facing commercial Banks. The institutions the study used are all licensed commercial banks in Ghana between the seven-year duration of 2012 and 2018. Data for the research would, therefore, be obtained from published audited financial statements and annual reports, credit policy manual, annual banking survey, and the various report on the prior, during, and after the Ghana banking sector reforms.

The research methodology is described in chapter three. In this session, the study, the research instrument, and data collection procedures are outlined. In the fourth session of this study, data analysis, interpretation, and discussions were captured. Last but not the least, the fifth chapter which ends the entire report on the study provides a summary of findings, conclusions, and recommendations of the study.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The literature review covers relevant literature that helped gain more insight into the major causes of loan default within financial institutions in Ghana. It covers but not limited to definitions and explanations of terminologies about causes of non-performing loans, credit management techniques, and implications of non-performing loans on interest income, operating profits, and loanable funds.

2.1 Theoretical Literature

This is to bring to the fore the various theoretical underpinnings for the research. The theories are reviewed are Bad Management Hypothesis, Moral Hazard Theory, The Information Asymmetry Theory, The Financial Accelerator Theory, and Institutional Theory.

2.1.1 Bad management hypothesis

The originators of this hypothesis, Berger and DeYoung (1997), proposes that poor administrative practice makes credits non-performing inevitably. They hold the view that the proper credit management practices are needed to reduce non-performing credit. Studies of bad credit administration practice revealed a positive slacked connection between the estimation of past due/overdrawn advances and NPLs. This, from administration viewpoint, shows the lack of ability of the credit administrator to foresee or to recuperate in any event mostly tricky credits.

2.1.2 Moral Hazard Concept

Moral Hazard theory is underpinned by the idea that people have motivating forces to change their conduct when their danger or awful dynamic is borne by others. Moral peril is a circumstance where one gathering engages in a dangerous occasion realizing that it is ensured against the danger and the other party will cause the expense. It emerges when the two players have deficient data about one another. In a monetary market, there is a danger that the borrower may take part in exercises that are bothersome from the moneylender's perspective since they make him more averse to take care of an advance. It happens when the borrower realizes that another person will pay for the mix-up he makes. This gives him/her the motivation to act less securely.

2.1.3 Information Asymmetry Theory

This is a theory that alludes to a circumstance where one party does not possess adequate data about the other to settle on the same financial decision of whether to lend or borrow. It also refers to a circumstance where entrepreneurs and directors are more informed about the possibilities for, hazards and risks confronting their business, than the banks (Price Water House Keepers, 2015). Mombo (2013) recognized the potential failures made by information imbalance. He explicitly disclosed that because of the absence of adequate information, a moneylender may give his assets to a borrower or the bank may participate in exercises that considerably disregard the underlying terms and states of the advance agreement (moral perils).

2.1.4 Financial Accelerator Theory

This theory gave the hypothetical clarification of the function of banks during a monetary change. They clarified that during expansionary periods, the monetary profile

or credit worthiness of borrowers improves, resource costs increment and this euphoric circumstance prepare for an expansion in the interest for credit. This generally brings about excess accessibility of acknowledging, normally supplemented with a casual loaning strategy, hence expanding credit hazard. The monetary quickening agent hypothesis can be connected to the "Monetary hypothesis" spearheaded by Minsky (1974) otherwise called monetary insecurity speculation, in which he endeavored to give an arrangement and clarification of the qualities of the monetary emergency. The hypothesis suggests that, in prospering occasions, when corporate income increments are above what is expected to settle their credit commitment, theoretical happiness at that point creates, and before long obligations develop past what the organizations can settle from the pay they produce. This can subsequently prompt a monetary emergency since banks and moneylenders will fix credit accessibility, even to organizations that can bear the cost of advances and the economy at that point contracts.

2.2 Conceptual Review

2.2.1 Performing Loans

The USA Federal Financial Institutions Examination Council characterizes an advance that is under 90 days past due that has not been set on non-accumulation or isn't in exercise status as a performing credit. It is cash acquired by which the borrower has made the concurred and planned installments before the due 90 days. A performing credit is an obligation on which the borrower has verifiably made the installment on schedule. (Graphiconline, July 27, 2017).

As per Farlex Financial word reference (2015), a performing advance is a credit that isn't in or close to default. In the perspective of the International Monetary Fund (IMF), a

performing advance is an advance where interest and head installment are under 90 days past due; under 90 days of interest has been renegotiated, promoted, or postponed by arrangement; and proceeded with installment is envisioned. All conditions should be available for a credit to perform. Nonetheless, the particular definition is reliant on credits specifically terms. The law-word reference additionally concurs with the prior definitions as it says a performing advance is a point at which the interest installment and chief are under 90 days past the days on which they ought to have been paid. It is additionally an advance that the borrower is taking care of as concurred in the advance arrangement.

"Lawfully, a credit office is characterized to mean a legally binding arrangement among two gatherings where one, the moneylender give an amount of cash to a borrower, they vow to return the said amount to the loan specialist either in one knot or in portions over a predetermined period" (Paul Lawer Tettey, 2017). "The understanding may incorporate the arrangement of extra installment of rental charges on the assets progressed to the borrower (account holder) for the time the assets are in the possession of the indebted person. The extra installments that are as interest charges, preparing expenses, commissions, checking charges, among others are typically paid notwithstanding the chief aggregate loaned. To be sure, these extra installments whenever made as per the contracts of the credit office establish the interest payments to the moneylender or creditor."(Paul Lawyer Tettey, 2017). Here is anyway some combination of assessment on this issue.

An advance/credit office may, consequently, be considered as performing if installments of both the head and interest energizes are to date as concurred between the loan

specialist and the borrower. Per the Bank of Ghana (BoG) grouping (BoG, 2018) credits are viewed as current if the installment of head and premium is modern. It can, subsequently, be derived that credits that are forward-thinking regarding the head and interest installment are depicted as performing advances.

2.2.2 Definitions and Concept of Non-Performing Loans

Non-Performing Loans (NPLs) are advances that borrowers do not settle in time. The term NPLs is utilized reciprocally with bad advances and disabled credits as distinguished by Fofack (2015).

In 2014, in an exhaustive evaluation, the European National Bank distinguished advances as non-performing on the off chance that they met any of the rules of 90 days past due. This is regardless of whether they are not defaulted or debilitated if NPLs or are disabled concerning bookkeeping particulars for Generally Accepted Accounting Principle (GAAP) and International Financial Reporting Standards (IFRS) banks and are in default as per the capital prerequisite regulation. Bank credit is viewed as non-performing when for more than 90 days the borrower has not honoured the premium as agreed. Non-performing credits are likewise called awful obligation as characterized by the European Central Bank. (European Central Bank September 2016). In the perspective of the Italy banking framework, non-performing loans (NPLs) alludes to account holders who are not, at this point ready to meet all pieces of their authoritative commitments due to their low and wasteful monetary and monetary conditions. (Bank of Italy, March 2017)

The International Monetary Fund (IMF); passage 4.84-4.85 of its Assemblage Guide on monetary sufficiency indicators (2004) recognizes a credit as non-performing when installment of interest or potentially chief are not made inside 90 days and there are valid justifications to question that installment will be made in full. An addendum given in 2018 determined the period for moneylenders to put aside assets to cover non-performing credits two (2) to seven (7) a long time, contingent upon if the advance was made sure about.

Hence, the International Monetary Fund (IMF) additionally sets out numerous measures for a non-performing credit classification. In 2015, the IMF characterized NPLs as "credits whose borrowers have not paid interest, as well as a head installment in any event 90 days or more or indebted individuals interest installment equivalent to 90 days or more, have been promoted, renegotiated or deferred by understanding and installment have been postponed by under 90 days, yet accompanies high unsure or no conviction the account holder will make installments later on". A non-performing advance may likewise allude to one that is not acquiring pay and full installment of principal and interest is not, at this point foreseen, head or interest is 90 days or more or the development date has passed and installment in full has not been made.

In their view, Islam, Shil, and Mannan, (2014), NPL is "one that cannot be recuperated inside a specified period. Consequently, the capability of a credit as performing or not is a right of the loaning institution. That is the point at which the principal or potentially interest on an advance have been left unpaid for in any event ninety days, it is considered nonperforming". "NPLs are problematic, and can hush up venomous to the development of a monetary organization (Bexley and Nenninger, 2012)".

When the indebted person begins making installments again on an NPL, it turns into a re-performing advance (European Central Bank, September 2016), regardless of whether the full obligation has not been completely paid. For example, the NPL and failing to meet expectations advances in UniCredit Ghana Ltd have often required the rebuilding of reimbursement terms, which has brought about liquidity challenges for the bank, affecting contrarily on consumer loyalty and maintenance.

Tyler Lacoma (2017) additionally distinguishes "non--performing advances as advances, particularly credits that financial institutions loan to borrowers, however, do not profit by". As such, the borrower cannot repay the credit in full, or even enough for the financial institution to make a benefit. At the point when this occurs, the borrower can either work out another installment arragnement or take in substitution the security the borrower has given". The Bank of Ghana in January 2017 uncovered that NPLs of the financial business in Ghana was 13 percent and stayed unaltered in June 2017 (BoG Report, 2017).

2.2.3 Causes of Loan Default/ Non- Performing Loans

2.2.3.1 Credit Culture

"Most nonperforming credits are brought about by borrower choices. In some cases, borrowers choose to fit the bill for credits without pondering the future and what else they need to purchase with their pay. At the point when this happens, a credit culture is created where borrowers make enormous advances, not because it is in need of such credits monetarily shrewd but since they see others doing it. That can undoubtedly bring about defaulted credits". (Tylor Lacoma, 2017).

Credit management processes must be used to assess the risk associated with the borrower and qualify the borrower to secure the credit. This credit risk assessment incorporate the limit of the borrower to reimburse the advance, just as the motivation behind the advance among different requests since others demand cash for a few reasons, including business improvement (Boahene, Dasah, and Agyei, 2012). A proper risk appraisal of a borrower goes far to lessen instances of default as different variables have been noted as reasons for the non-execution of advances (Paul Lawyer Tetteh, 2017).

The works of Richard (2011) show that in Africa, NPLs in banks can be largely ascribed to moral hazards. Results demonstrated that bank managers/administrators neglect to oppose improper loaning techniques or credit risk appraisal because of compassion, as well as pay-offs.

2.2.3.2 High Interest Rates

It is known that advances are given at "high financing costs to borrowers in the most hazardous fragments of the credit market" (Mabvure, Gwangwava, Faitira, Mutibvu, and Kamoyo, 2012; p. 471). The financial conditions or the economic situations which could either be systemic or temporal have effects on interest rates charged by banks when businesses and individuals apply for credit and condition can cause credit defaults. Any unexpected market change can change the advance market by influencing how much cash individuals need to take out as advances and make installments. On the off chance that the market out of nowhere changes and the costs of items increment because of deficiencies or more prominent requests, debtors will have less cash to take care of their

advances, which can prompt more noteworthy in general non-execution. (Tylor Lacoma, 2017).

Tyler Lacoma (2017) concur with Bloem & Gorter (2010) that unexpected market changes are additional factors that lead to NPLs and states that "any abrupt market change can achieve changes in the credit market by influencing how much cash individuals can take as credits and make payments". On an occasion that the market abruptly changes and costs of things increased because of deficiency or expanded interest, borrowers will have less cash to take care of their advances which can prompt advance default (Amuakwa-Mensah and Boakye-Adjei, 2015).

2.2.3.3 Unemployment

Joblessness will affect credit hazard through the adjustment in the business cycle, swapping scale, loan fee, credit availability, and credit quality. Liquidity crunch or monetary issues can affect debtors' capacity to fulfill their obligations (Tettey, 2017).
Again, "rivalry among commercial banks regarding development, productivity and the desire to be a market leader can make financial institutions settle for the status quo or inappropriately value their credit items" (Tettey, 2017). This could bring about a greater expense of expanding non-performing advances.

2.2.3.4 Competence of Staff

The capability of staff to ensure proper credit procedures are followed professionally is a factor that contributes to credit defaults in commercial banks. Tylor Lacoma (2017) states that the "execution of banks' credit is a vital reason for nonperforming advances. A proficient and very much proper administratively run bank should have the option to

change credit rates and terms to the current market to diminish the opportunity of non-performing advances. These financial institutions ought to likewise be particular concerning which borrowers they acknowledge. Banks that do inadequately in these territories will make more non-performing advances" (Tylor Lacoma, 2017). Staffs that are put in charge of credit risk appraisal anad management must also have the fundamental knowledge, skills and professionalism to enable them contribute effectively to running an efficient credit management system. This eventually will ensure that credit management challenges (non-performing loans) can be reduced in the institution (Tettey, 2017).

Banks are presented with a lot of challenges about how assets are given and how they can guarantee back assets conceded as advances and other credit offices. As posited by Heffernan (2010) the disappointment of these organizations and individuals, collectively referred to as debtors to reimburse their advances caused the development of NPLs and is viewed as the most difficult issue confronting the banks and causing the breakdown of these institutions.

2.2.3.5 Credit Management Techniques

Banks and their clients have various impressions of credits or loan facilities. To most investors, credit is certifiably not a capital-market action, yet an excessive number of corporate clients' especially little and medium-sized organizations, bank advances are their most significant wellspring of capital. The interest for medium-term or long term loans comes primarily from business and modern organizations and private people. Be that as it may, credit creation is the principal means of income generating action for banks. In any case, this movement includes amazingly high dangers to both the bank

and the borrower (customer). The danger of a borrower not satisfying their commitment according to the agreement can extraordinarily adversely interrup the smooth working of a commercial bank's activity. Then again, financial institutions with high credit risk faces possible bankruptcy and this does not give investors confidence to put their deposits and investments. Financial institutions have fallen into or experienced liquidity challenges because of wasteful credit impact resulting in significant levels of advances. Credit risk procedures of financial instutitions and helpless credit quality keep on being a predominant reason for banks' disappointments and banking emergencies around the world. Once more, Financial institutions have confronted challenges throughout the years for a huge number of reasons, the significant reason for genuine financial issues keeps on being straightforwardly identified with careless credit norms for borrowers and counterparties, helpless portfolio hazard of the executives, or absence of consideration regarding changes in monetary or different conditions that can prompt a decay in the credit remaining of a banks' counterparties (Gill, 2011).

A share of the supportive variables that banks guarantee to have added to this circumstance incorporates high non-performing loan (NPL) proportions and high provisions for loan losses. For sure, the nature of a banks' totaled credit book stays a wellspring of financial area weakness. Significant levels of non-performing assets in the fiscal summaries of banks can bring down productivity and disintegrate the capital base. Pointers of resource quality estimated by the non-performing loans (NPL) proportions hit a pinnacle of 20% in February 2010, declined to 16.5 percent in September, and 16.9 percent before the finish off October 2010 (Amissah-Aurthur, 2010). Hence, the effective danger the executives are required. Carey (2009) demonstrates that hazard the of executives is more significant in the monetary area than in different pieces of the

economy. On account of banks, the issue of credit hazard is even of more noteworthy concern due to the more significant levels of apparent danger coming about because of the conduct of customers and the sort of business exercises they finance through credit.

2.3 Implications/Effects of NPLs

The findings of various researches suggest that non-performing loans are significantly affected by bank-specific, industry, and macroeconomic variables in a broader context. However, in a more specific context, the study seeks to identify the effects of non-performing loans on interest income, operating profit and loanable funds, interest rate, loan growth, diversification opportunities, macroeconomic determinants, and loan loss reserves.

2.3.1 Non-Performing Loans and Interest Rate Variables

Ghana is accepted to have one of the most elevated loan cost spread in Africa (Bawumia et al. 2005; Aboagye et al. 2008; Garr and Coleman, 2013; Mensah and Abor, 2014; Sherif and Amoako, 2014). The high loan cost spread is influencing private area speculations and development in Ghana and as such represents the requirement for financing costs to be diminished to advance monetary exercises in Ghana (Amankwa-Mensah and Marbuah, 2015). It was accepted that the growth of the financial industry will decrease loan interest fundamentally however the circumstance in Ghana currently shows that has not been achieved (Owusu-Antwi et al. 2017). After a significant increase in financial institutions in Ghana, the normal decrease in financing cost spreads to guarantee banking productivity has not appeared (Bawumia et al., 2005). A large portion of the banks and financial institutions contend that there is a higher danger in granting loans which may result from moral risks and unfriendly determination dependent on data

deviation bringing about non-performing advances and arrangement for dubious obligations.

Causes and treatment of non-performing credits were concentrated in detail by Bloem and Gorter (2001). They concurred that "terrible credits" may impressively increase because of unexpected changes in financing costs. They examined different worldwide guidelines and perform on perceiving, esteeming, and ensuing treatment of non-performing credits to address the issue from the view purpose of controlling administration and decrease measures. An investigation directed by Espinoza and Prasad (2010) zeroed in on macroeconomic and bank explicit elements impacting non-performing advances and their assets in the banking system. After a far-reaching investigation, they found out that higher financing costs increases non-performing credits yet the relationship was not measurably huge. Berge and Boye (2007) found that difficult advances are exceptionally delicate to the genuine loan costs and joblessness for the nordic financial framework over the period 1993–2005.

Bawumia et al. (2005), contemplated the effect of market financial factors and strategy factors on the loan fee in Ghana. The outcomes demonstrated that swelling, saves, charges, cross appropriation among premium and non-premium pay were key determinants of business bank revenue spread in Ghana.

2.3.2 NPLs and Loan Growth

Clark (1992) examined the relationship between the growth of loans and the quality of loans. Following the theoretical framework of Clark (1992), banks seeking to boost their overall market share could lower their underwriting standards to attract more loan

customers. Banks could lower the non-price conditions of the loan to attract fresh customers. Also, even if a bank maintains the same credit standards, it may attract lower credit quality borrowers, thereby increasing the risk exposure to the exposure of the loan.

However, Anandarajan et al (2007) argue that the risk on bank loan portfolios depends on the quality of incremental loans. Therefore, the relationship between NPL and loan growth is likely to depend on the quality of incremental loans. Nonetheless, the quality of incremental loan or loan growth is often unobservable, thus, it is difficult to predict the relationship between NPL and loan growth. From a credit risk management perspective, when banks anticipate NPLs, bank managers would decrease lending in the current period to minimize expected credit loss. Thus, we expect a negative relationship between NPL and loan growth.

2.3.3 NPLs and Diversification Opportunities

The literature suggests that banks' diversification opportunities may be related to loan quality (Salas & Saurina, 2002; Hu et al. 2004; and Rajan and Dhal, 2003). These studies employed bank size (total asset) as a proxy for diversification. For example, Salas & Saurina (2002) find a significant negative relation between bank size and NPLs. They argue that large banks tend to be more diversified and that diversification reduces credit risk. Alternative measures of diversification have been employed. For example, Louzis et al (2011) employed total assets and non-interest income and did not find evidence to support the bank size diversification hypothesis. They concluded that bank size, proxy by total asset, does not fully capture diversification. Additionally, Louzis et al (2011) employed non-interest income as an alternative proxy for the diversification effect but did not find a significant negative relation between NPLs and diversification. Overall,

empirical evidence for diversification effects on NPLs appears mixed. This follows the reasoning that banks are expected to maintain a well-diversified loan portfolio. A diversified portfolio spreads credit risk across heterogeneous and unrelated debtors. This sharing of risk reduces the size of NPL relative to a non-diversified loan portfolio.

2.3.4 NPLs and Macroeconomic Determinants

The theoretical literature argues that the state of the economy is the most important factor influencing loss rates on diversified loan portfolios (e.g. Carey, 1998; Ruckes, 2004; Geanakoplos, 2010). The literature submits that in good economic times, banks tend to extend credit to low-quality debtors but when a recession sets in, NPLs are expected to increase. Empirical studies appear to show consistent evidence for this macro-financial linkage (e.g. Quagliarello, 2007; Klein, 2013). For example, Quagliarello (2007) in a study of Italian banks from 1985-2002, found that the state of the business cycle is a determinant of NPLs. Klein (2013) examines NPLs in Central, Eastern, and South-Eastern Europe (CESEE) countries to determine whether NPL is driven by macroeconomic factors. Klein (2013) examined the relationship between NPL and macroeconomic factors such as a change in gross domestic product, unemployment, and inflation. Klein (2013) found a strong negative relationship between NPL and the state of the business cycle proxy by a change in gross domestic product. Other studies include Keeton and Morris (1985), Rinaldi and Sanchis-Arellano (2006), Salas and Saurina (2002), Carey (2002), Pagano, and Marco (2008), Boss et al. (2009), and Espinosa and Prasad (2010). Therefore, consistent with prior studies, we expect a negative relationship between NPL and the state of the business cycle, proxied by a change in gross domestic product. A negative sign indicates NPL is pro-cyclical with the

state of the business cycle. A positive sign would indicate counter-cyclical, pro-cyclical NPL behavior.

2.3.5 NPLs and Loan Loss Reserves

At the point when banks anticipate NPLs, banks will increase their non-performing loans. An expansion in arrangements converts into an expansion in advance misfortune saves. Subsequently, a positive connection between NPL and stores is normal.

2.3.6 Non-Performing Loans and Operating Profits

As per Issa (2009), from a realistic perspective, the reasoning behind the presence of Financial Institutions is the arrangement of various sorts of credits, which thusly are considered as the primary kind of revenue to the bank. In this way these organizations and businesses endeavour to contribute the greater part of the accessible assets as could be expected under the circumstances, as advances to expand their profits. This thus brings about most of their resources being as advances and other credit facilicies (Achou and Tenguh, 2008). The premium pay generated from credits contributes fundamentally to the income of the financial institutions. Notwithstanding, when credits become delinquent, it has a genuinely negative impact on the wellbeing and activities of banks. One reason is, per the Bank of Ghana guidelines, the credit granting institution needs to make arrangements and charges for credit misfortunes (awful obligation/debilitation) which at last lessen the benefit level.

A few investigations have analyzed both the determinants of high loan fee spread and the suggestions on both the economy and productivity of banks even though most of these examinations have been in different districts and nations (Sherif and Amoako,

2014). This gives off an impression of little examinations in the region of loan cost spread and benefit of banks in Ghana. The clear absence of solid proof on the effect of loan cost edge on productivity makes this investigation extremely significant. This investigation attempts to fill the lacuna by utilizing current information to attempt to comprehend the effect of financing cost spread or premium edge on the benefit.

Raza et al. (2013) analyzed the determinants of bank performance in Pakistan and included revenue spread as one of the vital determinants of bank benefit dependent on an example of 18 banks for more than 10 years. The outcomes indicated a negative connection between interest spread and bank performance in Pakistan. Aremeu et al. (2013) contemplated the determinants of bank performance in Nigeria and included revenue spread as one of its autonomous factors. The aftereffects of the examination indicated that premium spread is fundamentally connected with bank performance over the long haul yet immaterial in the short run.

2.3.7 Non-Performing Loans and Loanable Funds

A huge non-performing loan portfolio will in general sabotage the banks' capacity to allow more credit. This is because the loanable assets will in general be exhausted when the reimbursement of credit is deferred. This causes another significant issue which then portrayed the credits issued as a 'harmful resource' where there is a deficiency of certainty for debtors to settle their obligations therrfore prompting liquidity challenges. At the point when clients lose trust in banks, they cause alarm withdrawal (which no bank can endure) and neglect to set aside installments. This causes an uncommon withdrawal and decrease in loanable assets. This will make investors pull out since tremendous sums discounted as terrible obligation and unfavorably influence the

retaining of the investors' deposit. In a comparative analysis, the profit installment is similarly adversely influenced because the arrangements for bad credits are deducted before profits are proclaimed.

Some studies demonstrates that "bombing banks (rush withdrawal) have a colossal measure of non-performing advances before disappointment and that resource quality is a huge indicator of bankruptcy" (Berger and De Young, 1997). To be sure in Ghana, most financial institutions have imploded and some even united essentially on the record of non-performing advances. The issues examined above show the gravity of the ramifications of non-performing credits on the tasks of banks and this investigation endeavors to recognize the significant reasons for these NPLs among different targets.

2.4 Loan Classification

Standard claims: defined as claims where loans whose repayment is up to 30 days overdue, the debtor meets his other commitments under the contract and an analysis of the debtor's economic situation indicates that the claim will be repaid in full and on time.

Standard claims with qualification: where reimbursement is more than 30 days, yet not over 90 days past due. The borrower neglects to meet another responsibility emerging from the agreement, for instance, he neglects to give data as needed under the agreement, or dependent on an examination of the indebted person's financial circumstance a misfortune is normal for the bank because of past-due reimbursement. Arrangements are made in the measure of in any event 1%, yet fewer than 20%, of the unstable estimation of a standard case with capability.

Non-standard claims: These are cases where reimbursement is over 90 days, however not over 180 days late. The borrower is in liquidation and the case emerges from the acknowledgment of an assurance accommodated the account holder, or dependent on an investigation of the indebted person's monetary circumstance it is accepted that the case will in enormous part be reimbursed. For this situation, arrangements are made in the measure of at any rate 20%, yet under half, of the unstable estimation of the non-standard case concerned.

Doubtful claims: This is classified as cases where reimbursement is more than 180, yet not over 360 days late. The borrower is going through synthesis procedures, a liquidation appeal is documented and a brief conservator is designated for the account holder's property, or dependent on an investigation of the indebted person's financial circumstance it is expected that lone a more modest piece of the case will be reimbursed. Here arrangements are made in the measure of at any rate half, however under 95%, of the unstable estimation of the suspicious case.

Loss-making claims: These are cases where reimbursement is over 360 days late; a liquidation appeal for the account holder's property is dismissed for the absence of resources. Insolvency is pronounced for the account holder's property. The insolvency procedures for the account holder's property are ended since there are insufficient resources to cover the expenses of chapter 11 procedures. This is a case against an individual with a unique relationship to the bank, or an individual having command over the bank, and reimbursement of the case is over 90 days late, or an examination of the indebted person's monetary circumstance demonstrates that the case won't be reimbursed, even to some degree; · arrangements are made for 100% of the unstable

estimation of the misfortune making guarantee concerned. Unclassified advances were characterized as advances in the arrangement of cases. (Dimitiz, 2010).

2.5 Empirical Literature

Twum and Tornyehlor (2015) recognized the primary driver of default of credits as inappropriate choice of a business person, inadequate investigation of venture suitability, the deficiency of insurance security/evenhanded home loan against advances, ridiculous terms, and timetable of reimbursement, absence of follow up measures and default because of normal disasters. The study by Sally (2016) on the eventual fate of MFIs uncovered that nature, the season of dispensing, management, and benefit of endeavours, added to the reimbursement capacity and therefore high default rates. Other basic components related to advance wrongdoings are a sort of advance; term of the advance; loan cost on the advance; helpless record; borrowers' pay and exchange cost of the credits. The ongoing banking sector clean up has started a premium in understanding the drivers of NPLs in Ghana. The studies went from cross-country investigation for example board information models to nation explicit contextual analyses.

The studies on the factors of NPLs depends on hypothetical models that manage the business cycle with an express part for financial intermediation. The monetary quickening agent hypothesis as talked about in Bernanke and Gertler (2017), Kiyotaki and Moore (2007) as referred to by Koomson et al (2014), is the generally utilized hypothetical edge work to interface NPLs with a country's macroeconomic climate. The macroeconomic determinants of NPLs can be additionally followed to the hypothetical writing on life-cycle utilization models, for example, Lawrence (1995) referred to by Kayoze (2012) that presents expressly the likelihood of default. Such models infer that

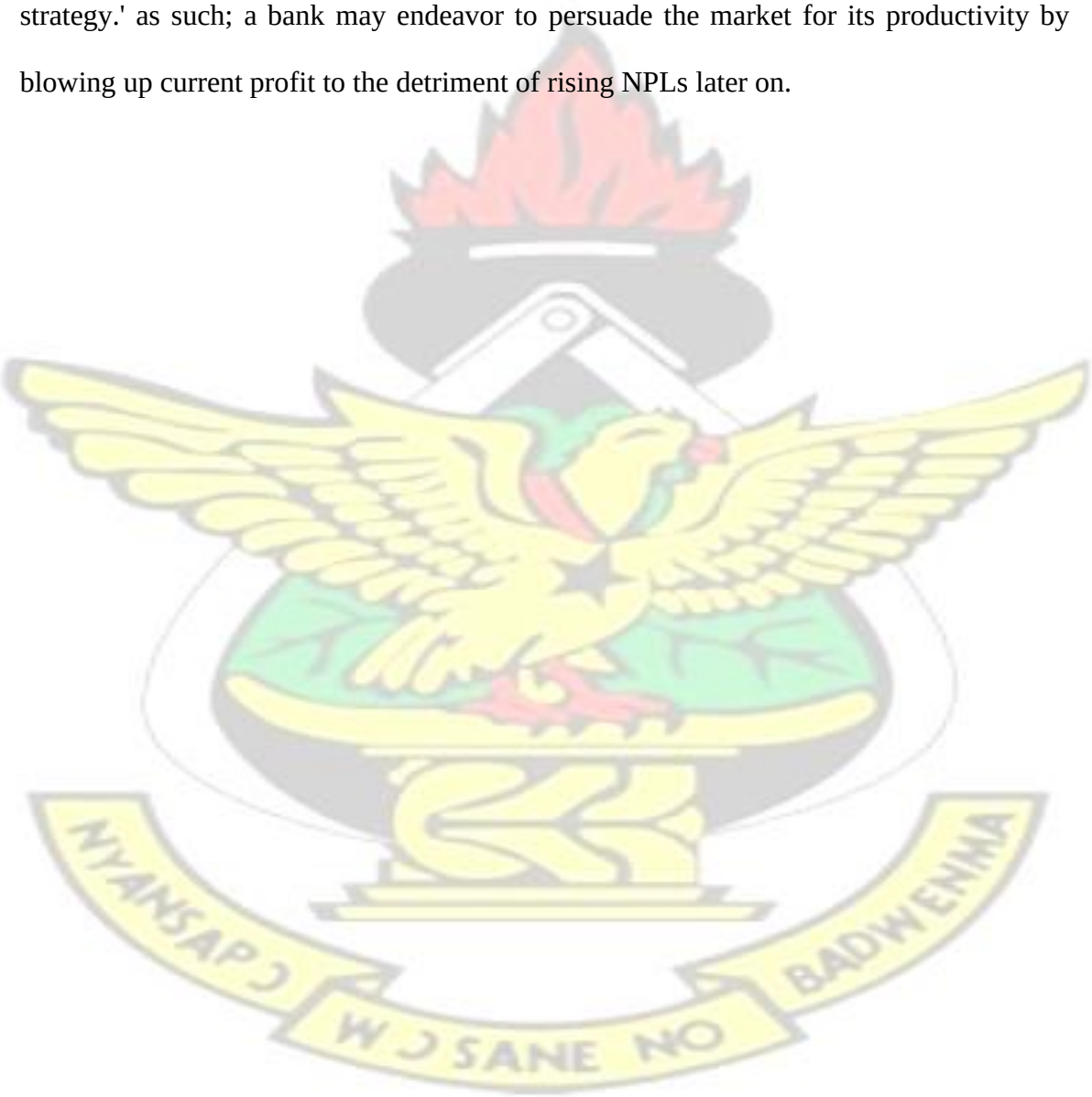
borrowers with low livelihoods have higher incidents of defaults because of an expanded danger of confronting joblessness and being not able to settle their commitments. Also, banks charge higher loan fees to more risky customers. Accordingly, the default likelihood relies upon current pay and the joblessness rate, which is connected to the vulnerability for future payment and the loan interest rates. Utilizing bank-level information, Klein (2013) examines NPLs in 16 Central, Eastern, and South-Eastern European countries and find both bank-explicit just as macroeconomic variables to impact NPLs. Skarica (2014) utilizes quarterly information from 2007 to 2012 for 7 Central and East European nations, to investigate the full-scale monetary determinants of NPLs, and find both joblessness and increasing rates to result in rise in NPLs while genuine GDP growth has a negative effect. Jakubik & Zumaminga (2013) analyze the factors of NPLs in 9 Western and Southern African nations including South Africa, Zimbabwe, Botswana, Ghana, Nigeria, Togo, Cote d'Ivoire, Lesotho, and Angola. Utilizing GMM assessments with quarterly information from 2004 to 2012, the authors discover genuine GDP growth and public stock cost file to decrease NPLs while a country's conversion standard, private credit-to-GDP, and past NPLs to build present period's NPLs. Advancing toward the eurozone, Makri et al. (2014) inspect the function of both macroeconomic and bank-explicit factors on NPLs in 14 nations in the Eurozone and confirmed a solid impact of the two classifications of factors on NPLs. Messai and Jouini (2013) look at the issue for 85 banks in Italy, Greece, and Spain, separately, for 2004-2008 and find both financial performance and bank productivity to decrease NPLs while joblessness rates, genuine financing costs, and bad credit quality to emphatically impact NPLs. Studying some ongoing individual European nation’s explicit investigations, Louizis et al. (2012) use the information for 9 Greek business banks and analyze NPLs in customer, business, and ranch advance classifications. The creators

discover NPLs to be chiefly affected by macroeconomic factors. Salas and Saurina (2002) look at Spanish business and reserve funds banks and discover GDP development to bring down NPLs. Macit (2012) explores NPLs for the 15 biggest business banks in Turkey utilizing quarterly information from 2005 to 2010. Both bank-explicit and large scale financial factors altogether impact NPLs. Essentially, Cifteret al. (2009) find slacked modern creation to impact NPLs in the Turkish financial industry for 2001–2007. Going to contemplates taking a gander at different locales, Beck et al. (2013) look at the function of key macroeconomic pointers in 75 nations (both progressed and arising economies) for the period 2000 - 2010 and discover genuine GDP, ostensible successful trade rates, share costs, and genuine loaning rates to altogether influence NPLs. Espinoza and Prasad (2010) utilize a board informational index from 1995 to 2008 for 80 banks in Africa and discover NPLs to deteriorate as financial development brings down and loan costs and hazard avoidance increment. In like manner, Nkusu (2011) analyzes the issue for 26 countries of which Ghana is part for the period 2007–2015 and affirms that unfriendly macroeconomic determinants are related to rising NPLs. Buncic and Melecky (2012) gauge the determinants of NPLs by utilizing yearly information for 54 nations from 2004 to 2014. Illustrative factors incorporate the slacked NPL proportion, genuine GDP growth, CPI expansion for every nation, while a vector of control factors including the credit-to-GDP proportion and the portion of unfamiliar cash advances in all-out advances. De Bock and Demyanets (2012) gauge board relapses again utilizing yearly information for 25 developing business sector economies for 2000–2010 that incorporates the slacked subordinate variable and imperceptibly nation impacts. Genuine GDP withdrawal, cash deterioration against the US dollar, more fragile terms of exchange, and outpourings of obligation make capital (portfolio obligation and bank credits) lead to a higher total NPLs of the financial industry. Combining these

investigations, a typical finding is NPLs are countercyclical to in general nation explicit macroeconomic conditions. Moreover, most studies centered more on macroeconomic and outside elements affecting NPLs and exercise banking industry explicit components.

The banking-business explicit determinants of NPLs Credit development: Keeton (2009) utilizing a basic model of the market for bank advances show that quicker advance development prompts higher advance misfortunes. At the point when banks increase their stockpile of advances, they lessen their financing costs charged on advances and lower their base credit standard. Such a decrease in credit norms expands the odds of advance defaults by borrowers. This circumstance expects loan growth to decidedly influence NPL. A proportion of progress to-resource ratio, such as Klein (2013). This measure likewise reflects liquidity risks since credits are less fluid and more likely to go bad yet have a more prominent anticipated return than different assets, similar to government protections in banks portfolios. The impact of bank gaining by NPLs can be uncertain. From one perspective, managers responsible for accounts with low capital base have an ethical peril motivating force to participate in risky loan granting rehearses alongside unprofessional credit scoring and observing borrowers (Keeton and Morris, 1987). This 'ethical risk' theory infers a reverse connection between value capital and NPLs. Then again, administrators in banks that are exceptionally promoted may depend on a liberal credit strategy under the thought of 'too large to fizzle' (Rajan, 2014) inferring a positive connection among capital and NPLs. The proportion of capitalization by absolute value funding to-add up to resources, filth like Klein (2013), Louizis et al. (2012), Macit (2012), Makriet al. (2014). Advance loss arrangement: This variable mirrors the credit nature of banks and the general mentality of the financial framework to control risks. Bank productivity: Highly beneficial banks have less motivating forces to

participate in high-risk exercises. So the benefit is relied upon to contrarily affect NPLs, following the 'terrible administration' theory of Berger and DeYoung (2007). In rejoinder, higher benefits could likewise build NPLs. This chance is appeared in the model of Rajan (2004) where credit strategy is not resolved exclusively by the augmentation of banks' profit yet also by the financial standing of banks. Subsequently, bank managers may endeavour to control current income by turning to 'liberal credit strategy.' as such; a bank may endeavor to persuade the market for its productivity by blowing up current profit to the detriment of rising NPLs later on.



CHAPTER THREE

METHODOLOGY

3.0 Introduction

Chapter three deals with the methodology used in this research. It focuses on the various processes and procedures used in conducting the research. The chapter also discusses the various sources of the data for the study, the technique for sampling, and the approaches for data analysis as well as validity and reliability.

3.1 Research Design

The research design used is quantitative approach to inquiry. It is premised on an assumption that the quantitative research approach provides a better understanding of research problems than using the qualitative method. The study adopted this approach for a reason that the demerits of qualitative methods and this aid in producing robust results (Creswell, 2013).

According to Sullivan (2014), a quantitative approach involves quantifying data or assigning measures to statistically test their relationship. Gay, Mills, and Airasian (2015) confirmed that the study based on quantitative data research employs techniques that quantify data and typically subject them to statistical analysis. In the considerations of the choice of quantitative methodology, primarily, the quantitative research placed in the position to focus on the main concerns of the research; the effect of NPLs on the profitability of commercial banks in Ghana.

3.2 Population of the Study

The target population for the study was all commercial banks in Ghana. As of June 2020, there are twenty three licensed banks in Ghana. Including; ABSA Ghana, Access Bank Ghana Limited, ADB Bank, Bank of Africa, Cal Bank, Consolidated Bank, Ecobank Ghana Limited, FBN Bank, Fidelity Bank, First Atlantic Bank, First National Bank, and GHL Bank, GCB Bank, Guaranteed Trust Bank, NIB Limited, OmniBSIC Bank, Prudential Bank, Republic Bank, Societe General Bank, Standard Chartered Bank, UBA, Universal Merchant Bank and Zenith Bank Ghana Limited.

3.3 Sample Size and Sampling Techniques

In all, the study used a sample of eight (8) commercial banks for the study; ADB Limited, GCB Bank, Access Bank, Societe General Bank, NIB Limited, Ecobank Ghana Limited, UBA, and Fidelity Bank Limited. The respondents were purposively selected from the population because of the following reasons:

1. These eight banks together control 50.7% of the total advances in the banking industry for more than five out of seven years.
2. These banks are also dominant in the market regarding their outlets or branches throughout the country and control 63% of the total deposits in the industry.

The above reasons make their choice representative of the industry since they are involved in various sectors of the Ghanaian economy.

3.4 Data Collection

3.4.1 Sources of Data

This study utilized secondary data from published audited financial statements of the sampled banks that are active participants in the Ghana banking industry. These business

banks have been present and working through the financial clean up and different reports distributed by the Bank. The chosen banks control roughly 75 percent of the industry resources size, credit size, liabilities positions, and capital and profit, making this sample adequately representative of the population. This research adopted the causality design and deductive research plan. The causality research approach has been picked because i) the investigation endeavoured to test and dissect the relationship among variables or factors ii) the design assists with finding an experimental relationship between the independent factors and a variable or dependent variable.

This study utilized descriptive analysis and panel regression techniques to digestbreak down information. To guarantee that the sample adjusts to panel regression analysis methods, the information was tried for ordinariness, linearity, multicollinearity, and heteroscedasticity.

3.5 Data Analysis

Statistical Package for Social Sciences (SPSS) was used. Given the package's advantage for the automatic performance of several tasks such as cutting, copying, pasting, finding, replacing, etc., and its familiarity, the researcher was able to conveniently import the data, edited and cleared it later. Relevant variables and their corresponding application properties of the same were used to analyze the data into charts, tables, and graphs.

3.5.1 Model Specification

From the connection that exists among variables, a panel regression model was advanced by taking natural logs of the various variables chosen for the study.

$$InROA_{it} = \alpha_{it} + In\beta 1NPL_{it} + In\gamma 2LQDT_{it} + In\gamma 3SLVT_{it} + In\gamma 4IR_{it} + In\gamma 5TA_{it} + \varepsilon_{it}$$

The description of the model is as follows:

α = Constant parameter/Intercept

β = Coefficients of independent variables

γ = Coefficients of control variables

T = Time periods under consideration

In = Natural Logarithm

'ε' represents the unexplained residual

Where,

$InNPL_{it}$: refers to the ratio of the natural logarithm of Non-Performing Loan to Loans and Advances for bank *'i'* at times *t* and *t-1*.

$InLQDT_{it}$: represents the ratio of the natural logarithm of Loan to Deposit Ratio of the bank *'i'* at time *t* and *t-1*.

$InSLVT_{it}$: means the ratio of the natural logarithm of shareholders' funds to total assets of bank *'i'* at time *t* and *t-1*Shareholders Funds/Total Assets

$InTA_{it}$: means the natural logarithm of total assets of the bank *'i'* at time *t* and *t-1*.

$InIR_{it}$: This represents the natural log of the interest rates charged per year. At time *t* and *t-1*.

NB: All variables are bank induced.

This study utilized three panel assessment strategies: (1) Pooled Regression Model (OLS), (2) Fixed Effects (FE) Model, (3) Random Effects (RE) Model. OLS expects that all subjects are homogeneous which limits the heterogeneity (singularity or uniqueness) that may exist among various subjects under study in the relapse model (Woodridge, 2010). The Fixed Effects (FE) model considers heterogeneity or singularity among cross-area units by letting every substance have its catch esteem that catches the distinctions across elements (Gujarati and Porter, 2009). Then again, Random impacts (RE) Model is

utilized on suspicions that the surreptitiously singular heterogeneity is uncorrelated with the autonomous factors remembered for the model. The RE assessor expects that the capture of an individual unit is an arbitrary segment that is drawn from a bigger populace with a consistent mean worth. The Hausman test shows the Chi Square of 18.86 with the p estimation of 0.17. Given this, the outcomes and conversation have zeroed in on the result gave by the Random Effects model.

3.5.2 Measurement of Variables

The reliant or dependent variable for this examination is Return on Assets (ROA) as the measure of financial performance; it is determined by making the net profit the numerator by the total assets as denominator in a financial year. The ROA measures performance and how the banks are making profits comparative with their assets, which means how the executives are productive in using the organization's resources to create profits. By and large, a higher ROA shows the viable and productive utilization of banks' assets to create profits. This research extracted or calculated the ROA from published yearly audited accounts of these banks.

Independent Variable

Non-Performing Loans (NPLs) ratio: This is arrived at by dividing the value of loan assets that are not performing (NPLs) by the total loans and advances. In the scheme of things, this ratio or rate signifies the credit risk associated with the loan assets. When the NPLs ratios are high, it demonstrates how low the quality of credit is. This, therefore, shows that when the NPLs are high, high loan losses will be provided for in the accounts against income for the period under review.

Control Variables

Liquidity ratio (LQDT*):* This is a ratio of loans to total resources of the banks. It is used to show the ability of the bank to mobilise deposits as compared to their loan advances. In situations where there are increases in the loan, balances are higher than deposit mobilized then there would be a decrease in the liquidity level of the bank.

Capital Adequacy Ratio (SLVT)*:* This is a measurement of a bank's capital in comparison to the amount of its risk-weighted credit coverage. For this study, the Capital Adequacy Ratio (CAR) is explained by Shareholders' Equity by the Total Resources of the banks.

Interest Rate*:* This represents the mean value of the various interest rates charged by the banks in the industry within the year. Each year's interest rate used is the average of the respective rates charged within the years under study.

Total Assets (TA): This represents the sum of both current and non-current assets on the statement of financial position of the banks each year.

Measurement of Variables effect on Profitability (ROA)

Variable	Measurement Definition	Acronym	Expected Sign
DEPENDENT VARIABLE			
Return on Assets	Net Profits / Assets expressed in %	ROA	
VARIABLE (INDEPENDENT)			
Non-Performing Loans	Non-Performing Loans and Total Gross Loans Ratio expressed in %	NPL	-
VARIABLES (CONTROLLED)			
Liquidity	Loans to Deposit Ratio expressed in %	LQDT	-
Capital Adequacy	Shareholders' Funds / Total Assets	SLVT	+
Interest Rate	Interest rate per year	IR	-
Total Assets	Total Assets	TA	

3.6 Reliability

Reliability demonstrates how much an instrument yields consistent outcomes. The common means by which reliability is measured are internal consistency, test-retest, and between rater reliabilities. Cronbach's alpha was utilized to check internal consistency and dependability. Group reliability, score dependability, the number of things, test sizes, and trouble level of the instrument additionally can affect the Cronbach's alpha worth in this manner the builds were made as straightforward as could be expected under the circumstances. Between rater unwavering quality was utilized to check the level of arrangement among raters (i.e., those finishing things on an instrument). Normal

circumstances where more than one rater is included may happen when more than one individual behaviors study hall perceptions, utilizes a perception convention, or scores an open-ended test, utilizing a rubric or other standard convention. This consistency test was determined using Cronbach's alpha. A Cronbach's Alpha score of above 0.65 is considered truly reliable, Rickart et al (2014).

3.7 Ethical Considerations

The main ethical issues involved in this study were respondents' rights to self-determination, anonymity, and confidentiality. For this reason, respondents were coded to avoid the use of their official names.

CHAPTER FOUR

DATA PRESENTATION AND DISCUSSION OF FINDINGS

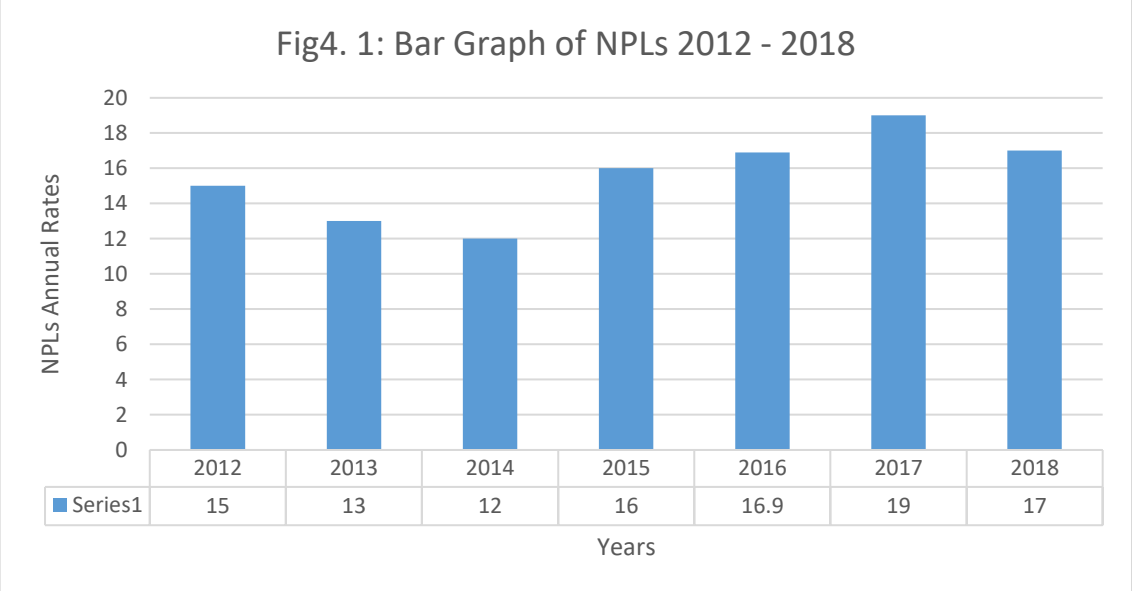
4.0 Introduction

This chapter presents and analyses data gathered in respect of the various objectives through the secondary data. The findings are presented

4.1 Descriptive Statistics

4.1.1 Trend Analysis of NPLs

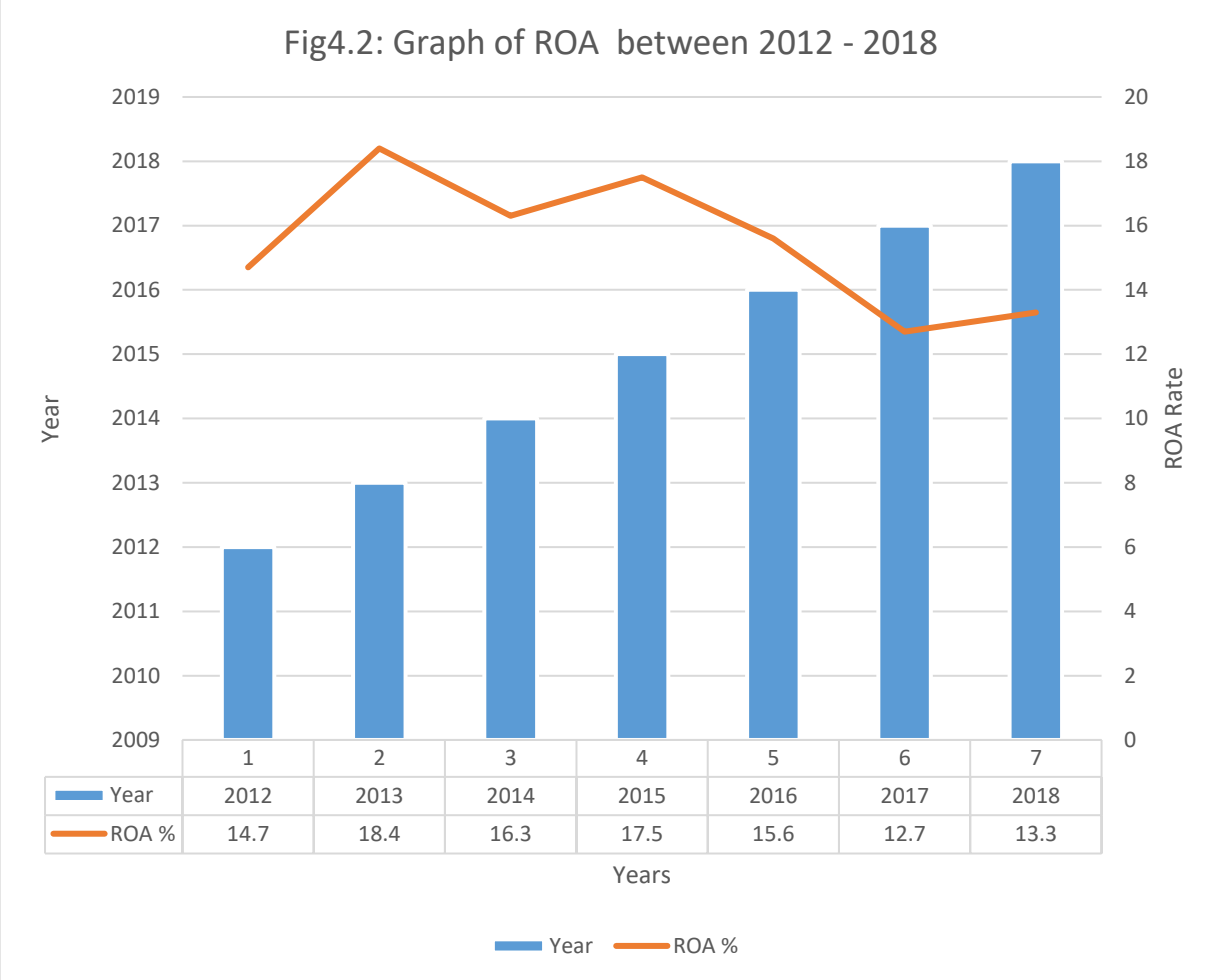
The data curled from the various audited accounts of the sampled banks showed that 2017 is the year in which the highest rate of non-performing loans occurred at 19%. This is slightest higher than the industry average of 18%. The lowest rate of non-performing loans occurred in the 2014 financial year with a rate of averaging 12% while the industry average was 21%. This means that the banks were doing better on their loan assets. This however increased by 4 percentage points to 16% and kept increasing till the banking sector clean up in 2017 and starts to decline to 17% in 2018.



Source: Researcher's Data from Audited Financial Statements of Sampled Banks

4.1.3 Return on Assets Trend from 2012 – 2018

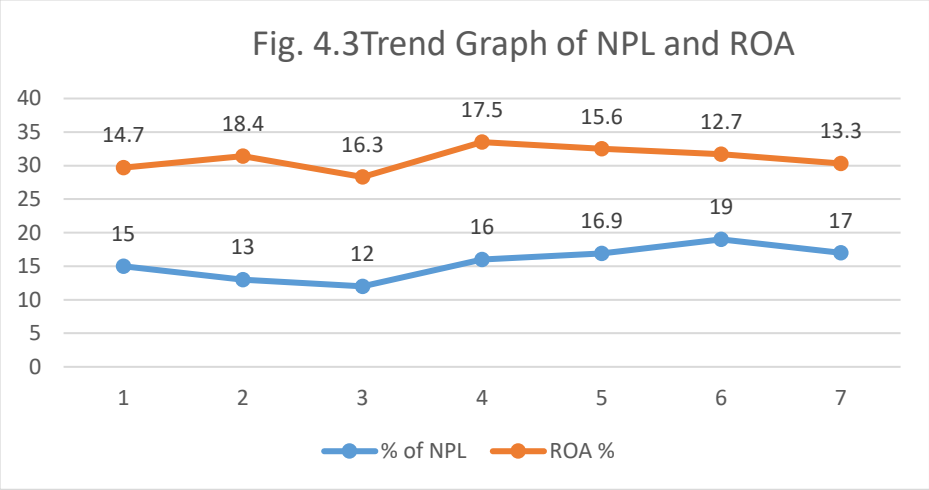
The study used return on assets as a measure of the profitability of the banks. The results indicate the lowest year of profitability was 2017 when a 12.7 return was made on assets. This was the period within which the Bank of Ghana was undertaking the clean of the industry. In 2013 however, the banks recorded the best return on assets of 18.4%. They however in Figure 1 has a relatively low NPL of 13%. The years 2012, 2014, 2015, 2016, and 2018 saw ROAs of 14.7, 16.3, 17.5, 15.6, and 13.3 percent respectively.



Source: Researcher's Data from Audited Financial Statements of Sampled Banks

4.1.4 Trend of NPL and ROA

Over the seven years under consideration, the Return on Assets (ROA) and NPL show an inverse relationship. But the graph shows that other factors are also responsible for a downward performing ROA.



Source: Researcher's Data from Audited Financial Statements of Sampled Banks

4.2. Correlation Results

The Pearson Correlation Coefficient was calculated to determine whether a statistically significant correlation was present between non-performing loans, capital adequacy ratio, liquidity ratio, Interest rate, and total assets with return on assets. The findings indicated that interest rates, liquidity, and NPLs are significantly correlated with ROA, while Interest and Liquidity ratio are not correlated with NPL. The correlation matrix of dependent and independent variables shows that NPL is negative and significantly correlated with ROA. The results show that the capital adequacy ratio (SLVT) is positive and significantly correlated with ROA, while it is insignificantly correlated with NPL and liquidity ratio. The correlation matrix table of variables impacting ROA is presented in Table 4.1 below.

Table 4.1: Correlation between Variables

Variables	InROA	InNPL	InLQDT	InSLVT	InIR	InTA
Log of Return on Assets	1					
Log of Non-Performing Loans	-0.696	1				
Log of Liquidity Ratio	-0.058	0.512	1			
Log of Capital Adequacy Ratio (SLVT)	0.167	-0.201	-0.422	1		
Log of Interest Rates	0.077	-0.61	-0.58	-0.15	1	
Log of Total Assets	-0.552	0.644	0.384	0.149	-0.315	1

Source: Researcher's Data curled from Published Accounts of selected banks

4.3 Regression Results

The coefficient estimate of NPLs is negative and statistically significant, indicating that the higher the level of non-performing loans, the lower the ROA. The possible explanation for this relationship is that customer default on interest and principal payments affects both the balance sheet and income statement. Customer failure to repay principal amounts decreases the asset base of banks, the principal amount is written off as expenses on the income statement, hence reduces bank profit. Similarly, the customer fails to pay interest on loans as expected reduces bank income, which also decreases the level of profits to the bank. This finding supports information asymmetry theory and bad management hypothesis which argue that an increase in NPLs is a result of adverse selection, and is linked to management's inability to control operating efficiency which in the long run lead to a decrease in profitability. Therefore, the results support Hypothesis 1 that states; the higher the non-performing loans, the lower the ROA. The results are consistent with the findings borrowers (Keeton and Morris, 1987), (Rajan,

2014), (2013), Louizis et al. (2012), Macit (2012), Makriet al. (2014), Berger and DeYoung (2007) and Rajan (2004).

The estimated coefficient of Liquidity (LQDT*)* ratio is negative and statistically significant. The results indicate, as the loan to deposit ratio increases, the profit level of the bank decreases, implying that the bank is increasingly exposing itself to liquidity risk and financial distress when the liquidity ratio increases. A higher ratio gives the impression that the bank has reached its limit of funding loans from its deposits, and uses more expensive methods such as expensive deposits, debt, and equity financing to fund its loan book. This in turn reduces its profitability levels. These results are in line with the findings of Kithinji (2010), Kargi (2011), and Kolapo et al. (2012).

The estimated coefficient of Capital Adequacy Ratio (SLVT) is negative and statistically significant. The results indicate an increase in capital adequacy ratio has explanatory power over the upward movement of bank profits. A possible explanation for this is that banks with higher capital ratio, depend on their capital to fund asset growth. This reduces dependency on expensive external funding capital and therefore leads to higher profitability. These findings support the findings of Berger (1995), Vong and Chan (2006), and Ozili (2015).

The coefficient of Interest rate is negative and statistically insignificant, indicating an increase in interest is associated with the decrease in ROA (a proxy for bank profitability) but interest rates do not demonstrate it to have explanatory power over bank profitability levels. A possible explanation for this is that an increase in economic activities is associated with a low rate of defaults.

Table 4.2: Coefficient Results of Independent and Control Variables

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	13.336	12.987		1.027	.492
InNPL	-.519	.680	-.611	-.763	.585
InLQDT	-2.292	2.393	-.711	-.958	.514
InSLVT	-.572	.646	-.626	-.885	.539
InIR	-.089	1.553	-.046	-.058	.963
InTA	.065	.232	.193	.280	.826

a. Dependent Variable: Log of Return on Assets

b. Predictors: (Constant), Log of Total Assets, Log of Capital Adequacy Ratio (SLVT), Log of Interest Rates, Log of Liquidity Ratio, Log of Non-Performing Loans

4.4 Discussion

The value of NPLs was negative and statistically significant, indicating that the higher the level of non-performing loans, the lower the ROA means that banks should take their credit management techniques and strategies seriously and ensure that their investments in the creation of loan assets do not go waste as put forth by (Keeton and Morris, 1987), (Rajan, 2014), (2013), Louizis et al. (2012), Macit (2012), Makriet al. (2014), Berger and DeYoung (2007) and Rajan (2004).

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The study confirmed Research by Asafoatse & Asante (2007), Twum & Tornyehlor (2015), Sally (2016), and Bunyamin (2015) on the reasons for loan defaults among banks which included lack of willingness to pay loans coupled with a diversion of funds by borrowers, willful negligence and improper appraisal by credit officers.

4.5 Conclusion

Among other things, the study revealed that interest rates, liquidity and NPLs are significantly correlated with ROA, while NPLs are not correlated with the interest and liquidity ratio. The dependent and independent variables correlation matrix demonstrates that NPL is negative and significantly correlated with ROA.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

5.0 Introduction

The overarching objective of this study was to unearth the effects of bad loan assets of banks (NPLs) on their performance with evidence collated from Ghanaian commercial banks using Return on Assets (ROA) as the measure of profitability. This chapter presents the summary of the findings that were found out from the available data as well as the conclusions that could be drawn or extrapolated. The chapter comes to an end with the recommendations which are to address the challenge of Non-Performing Loans (NPLs) for the study and further studies.

5.1 Summary of Findings

The findings from the study were categorized at trends in NPLs, Trends in Return on Assets, Regression, and correlation between variables.

5.1.1 Non-Performing Loans

The analysis showed that the 2017 financial year was the worst year of non-performing loans which is 19%. It also came to light that non-performing loans hurt the profitability of banks and also on the capital adequacy ratios. This is because the regular writing off of portions of the loan assets of a bank whose major source of profit is loan assets would in no small measure affect their operational or loanable funds which eventually make them not liquid enough.

5.1.2 Return on Assets

Return on Assets was used as a measure of the profitability of the banks. It was realized after the analysis that the financial year of 2017 was the lowest year of profitability with a 12.7% return on assets. It was revealed that within that time, the confidence of the banking population was low as they feared depositors come for loans, and the banks themselves were cautious in giving out loans. This was corroborated by the fact that the year 2013 was the best year of return on assets of 18.4%. It must be said that for businesses to increase their return on assets, however, there must be good supervision as well as reduce the NPLs since it has a negative relationship with return on assets.

5.1.3 Relationships between Variables

The Pearson Correlation Coefficient which determines the statistical significant correlation between variables shows that real significance exists between NPLs, the ratio of capital required to be adequate, the ratio of fund available to settle current liabilities and cash available, Interest rate as well as the sum of all assets with ROA. It was further revealed that interest rates, liquidity, and the rate of loans not performing are meaningfully correlated with Return on Assets, but the Interest rate and ratio of liquidity did not significantly correlate with NPL. This negative and statistically significant nature of the NPL shows that an increasing rate of non-performing loans would give rise to a lower ROA.

5.2 Conclusions

This study concludes that the liquidity ratio positively and significantly influences the Return on Assets used as a measure in the study. This shows that an increase in liquidity ratio would lead to a positive and significant increase in return on assets or profitability.

Also, an increase in return on liquidity would lead to a positive and significant increase in return on assets.

The study further concludes that non-performing loans have an adverse and high influencing effect on banks' profitability in the Ghanaian banking industry. It was revealed that rising NPLs leads to a high fall in return on asset of banks. Besides, an increase in nonperforming loans would lead to a significant decrease in the liquidity ratio as well as a decrease in the capital adequacy ratio as well. These two effects will result in a decrease in loanable funds of the banks.

The study also concluded that high interest rates are responsible for high non-performing loans, thereby reducing the return on assets.

5.3 Recommendations

From the findings of the research, it was seen that NPLs do impact negatively on the Return on Assets of Banks. This was evidenced by the negative relationship that predicted a reduction in profitability (ROA), liquidity, capital adequacy, and NPL in the years under study as well as the negative consequence it has on the confidence of investors and depositors.

Since the main objective of these banks is financial inclusion and intermediation, proactive measures must be put in place to avert the problem of NPLs thereby reducing its negative impact on profitability. Based on the findings of the work, below explained are some direct and pro-active recommendations made to management to reduce NPL's.

5.3.1 Regular and Effective Monitoring

If the menace of Non-Performing loans can be eradicated or reduced, then the essence of effective and regular monitoring cannot be overemphasized. Regular and effective monitoring can help avoid the problem of NPLs. Effective monitoring would also provide the opportunity for loan officers to advise borrowers and help their businesses grow to help them pay their loans. The periodic review will also help identify borrowers whose loans are likely to be non-performing and necessary actions taken. For this to effectively take place, it is recommended that management should put in place measures that will make logistics and other materials needed by loan officers to go on routine monitoring and support monitoring activities.

5.3.2 Refresher Training Courses for Credit Officers and Managers

To help reduce Non-performing loans, Periodic relevant refresher training for loan officers is also recommended to management. Periodic training will help improve the knowledge of loan officers on areas such as creditworthiness as well as risk assessment of clients. This will lead to an improved credit appraisal system and help alleviate adverse selection.

It will also assist credit officers to appreciate the role prompt credit delivery plays in loan default prevention. The training would further equip credit officers to be able to quickly identify loans that have the potential of not performing. When these signals are picked early, it makes credit officers proactive; thereby putting in place measures that would remedy the situation. It is recommended that for effective training programs to take place, the services of experts and resource persons in the area of microfinance and/or banking be engaged in the provision of training programs. It is worth noting management

does not see to the implementation of what was taught and learned during the training. Management must therefore be committed to providing a conducive environment that will ensure that what is taught during training programs is well implemented.

5.3.3 Provision of security and guarantees for Credit Facility

As stated earlier, giving loans to borrowers implies bearing the risk of default. Notwithstanding the risk, it is therefore strongly recommended that Banks demand some form of security that can be sold to defray the loan in-case of indebtedness or default. The security could be in the form of savings, fixed deposits, and physical assets like land amongst others. This measure will help reduce the problem of non-performing loans as well as its related consequences. It should be further stated that if a property is used to secure a loan, it will reduce absconding on the part of borrowers as well as willful default. This is because borrowers, knowing that their property was used to secure the loan; will make every effort to pay back the loan since the property will be realized to offset the indebtedness if they don't pay the loan. It is therefore advised that management insists on the application of the credit policy on borrowers to ensure that the institution will be able to reduce the impact of NPLs on the performance of profitability. The people in authority of these banks must commit resources to build an efficient credit data system. This would result in the elimination of information asymmetry and helps management to have authentic and timely data on clients. Additionally, the Boards of these banks must insist on measures to ensure cost efficiency regarding credits.

5.3.4 Strict use of Credit Reference Bureau

This is a system put in place to avail the credit history of prospective borrowers to financial institutions. Since most members save and borrow from more than a source, the

use of this system will make the banks aware of the history of the prospective borrower to help determine whether he/she is creditworthy or not. Not every client's history will indeed be by using this software but some can be known; and will help reduce NPL's a bit.

5.3.5 Bank of Ghana Regular Supervision and Sanctioning

The supervision department of the Bank of Ghana should ensure that it conducts thorough supervision and assessment of the liquidity position of the banks at all times to put the management of these banks on their toes. The Bank of Ghana must also ensure that it ensures strict adherence to the single obligor rule and lending to related parties which was one of how banks got heavily exposed during the banking sector clean-up. The BOG must also ensure that professionally qualified and competent persons are appointed to the Boards of banks with definite terms of office. The bank should also ensure that the interest rates of banks are within appreciable limits to avoid the incidence of loans going bad.

REFERENCES

Aboagye, F., Nunuekpeku, R., Manu, S., & Sadia, D. (2008). Comparative Study of Interest Rates in Africa. *Journal of Economics and Finance*, 11-43.

Amissah-Aurthur, K. (2010). *Asset Quality in Ghanaian Banks.* Cape Coast: University of Cape Coast.

Amuakwa-Mensah, F., & Boakye-Adjei, A. (2015). Determinants of non-performing loans in Ghana banking industry. . *International Journal of Computational Economics and Econometrics*, 7-21.

Asafoatse, D. J., & Asante, K. D. (2015). Loan Default and Credit Risk Management Among Coperative Societies in Ghana. *European Journal Management Management and Governance*, 21 - 43.

Bank of Ghana. (2017). *Banking Supervision Report.* Accra: Bank of Ghana.

Bank of Ghana. (2018). *Ghana Banking Report.* Accra: Ghana Publishing House.

Bank of Ghana, (. (2018, January). Ghana Banking Sector Summary Report. *Ghana Banking Sector Summary Report*. Accra, Accra, Greater Accra: Bank of Ghana.

Basel Committee on Banking and Supervision. (2015). *Principles for the Management of Credit Risk (3rd Ed).* Basel: Switzerland Bank for International Settlements.

Bawumia, M., Twunasi, A., Adebayor, J. A., Mensah, R. S., & Alifoe, Q. (2005). *Interest Rates and Impact on Non Performing Loans in Africa; A comparatve study among African Countries.* Accra: Universiy of Ghana.

Berger, A., & DeYoung, R. (1997). *Problem Loans and Cost Efficiency in Commercial Banks.* Japan: Rihan Publications.

Bernanke, B., & Gertler, M. (2017). Agency Costs, Net Worth and Business Fluctuations. *American Economic Review 79*, 14 - 31.

Bexley, K., & Nenninger, O. L. (2012). *Non Performing Loans in the GCC Banking System and their Macroeconomic Effects.* Switzerland: International Monetary Fund.

Bloem, M. A., & Gorter, N. C. (2010). *Treatment of Non-Performance in Macroeconomic Statistics.* Ohio: Ohio Unversity Press.

Boahene, S. H., Dasah, J. K., & Agyei, S. (2012). Credit risk and profitability of selected banks in Ghana. *Research Journal of finance and accounting (4)*, 34-41.

Bunyamin, J. A. (2015). *Loan Defaults in Northern Ghana.* Tamale: Adorable Publishers.

Carey, M. (2009). Credit Risk in Private debt portfolios. *Journal of Finance (53)*, 1363 - 1387.

Dimitiz, V. K. (2010, September 4). *National Business Survey.* Retrieved from www.nbs.sk: http://www.nbs.sk/_img/Documents/STATIST/ZSU/v33-12/v33-12a@200902.xls

Eppy, I. (2015). *Perceived Information Asymmetry, Bank Lending Approaches and Bank Credit Accessiblity by SMEs in Uganda.* Makerere University: Unpublished Thesis.

Fofack, H. (2015). *Non Performing Loans in Sub Saharan Africa; Casual Analysis and Macroeconomics Implications.* Makerere: Makerere University Press.

Garr, S. K., & Coleman. (2013). Doing Business in Africa; Interest Rates Analysis. *Journal of African Business*, 26-54.

Gill, D. (2011). *Macroeconomic and bank-specific determinants of non-performing loans in Greece: a comparative study of mortgage, business and consumer loan portfolios.* Genk: Pinacle Publications.

Hefferman, J. P. (2010). Forecasting Non Performing Loans in Barbados. *Journal of Business, Finance and Economics in Emerging Economies (5)*, 80 - 107.

International Monetary Fund (IMF) (Ed.). (2015). *Annual Report on Exchange Agreements and Non Performing Loans.* International Monetary Fund.

Kargi, H. S. (2011). *Credit Risk and Performance of Nigerian Banks.* Zaria: Ahmadu Bellow University Press.

Kiyotaki, N., & Moore J. (2007). Credit Cycles. *Journal of Political Economics 105*, 211 - 248.

Kolapo, T. F., & Oke, M. O. (2012). *Credit Risk and Commercial Bank Performance in Nigeria: A Panel Model Approach.* Melbourne: Austrailia Journal of Business and Management Research, 2(2), 31.

Mabvure, J., Kamoyo, M., Gwangwavaj, M. F., & Mutuibvu, V. (2012). Non-Performing Loans in Africa; A case of CBZ Bank of Zimbabwe. *African Financial and Economic Journal*, 24 - 43.

Mensah, R. H., & Abor, D. K. (2017). The Role of Interest Rates in Non performing loans . *The Banking Sector Clean Up in Ghana* (pp. 6-16). Accra: University Press.

Minsky, H. P. (1974). *The Modelling of Financial Instaility: An Introdcution, Modelling and Simulation.* Indonesia: Rhoda Publications.

Mombo, C. A. (2013). *The Effect of Non-Performing LOan on the Financial Performance of Deposit Taking Microfinance Institutions in Kenya.* Nairobi: University of Nairobi.

Nyarko-Baasi, M. (2018). *Effects olf Non-Performing Loans on the Profitability of Commercial Banks - A Study of Some Selected Banks on the GHana Stock Exchange.* Accra: Global Journal of Management and Business Research .

Owusu-Antwi, J., Asiedu, S., & Aduboahen, L. A. (2017). Interest Rates in Ghana; Effects on Non Performing Loans. *Journal of International Business*, 38-49.

Pricewaterhouse Coopers. (2019). *Special Report on Banks in Receivership* . Accra: Pwc.

PriceWaterHouseKeepers. (2015). *Banking Report.* Accra: PriceWaterHouse.

Richard, J. L. (2011). Determinants of Credit Risk in Sub-Saharan African State Owned Banks: An Empirical Investigation. *Economic Issue - Stoke and Trent (12)*, 27 - 46.

Sally, J. S. (2016). Credit Risk in Two Institutional Regimes: Spanish Commercial and Savings Banks. *Journal of Financial Services Research (22)*, 5-23.

Scoop, J., & Drake, S. W. (2020). Financial Mediation in a Pandemic. *Harvard Business Review*, 15-38.

Shil, M., & Mannan, H. (2014). Economic Determinants of Non-Performing Loans: Perception of Pakistani Bankers. *European Journal of Business and Management (4)*, 12-16.

Tettey, P. L. (2017). Macroeconomic and institutional determinants of non-performing loans. . *Journal of Central Banking Theory and Practice*, 47-62.

The Federal Financial Institutions Examination Council, USA. (2016). *Federal Examinantions Handbook.* Ohio: Federal Publishers Limited.

Twum, B. N., & Tornyehlor, H. K. (2015). Non Performing Loans among Industries. *Journal of Finance and Macroeconomics*, 67-80.

Tyler, L. (2017). Non Performing Loans and terms of credit of public sector banks in India; An empirical Assessment. *Reserve of India Occasional Papers (24)*, 81-121.